

Defence Equipment & Support

Acquisition Safety Assessment of Safety Manager (SM) Assignment Holders



Guidance for Assignment Holders

# Document Ownership and Version Control

|  |  |  |
| --- | --- | --- |
| **Project/Service**: N/A | **Ref:** N/A | **Doc Ref:**  20240423 – Guidance for SM Assignment Holders Version 1.0 - O |
| **Document Name:**  Acquisition Safety Assessment of Safety Manager (SM) Assignment Holders – Guidance for Assignment Holders | **Revision no:** 1.0 | **Last updated:**  23/04/24 |
| **Original Authors:**  Michael Henstridge | **Signature:**  Record on original version | **Date:**  23/04/24 |
| **Reviewed/Updated by:**  Mark Tovey | **Signature:**  *via e-mail* | **Date:**  23/04/24 |
| **Approved by:**  Paul Reason | **Signature:**  *via e-mail* | **Date:**  24/04/24 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Rev Number** | **Updated by** | **Changes Made** | **Date** |
| 1 |  |  |  |
| 2 |  |  |  |

# Contents

[Document Ownership and Version Control 1](#_Toc157765374)

[Contents 2](#_Toc157765375)

[Assessment Context – DE&S Acquisition Safety Taxonomy 4](#_Toc157765376)

[Definition of a Safety Assignment – Basis of Competency Discussion 5](#_Toc157765377)

[Competency Discussion Process 6](#_Toc157765378)

[Core Areas of Assessment 6](#_Toc157765379)

[Step 1 – Evidence Preparation 7](#_Toc157765380)

[Step 2 – Preview by Evaluator 7](#_Toc157765381)

[Step 3 – Competency Discussion 7](#_Toc157765382)

[Competency Discussion Stage 1 - Introduction and Overview 8](#_Toc157765383)

[Competency Discussion Stage 2 – Application and Understanding of Acquisition Safety Process 8](#_Toc157765384)

[Competency Discussion Stage 3 – Understanding Safety Risks Through Lifecycle 9](#_Toc157765385)

[Competency Discussion Stage 4 – Taking a Whole Systems View of Safety 9](#_Toc157765386)

[Competency Discussion Stage 5 – Summing Up, Evidence Confirmation 9](#_Toc157765387)

[Step 4 – Competency Discussion Outcome and Next Steps 10](#_Toc157765388)

[List of Annexes 12](#_Toc157765389)

[Annex A – Safety Engineering Success Profiles 13](#_Toc157765390)

[Annex B – SM Assignment Specification 14](#_Toc157765391)

[Annex C – Competence Assessment Framework & Definitions Grid 18](#_Toc157765392)

[Assessment Scope and Coverage 18](#_Toc157765393)

[Area 1 – DE&S Success Profile Behaviours 21](#_Toc157765394)

[Area 2 – Engineering Function Competency 21](#_Toc157765395)

[Area 3 – Systems Safety Competences 21](#_Toc157765396)

[Area 4 – Systems Thinking and Integration Competence 22](#_Toc157765397)

[Area 5 – Regulated Environment, Technical Discipline & Specialism 24](#_Toc157765398)

[Air and Space Systems & Platforms 25](#_Toc157765399)

[Land Systems & Platforms 27](#_Toc157765400)

[Maritime Systems & Platforms 29](#_Toc157765401)

[Nuclear Systems 31](#_Toc157765402)

[Ordnance, Munitions and Explosives (OME) 32](#_Toc157765403)

[Annex D – Competency Discussion Outcome Evidence & Record Sheet 37](#_Toc157765404)

[Summary of Core Areas and Competencies 39](#_Toc157765405)

[Stage 2: Application and Understanding of the Acquisition Safety Process 43](#_Toc157765406)

[Stage 3: Understanding of Safety Risks Through the Lifecycle 47](#_Toc157765407)

[Stage 4: Taking a Whole Systems View of Safety 49](#_Toc157765408)

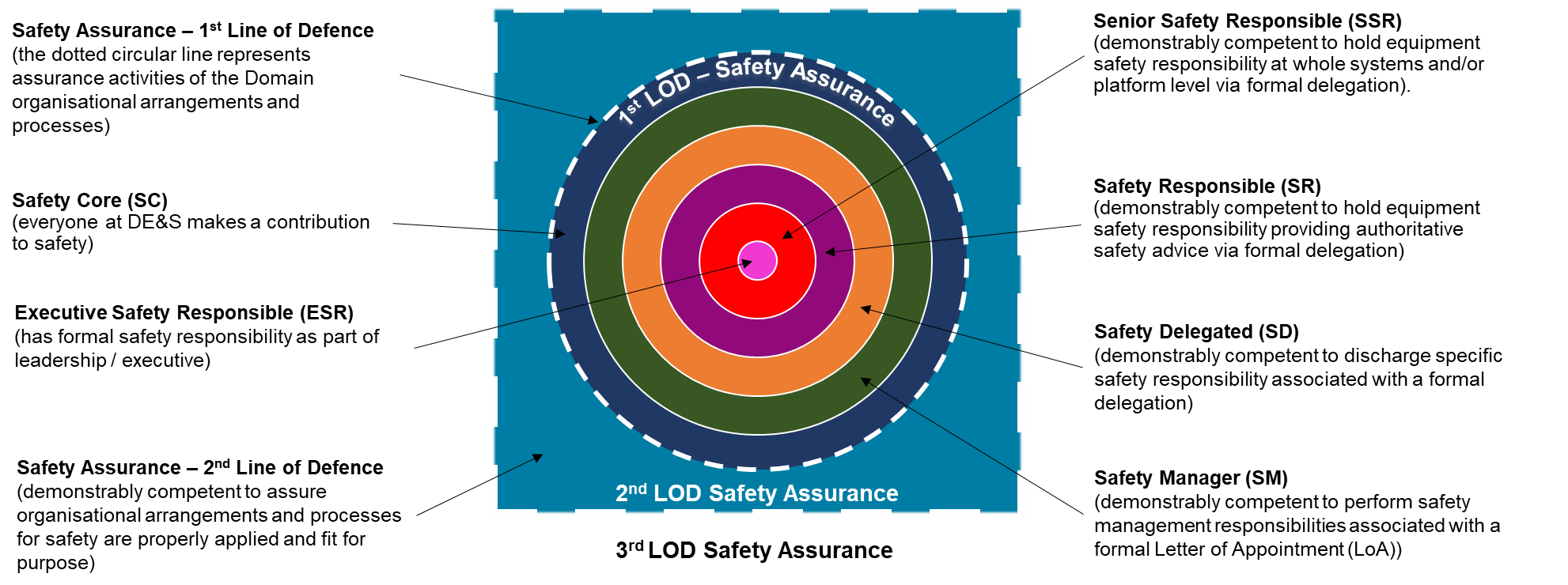
[Summary and Recommendations 51](#_Toc157765409)

# Assessment Context – DE&S Acquisition Safety Taxonomy

The DE&S Acquisition Safety Project was established to deliver a measurably capable organisation with a strong safety culture, clear governance and safety roles fulfilled by a demonstrably competent workforce, underpinned by three principles:

* **Culture**: Everyone in DE&S is responsible for safety. Currently it is seen as an engineering discipline.
* **Organisation**: We need to be clear who makes the key safety decisions.
* **Capability**: We need to consistently deploy the right people in the right assignments using the balanced matrix. Currently we cannot.

A new, precise vocabulary (taxonomy) to describe safety responsibilities for all assignments in DE&S, has been rolled out helping *everyone* to understand their safety responsibility, no matter where they work or which function they belong to (Figure 1).



*Figure 1: DE&S Acquisition Safety Assignment Taxonomy*

It is not only important that DE&S is able to identify where the key safety decisions are made, but also to demonstrate that staff are competent to undertake these assignments. Definitions of these safety related/responsible assignments have been created that define the competences, qualifications and experience required to successfully discharge these responsibilities.

Individuals deployed to SM assignments shall be demonstrably competent to support the SSR, SR, and SD by undertaking responsibilities in ensuring policies and processes for safety are identified, aligned to regulatory Safety and Environmental Management System, and implemented. The SM will be issued with a Letter of Appointment following a proportionate discussion of the SM competence.

# Definition of a Safety Assignment – Basis of Competency Discussion

The details of a specific SM will be defined in an Assignment Specification. It includes the competences, qualifications and experience required to undertake this assignment. It includes details of what Success Profile(s) individuals who undertake this assignment will have competence for, typically Safety Engineer – Senior Technical Specialist (STS) I or above. The Success Profile specifies the generic requirement (i.e., what a good Safety Engineer would possess) and the Assignment Specification has the specific details of the assignment to be undertaken by such an individual. This is shown diagrammatically in Figure 2.

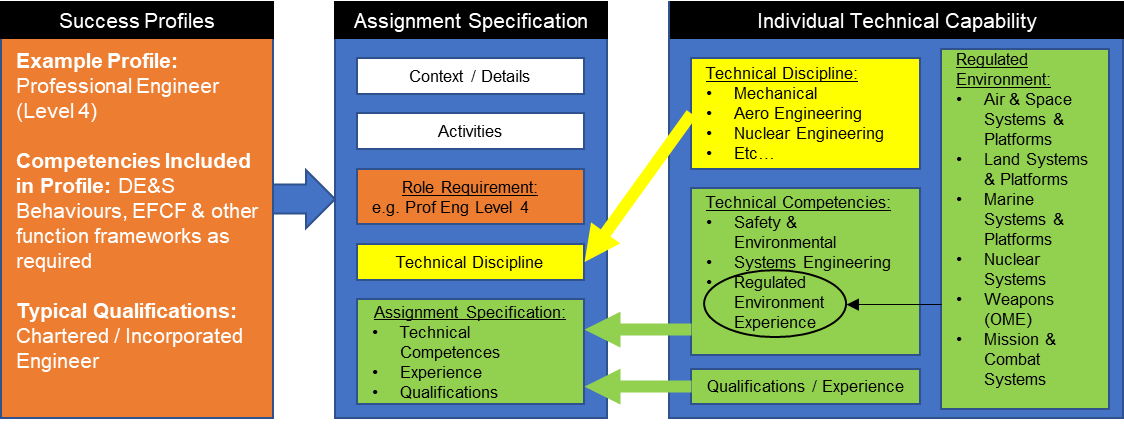


Figure 2: The Assignment Specification links all the key information together to be assessed against.

Key documents for the prospective SM assignment holder and evaluator

are the Assignment Specification and the associated Engineering Function Success Profile. All Engineering Function Success Profiles can be found on the HR Portal, linked [here](https://modgovuk.sharepoint.com/teams/17406/SuccessProfiles/Engineering/Forms/AllItems.aspx). The Success Profiles and Assignment Specification of relevance to the SM assignment are included in the following Annexes to this document:

* Annex A – Safety Engineering Success Profiles
* Annex B – SM Assignment Specification

The Assignment Specifications are also included in the Acquisition Safety & Environmental Management System (ASEMS) Safety and Environmental Protection Leaflet 17/2023, linked [here](https://www.asems.mod.uk/guidance/safety-and-environmental-protection-leaflets).

# Competency Discussion Process

An competency discussion framework and process - based on skills, experience, and competence - has been created for staff taking on (or potentially able to take on) SM assignments. This comprises the following four steps illustrated in Figure 3.

* Evidence preparation by the assignment holder,
* Preview of evidence by the evaluator,
* Interview,
* Interview outcome and next steps.



Figure 3: Four Step SM Competency Discussion Process

The scope of SM assignments and associated safety responsibilities will vary within and across the Regulated Environments. The competency discussion process for SM assignment holders should therefore be tailored accordingly, applying proportionality whilst maintaining compliance with the core principles of ASP.

## Core Areas of Assessment

There are five core areas that SM staff will be assessed against associated with the assignment. These areas are:

* **Area 1 - DE&S Success Profile Behaviours**. For example Communication and Influencing, Leadership – which are integral to making good safety decisions.
* **Area 2 - Engineering Function Competency.** Core engineering knowledge and skills that are essential to the engineering of equipment and services.
* **Area 3 - System Safety Competency.** Understanding core safety concepts and the process of management of safety.
* **Area 4 - Systems Thinking and Integration Competence.** The ability to understand the different aspects (sub-systems, environment, human factors) and how they come together to create hazards and risks.
* **Area 5 - Regulated Environment, Technical Discipline & Specialism.** Understanding the specific environmental context in which an individual will be making safety decisions (e.g., air environment for fixed wing aircraft).

These five core areas are shown in more detail in Annex C – Competence Assessment Framework & Definitions Grid. Ensure you are familiar with what these areas of competence are and how they are defined.

Prior to the Step 3 Competency Discussion, you will be required to submit evidence of competence and experience against these five core areas. The evaluator will consider this evidence in advance of the competency discussion and apply a consistent approach across the process.

## Step 1 – Evidence Preparation

You should consider what evidence is most appropriate to demonstrate competence against the five core areas. Remember, the more detail that can be provided in advance of the competency discussion, the easier it will be for the evaluator to determine which areas to probe and more importantly, where competence has been demonstrated.

Examples of evidence could include (these are not exhaustive):

* Specific roles you have held in regard to safety responsibilities.
* How you have discharged these responsibilities, key decisions taken and in what context.
* Relevant training courses attended, and qualifications attained.
* Memberships of professional bodies and organisations.

You must complete Annex D – Competency Discussion Outcome Evidence & Record Sheet and send this, together with a recent C.V. to the evaluator when required. You will be given timescales in which to complete this activity. These documents should ensure appropriate coverage of the competence set and relevant skills and experience and will form the basis of the competency discussion.

## Step 2 – Preview by Evaluator

The evaluator will review the evidence you provide against the five core areas and identify strengths and gaps that may exist in knowledge and / or experience. Using the information submitted, the evaluator will prepare questions to ensure appropriate coverage of the competence set and relevant skills and experience.

## Step 3 – Competency Discussion

Unlike SSR and SR assessments - where a minimum of two evaluators are required – SM competency discussion may be undertaken by the relevant SSR or SR only, provided they are suitably competent to assess all aspects of the SM assignment in question. For the SM role, Step 3 is therefore considered to be an “Competency Discussion” in contrast to an “Assessment Panel/Assessment” as per SSR, SR, and SD.

If the relationship between the SSR and SM is already established, then the above process may be tailored or simplified. However, it is critical that the SQEP of the Safety Manager and boundary of responsibilities is established, understood, and clearly documented in the associated Letter of Appointment.

The following guidance on the competency discussion can be tailored accordingly.

Figure 4 provides further detail of the elements to be covered during the competency discussion.

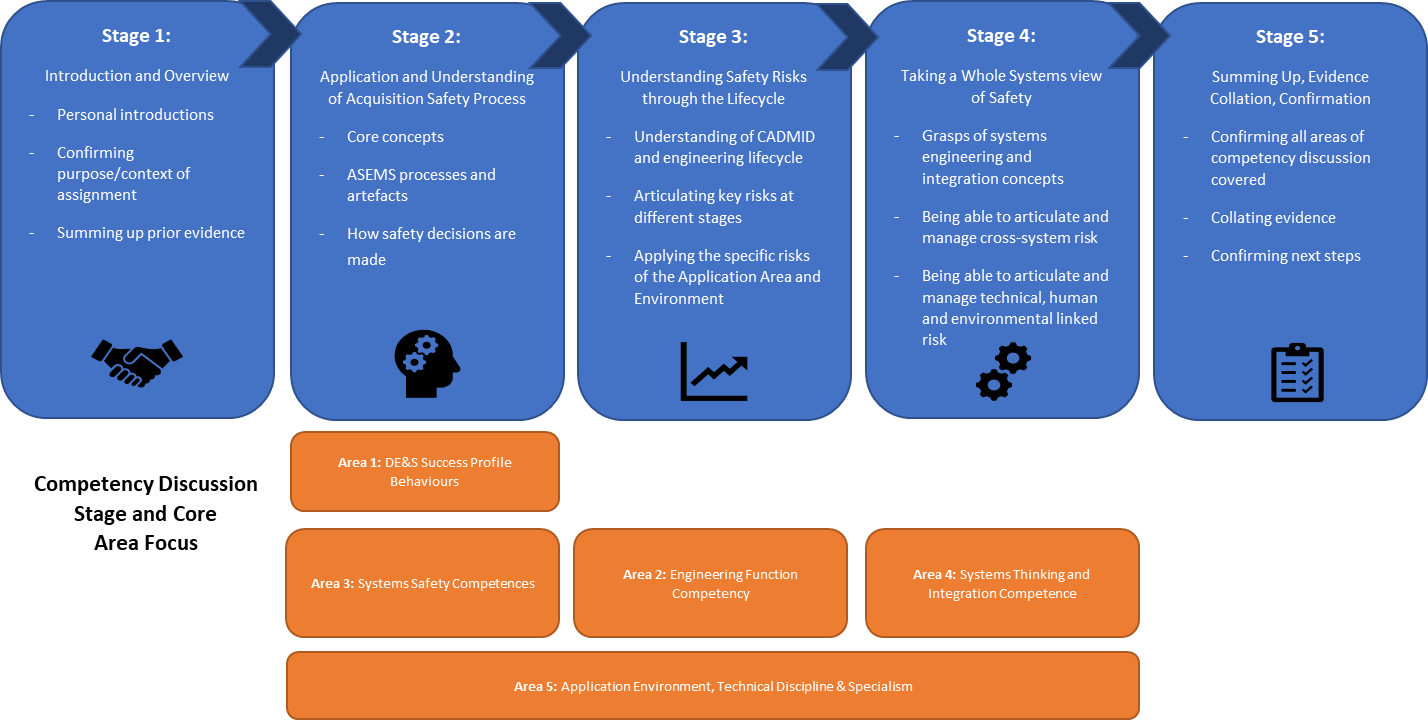


Figure 4: Five Stages of the Competency Discussion

The five core areas will be covered during Stages 2, 3, and 4 as outlined in the following sections. The evaluator has the opportunity at this point to consider tailoring the aspects of Stages 2, 3, and 4, dependent on the information provided prior to the competency discussion by the prospective SM assignment holder.

### Competency Discussion Stage 1 - Introduction and Overview

Personal introductions should be made, and a brief overview of the purpose and context of the competency discussion given. It is important to stress that the competency discussion is to ensure you are competent to discharge the safety aspects of the SM assignment – it is not about being interviewed for your job. The competency discussion itself should last between 30-45 minutes. Although this is a formal, documented process, every effort will be made to allow you the opportunity to fully demonstrate your competence in as relaxed an environment as possible.

There are three main areas to cover (Stages 2, 3 and 4 in Figure 4) to incorporate the five core areas being tested (shown in orange in the diagram) and these are expanded in the following sections. The evaluator will be looking for specific examples that you can talk about to demonstrate your competence rather than just theory. If any tailoring of the Stages has been undertaken by the evaluator, should clearly articulate why this has been done (i.e. Prospective SM assignment holders evidence has clearly demonstrated competence if certain Stages and requires not further discussions), and what the tailoring has resulted in to the prospective SM assignment Holder.

### Competency Discussion Stage 2 – Application and Understanding of Acquisition Safety Process

|  |  |
| --- | --- |
| **Purpose** | To ensure the individual really understands core safety concepts, safety management processes and tools, associated artefacts and how to apply these to achieve “safe to operate” outcomes. |
| **Core Areas** | * **Area 1 - DE&S Success Profile Behaviours:** Such as Communication and Influencing, Leadership. * **Area 3 - Systems Safety Competences:** These focus on the system management processes and tools, concept and approach in the MOD and Defence environment. * **Area 5 - Regulated Environment, Technical Discipline & Specialism:** Understanding the specific environmental context in which an individual will be making safety decisions (e.g., Air environment for fixed wing aircraft). |

### Competency Discussion Stage 3 – Understanding Safety Risks Through Lifecycle

|  |  |
| --- | --- |
| **Purpose** | To ensure the individual understands hazard management processes, tools and techniques, and how hazards and risks evolve through the lifecycle of equipment (from concept, through acquisition, to support and finally into disposal). |
| **Core Areas** | * **Area 2 - Engineering Function Competency:** Core engineering knowledge and skills that are essential to the engineering of equipment and services. * **Area 5 - Regulated Environment, Technical Discipline & Specialism:** Understanding the specific environmental context in which an individual will be making safety decisions (e.g., Air environment for fixed wing aircraft). |

### Competency Discussion Stage 4 – Taking a Whole Systems View of Safety

|  |  |
| --- | --- |
| **Purpose** | In this stage, we are focusing in on the systemic nature of risks. Safety risks will emerge often from a combination of technical, environmental, and human factors. An individual needs to have a whole system view to appreciate this. |
| **Core Areas** | * **Area 4 - Systems Thinking and Integration:** The ability to understand the different aspects (sub-systems, environment, human factors) and how they come together to create hazards and risks. * **Area 5 - Regulated Environment, Technical Discipline & Specialism:** Understanding the specific environmental context in which an individual will be making safety decisions (e.g., air environment for fixed wing aircraft). |

### Competency Discussion Stage 5 – Summing Up, Evidence Confirmation

At the end of the competency discussion, the evaluator will confirm that all areas of the competency discussion have been covered and you will be offered the opportunity to add any further evidence you feel may have been missed.

## Step 4 – Competency Discussion Outcome and Next Steps

You can expect to be notified of the outcome of the competency discussionwithin 1 week of the competency discussion. This will be by e-mail from the lead evaluator who may also arrange a meeting to discuss the outcome if necessary. You will be given 1 of 3 outcomes:

* **Competent**: Fully satisfies all requirements of the relevant Assignment Specification in terms of academic and professional achievement, formal training, and relevant experience. For an individual to be deemed ‘Competent’, they must have provided sufficient evidence to demonstrate their ability to discharge the full set of responsibilities for the SM assignment and satisfied the evaluator that they are competent to do so. The competency discussion will be valid for a maximum of 5 years or move of assignment, whichever is sooner, after which there will need to be a revalidation to ensure continued demonstrable competence.
* **Competent with Caveat(s)**: The individual may not be able to demonstrate full compliance with all aspects of the Assignment Specification, but their shortcomings are not sufficient to preclude them from discharging their safety responsibilities in an effective and efficient manner. For example, while individuals may not have completed essential training, the evaluator is able to satisfy themselves via the competency discussion that the individual has an acceptable understanding of the subject to hold a Letter of Appointment. In such instances, the individual may be issued with a caveated Letter of Appointment. The caveats, which shall be determined by the evaluator, may include the need for key outputs to be peer reviewed by competent individuals or for the SM to complete specified training within a stated timescale. A recommended approach to improving these areas, together with appropriate timescales, should also be recorded. All caveats are to be time limited, at which point the individual’s competence shall be re-discussed (either by the evaluator or the relevant individual[[1]](#footnote-2)) and a decision made on whether the caveats may be removed.
* **Not Yet Competent**: Where it is evident that the individual has significant gaps in competence and/or knowledge and skills, this should be recorded as ‘Not Yet Competent’. Individuals assessed as Not Yet Competent shall not be issued a Letter of Appointment. In such instances, the evaluator shall clearly record why they have reached their decision, and define the action required to achieve the required level of competence. As with ‘Competent with Caveats’, a recommended approach to improving capability should be recorded and an additional recommendation on how the safety aspects of the assignment should be discharged. The evaluator’s findings are to be reported to the relevant SSR, who decides how to manage the consequences (for instance, replacing the incumbent with a safety competent individual or requiring temporary delegations to be issued to other members of the team who can demonstrate the necessary attributes).

To be deemed ‘Competent’, you must have provided enough evidence to demonstrate your ability to discharge the full set of responsibilities for the SM assignment and satisfied the evaluator that you are competent to do so. The competency discussion will be valid for a maximum of 5 years or deployment, whichever is sooner, after which there will need to be a revalidation to ensure continued demonstrable competence.

If the competency discussionidentifies gaps in your competence or areas of knowledge and experience, this will be recorded as ‘Competent with Caveat(s)’ and the areas of weakness identified. A recommended approach to improving these areas, together with appropriate timescales, will be given and discussed with you.

Where it is evident that there are significant gaps in competence and/or knowledge and skills, this will be recorded as ‘Not Yet Competent’. As with ‘Competent with Caveat(s)’, a recommended approach to improving capability will be given and discussed with you.

The outcome will be entered into MyHR.

The individual will then upload their Letter of Appointment on MyHR, which will be submitted for approval. MyHR will be the formal record of responsibility being in place and it is important that this is completed.

# List of Annexes

Annex A – Safety Engineering Success Profiles

Annex B – SM Assignment Specification

Annex C – Competence Assessment Framework & Definitions Grid

Annex D – Competency Discussion Outcome Evidence & Record Sheet

# Annex A – Safety Engineering Success Profiles

The Professional II and Senior Technical Specialist I Safety Engineering Success Profiles are defined within the suite of the Engineering Function Success Profiles. The authoritative source will not be held within this Annex and can be found [here](https://modgovuk.sharepoint.com/teams/17406/SuccessProfiles/Engineering/Forms/AllItems.aspx).

# Annex B – SM Assignment Specification

**GENERIC SAFETY MANAGER ASSIGNMENT SPECIFICATION**

(Areas highlighted in yellow to be adapted for Domain / Application Area specific requirements)

|  |
| --- |
| **Safety Manager Assignment Specification**  **(Typical assignment title: Safety Manager / ???? – replace [XXX] in document** |

| SECTION 1: Assignment Overview | |
| --- | --- |
| **Why the assignment exists?** | * The [XXX] is responsible for [XXX] * This assignment specification should be read in conjunction with the related Letter of Appointment. |

| SECTION 2: The Individual | |
| --- | --- |
| **Success Profile** | |
| This assignment needs to be fulfilled by an individual aligned to and competent to undertake the following success profiles:   * Safety Engineer – Senior Technical Specialist I or above. | |
| **Certification / Qualifications / Registrations Required for this Assignment** | |
| * Any specific regulatory endorsement for this assignment * Qualifications, Registrations, and generic Engineering competence requirements are specified in the Safety Engineer Engineering Function Success Profile.   (Senior Technical Specialist I or above) | |
| **Professional Engineering Discipline** | |
| **Discipline (delete as appropriate)** | **Requirement** |
| Mechanical Engineering; Electrical Engineering; Systems Engineering & Integration; Sensors and Electronic Systems; Software and Missions Systems; Safety and Environment; | Identify Primary (Foundation), Secondary (Main Area of Expertise) and Tertiary (Useful other area of expertise)  - As appropriate to this assignment |
| **Training Relevant to this Assignment** | **Essential / Desirable** |
| Insert relevant training for assignment from [S&EP Leaflet 17/2023](https://www.asems.mod.uk/guidance/safety-and-environmental-protection-leaflets) Training Matrix for required Training | Insert relevant training for assignment from [S&EP Leaflet 17/2023](https://www.asems.mod.uk/guidance/safety-and-environmental-protection-leaflets) Training Matrix for required Training |

| SECTION 3: Assignment Specific Competence | |
| --- | --- |
| **Core Area 1: DE&S Success Profile Behaviours** | |
| **Behaviour** | **Minimum Level** |
| Changing and Improving | CSBC 3 |
| Leadership | CSBC 3 |
| Communicating and Influencing | CSBC 3 |
| Safety Focus | TBC |
| **Core Area 2: Engineering Function Competency** | |
| **Competence** | **Minimum Level** |
| EFCF 1 – Improve Engineering Capability | Supervised Practitioner |
| EFCF 2 – Application of Analytical Techniques | Supervised Practitioner |
| EFCF 3 – Technical Requirements, Evaluation & Acceptance | Supervised Practitioner |
| EFCF 4 – Technical Decision Making | Supervised Practitioner |
| EFCF 5 – Technical Risk Management | Supervised Practitioner |
| **Core Area 3: Systems Safety Competences** | |
| **Competence** | **Minimum Level** |
| SYSSAF 1 – Compliance with MOD policy and instructions, legislation, and procedures for system safety management | Practitioner |
| SYSSAF 2 – Complies with the principles of System Safety management | Practitioner |
| SYSSAF 3 – Complies with MOD requirements for System Safety Management through life, monitoring arrangements, and required documentation | Practitioner |
| SYSSAF 4 – Adoption of a safety risk management process consistent with the level of safety risk | Practitioner |
| SYSSAF 5 – Applies engineering and scientific knowledge within a domain and complies with applicable specialist safety requirements, procedures, and regulations | Practitioner |
| **Core Area 4: Systems Thinking and Integration Competence** | |
| **Competence** | **Minimum Level** |
| Systems Theory – Applying Systems Theory in Practice | Competent |
| Relationships – Taking account of relationships between equipment, systems and people when taking safety decisions. | Competent |
| Perspectives – Examining systems from multiple perspectives | Competent |
| Systems Thinking – Applying appropriate management styles for the safety system issue being considered | Competent |
| **Core Area 5: Regulated Environment, Technical Discipline & Specialism** | |
| **Domain Specific** | |
| **Competence** | **Minimum Level** |
| Specific Regulated Environment Competence | Specify level – typically Supervised Practitioner in any key application area competence. |
| **Assignment Specific Experience** | |
| * Engineering knowledge and experience appropriate to the application area. * Knowledge of the legal and regulatory framework. | |

| SECTION 4: The Activities  **Typical contents shown below but needs to be edited by DFM for generic domain version** |
| --- |
| **Key Activities and Tasks** |
| * Key responsibilities and activities of the [XXX] assignment are defined below:   + Insert key responsibilities here. Example of Professional II Safety Engineer shown below, but needs to be tailored to suit specific assignment:   + The Safety Manager is responsible for confirming the processes and tools have been applied to the appropriate rigor and subsequently provide supporting statement to the SSR/SR to this fact.   + Support the development and maintenance of policy and process to satisfy the DE&S corporate standards for Acquisition Safety.   + Develops, manages, and maintains effective Safety Management Systems. Identifies and analyses hazards and contributes to the identification and evaluation of risk reduction measures, ensuring that these are adequately documented and managed   + Work with colleagues at all levels to ensure compliance with relevant statutory legislation and regulations, MOD regulations and DE&S Policy.   + Develops and maintains project safety assurance plans, monitors compliance, and ensures that safety assurance evidence is gathered and assessed for safety case preparation   + Produces, reviews, and recommends acceptance/rejection of safety artefacts defined in their formal responsibilities against safety policies, but not act as final signatory on safety artefacts.   + Supports the management of contractual aspects to ensure safety requirements are captured and the management of contractors who perform safety activities.   + Provides informed safety advice to decision makers through Project Safety Panels * Additional specific responsibilities are described in the associated Letter of Appointment |
| **Responsibilities/Direction/Authorisation** |
| * This [XXX] assignment is subject to formal Letter of Appointment from [XXX] * The [XXX] assignment has no delegated authority to make technical decisions or responsibilities to state that a system is safe or to determine the ALARP status of risk. |
| **Accountability & Authority** |
| * This [XXX] assignment has no delegated authority to be the FINAL signatory on Safety Artefacts. |

| SECTION 5: Confirmation and Acceptance | |
| --- | --- |
| **Senior Safety Responsible** | **Individual Assigned** |
| Name: | Name: |
| Comments: | Comments: |
| Signature: | Signature: |
| Date: | Date: |

# 

# Annex C – Competence Assessment Framework & Definitions Grid

## Assessment Scope and Coverage

There are five Core Areas that the competence of staff with safety responsibility will be assessed against. These are captured and summarised in Table 1, clicking the Core Area title in the left column will take you to further details within this Annex.

Table 1: Five Core Areas Staff Will be Assessed Against

| **Core Area** | **Summary Description** | | |
| --- | --- | --- | --- |
| Area 1 – DE&S Success Profile Behaviours | These are the Behaviours most relevant to roles with safety responsibility and are listed within each Role Success Profile. The complete list of DE&S Behaviours is: | | |
| * Seeing the Big Picture * Changing and Improving * Making Effective Decisions * Developing Self and Others | * Leadership * Communication and Influencing * Working Together | * Managing a Quality Service * Working at Pace * Safety Focus * Working as one with our Customer |
| Area 2 – Engineering Function Competency | These are the competencies defined as part of the Engineering Functional Competency Framework (EFCF):   * **EFCF 1 – Improve Engineering Capability** – Explores innovative opportunities and exploit emerging technology to develop, sustain and enhance Defence capability. * **EFCF 2 – Application of Analytical Techniques** – Applies systems thinking and analytical techniques to refine the approach, achieve intended outcomes and challenge assumptions. * **EFCF 3 – Technical Requirements, Evaluation and Acceptance** – Develops well-formed requirements and evaluates technical solutions against verified acceptance criteria whilst promoting best practice * **EFCF4 – Technical Decision Making** – Applies technical expertise and uses available evidence to make informed technical decisions on complex issues. * **EFCF 5 – Technical Risk Management** – Assesses, communicates, and manages technical risk associated with engineering activities to enable regulatory compliance and deliver operational effectiveness.   In addition to these EFCFs, Engineering Function Competency may also be demonstrated via applicable Professional Registrations (e.g., IMechE, IChemE, etc.). | | |
| Area 3 – Systems Safety | These are primarily focused on the System Safety Functional Competences:   * **SYSSAF 1** – Compliance with MOD policy and instructions, legislation, and procedures for system safety management * **SYSSAF 2** – Complies with the principles of System Safety management * **SYSSAF 3** – Complies with MOD requirements for System Safety Management through life * **SYSSAF 4** – Adoption of a safety risk management process consistent with the level of safety risk * **SYSSAF 5** – Applies engineering and scientific knowledge within a domain and complies with applicable specialist safety requirements, procedures, and regulations   In addition to these competences, this Core Area is also underpinned by the following:   * Acquisition Safety Process Understanding * Mandatory Safety Courses | | |
| Area 4 – Systems Thinking and Integration Competence | Systems Thinking and Integration plays a key role in safety with some key areas being:   * **Applying systems theory in practice** – Ensuring safety judgements are based upon an understanding of basic systems concepts (such as emergence and hierarchy) * **Taking account of relationships between equipment, systems and people when taking safety decisions** – Ensuring safety judgements are made based upon an understanding of how elements of the system work together. * **Examining systems from multiple perspectives** – Ensuring safety judgements are based upon a diverse range of views of the system (such as an operational perspective or sustainment perspective). * **Applying appropriate management styles for the safety system issue being considered** – Knowing when to think slow and apply systems thinking and when it is OK to take shortcuts and think fast. Focussing on the task at hand whilst exploring the wider context. Having the paradoxical mindset (Big-Picture Thinking and Attention to Detail, Strategic and Tactical, Analytic and Synthetic, Courageous and Humble, Methodical and Creative). Being adaptable. Abstracting. Having foresight and vision. * Understanding of CADMID acquisition and support lifecycle. | | |
| Area 5 – Regulated Environment, Technical Discipline & Specialism | This Area focusses on any competencies that are specific to the Regulated Environment the member of staff is being deployed in. Noting that, whilst there may be significant overlap, the Regulated Environment does not directly transfer as Domain, as some Regulated Environments may be cross-Domain. For example, the OME Regulated Environment may be relevant to the Land, Sea, or Air Domain.  Key areas this may include are:   * Technical Discipline & Specialism (e.g., Naval Architecture, Software Engineering, Mechanical Engineering, etc…). * Regulated Environment knowledge (e.g., Nuclear Systems, Maritime Systems & Platforms). * Product / equipment knowledge and understanding. * Regulated Environment specific safety experience such as knowledge of the regulatory environment and hazards. | | |

## Area 1 – DE&S Success Profile Behaviours

The DE&S Success Profile Behaviours and the expectations in each Behaviour against the applicable Civil Service Behaviour/Core (CSBC) grade, can be found [here](https://modgovuk.sharepoint.com/:b:/r/teams/5020/Library/Human%20Resources%20Portal%20Documents/CS_Behaviours_2018-DES-branded-v6.pdf?csf=1&web=1&e=GhclMR).

## Area 2 – Engineering Function Competency

The Engineering Function Competence Framework (EFCF) can be found [here](https://modgovuk.sharepoint.com/teams/5020/Library/Human%20Resources%20Portal%20Documents/DE&S_Engineering%20Competence%20Framework.pdf).

## Area 3 – Systems Safety Competences

The System Safety Functional Competences can be found [here](https://modgovuk.sharepoint.com/sites/IntranetCivilianHRPeoplePortal/Documents/Forms/AllItems.aspx?id=%2Fsites%2FIntranetCivilianHRPeoplePortal%2FDocuments%2FSystem%5FSafety%2Epdf&parent=%2Fsites%2FIntranetCivilianHRPeoplePortal%2FDocuments).

## Area 4 – Systems Thinking and Integration Competence

This section focusses on the System Thinking and Integration Competence required for staff who hold some safety responsibility. These have been developed by DES EngSfty-EG ITS-SE and have been compiled using:

* Existing US Department of Defence work
* National Aeronautics and Space Administration work
* Royal Academy of Engineering

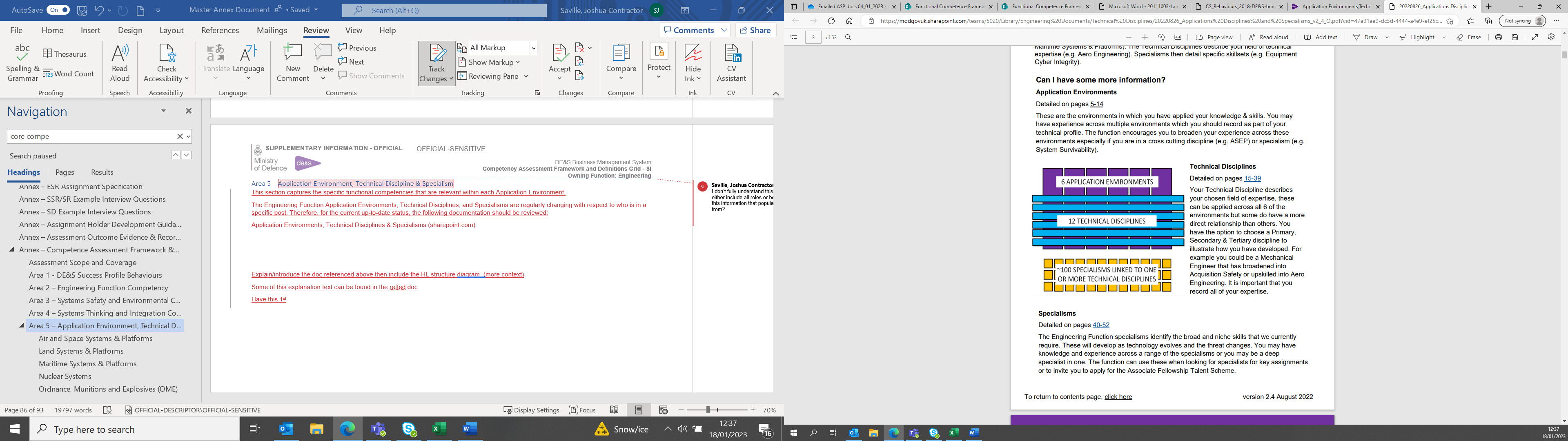
Competence in these areas is demonstrated by the assignment holder displaying all the positive indicators and none of the negative indicators against each of four Systems Thinking Competence Areas summarised in Table below.

Table 2: Summary of Systems Thinking and Integration Competence

| **Competence Area** | **Definition** | **Positive Indicators / Evidence** | **Negative Indicators / Evidence** |
| --- | --- | --- | --- |
| Applying Systems Theory in practice | Ensuring safety judgements are based upon an understanding of basic systems concepts (such as emergence and hierarchy). | * Recognises that small changes in one part of the system can result in safety or performance issues. * Recognises that single changes can impact multiple systems and processes, both within and outside their area of responsibility. * Recognises that changes in supply chain, operating environment, maintenance approach and operational use can result in safety or performance issues. | * Fails to investigate the performance/safety impact of (minor) changes to sub-systems and components. * Fails to investigate the performance / safety impact of (minor) changes in supply chain, operating environment, maintenance approach and operational use. * Fails to address issues if they are outside their formal responsibilities. |
| Taking account of relationships between equipment, systems and people when taking safety decisions. | Ensuring safety judgements are made based upon an understanding of how elements of the system work together. | * Predicts how key elements of the system work together to deliver the required levels of performance and safety and uses this to inform decisions. * Predicts how sub-system interactions can lead to safety and performance issues and uses this to inform decisions. * Predicts how system performance may be misunderstood by operators leading to safety issues. * Identifies when wider management structures and incentives are undermining safety. * Ensures that safety decisions take account of the role of people in managing systems. | * Fails to see the linkage between sub-system behaviour and wider system safety and performance. * Does not use understanding of how the sub-systems interact to inform decisions. * Assumes that the system is safe however the operators are using it. * Fails to recognise drifting goals eroding system safety. * Fails to consider how incorrect management of systems could lead to an accident. |
| Examining systems from multiple perspectives | Ensuring safety judgements are based upon a diverse range of views of the system (such as an operational perspective or sustainment perspective) and are based upon understanding of similarities and differences from other situations. | * Recognises that the system needs to be understood from multiple perspectives. * Can explain issues to people using multiple perspectives. * Challenges requirements and operational concepts that cannot be delivered safely. * Recognises unsafe worldviews and knows how to challenge and influence them. * Sees the similarities and differences between the current situations and previous accidents, near misses or safety issues and uses these similarities to shape their decisions and influence stakeholders | * Assumes that everyone sees the system in the way they do. * Assumes that ‘the customer is always right’ and doesn’t challenge their requirements or assumptions. * Fails to see the difference between situations, leading to unsafe situations or wasted time and effort. |
| Applying appropriate management styles for the safety system issue being considered. | Knowing when to think slow and apply systems thinking and when it is OK to take shortcuts and think fast[[2]](#footnote-3). Focussing on the task at hand whilst exploring the wider context. Having the paradoxical mindset (Big-Picture Thinking and Attention to Detail, Strategic and Tactical, Analytic and Synthetic, Courageous and Humble, Methodical and Creative). Being adaptable. Abstracting. Having foresight and vision. | * Recognises the need to make quick judgement calls *and* insist on more in-depth analysis depending on the situation. * Deals with the specific issue whilst taking account of wider safety and performance concerns. * Applies innovation and creativity whilst strictly following the safety management processes. * Changes their approach when the previous attempts have failed. * Identifies patterns of behaviour and develops hypothesis as to why they are happening. | * Sees related events as isolated incidents – doesn’t see the patterns. * Deals with the specific issue, or wider concern, but not both. * Fails to follow the basic processes. * Fails to apply innovation and creativity in solving system safety concerns. * Continues to apply approaches that have failed previously. * Fails to see emerging patterns of behaviour and predict safety or performance issues. |

## Area 5 – Regulated Environment, Technical Discipline & Specialism

This section captures the specific functional competencies that are relevant within each Regulated Environment (which can be tailored depending on the Assignement Specification of the role). It is based upon the structure and information captured within the Engineering Function [Regulated Environments, Technical Disciplines, and Specialisms](https://modgovuk.sharepoint.com/teams/2228/Functions/Engineering/pages/Document.aspx?title=Application%20Environments,Technical%20Disciplines%20%26%20Specialisms&itempath=https://modgovuk.sharepoint.com/teams/2228/Functions/Engineering&author=Osmond,%20Amanda%20Professional%20I%20(DES%20Eng-CFM-7)&cat=Technical%20Disciplines&cat1=).

This document provides the Framework for the engineering knowledge, skills, and experience that DE&S requires both to develop individuals’ careers and assist the Engineering Function in developing the workforce. The framework that the Engineering Function uses is the ‘Regulated Environment, Technical Discipline and Specialisms Matrix’, which is captured in Figure 5. The Engineering Function Regulated Environments, Technical Disciplines, and Specialisms change with respect to who holds specific posts and titles. Therefore, for the current status, the hyperlink above should be used.

The knowledge, skills, and experience that the Engineering Function requires is defined in terms of 6 ‘Regulated Environments’, 12 cross-cutting ‘Technical Disciplines’ and 100+ ‘Specialisms’. The Regulated Environments describe the areas in which you work within DE&S (e.g., Maritime Systems & Platforms). The Technical Disciplines describe your field of technical expertise (e.g., Aero Engineering). Specialisms then detail specific skillsets (e.g., Equipment Cyber Integrity).

Figure 5: Regulated Environment, Technical Discipline and Specialisms Matrix

The key Regulated Environments referenced in the Engineering Function’s Regulated Environments, Technical Discipline & Specialisms document are as follows and are further developed under the following headings:

* Air and Space Systems & Platforms.
* Land Systems & Platforms.
* Maritime Systems & Platforms.
* Nuclear Systems.
* Ordnance, Munitions and Explosives (OME).
* Mission and Combat Systems (not currently captured within this set of functional competencies).

### Air and Space Systems & Platforms

This section details the specific competencies and requirements applicable to the Air and Space Systems & Platforms Regulated Environment. The specific indicators for each Assessment Level against all of the Air and Space Systems Competences; are provided in the Airworthiness Competence Set (ACS) [here](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1069069/Airworthiness_Competence_Set.pdf).

In addition, the key competencies from the ACS are captured in Table 3 below alongside the competency levels and placeholder cells, which may be used by the Regulated Environment specific evaluator to identify the required level for each safety-related role.

Table 3: ACS Key Competencies

| **Air & Space Systems Engineering Functional Competence** | **Levels** | **ESR / SSR / SR / SD / SM <For Evaluator Delete as Appropriate>** |
| --- | --- | --- |
| ACS1 Core Function – The Core function encompasses those competences necessary to understand the regulatory context and associated behaviours in which Defence Aviation is conducted to facilitate the delivery of a safe environment within which Airworthiness may be established and preserved. | Awareness  Supervised Practitioner  Practitioner  Expert | To be determined by the evaluator who shall determine the competency level required for each Role. The required competency level should also be recorded in the relevant Assignment Specification. |
| ACS2 Type Airworthiness – The Type Airworthiness function encompasses all the actions associated with the upkeep of a Type Design and the associated Approved Data through life | Awareness  Supervised Practitioner  Practitioner  Expert |
| ACS3 Continuing Airworthiness Support – The CAw function encompasses those competencies necessary to provide satisfactory support to the Aviation Duty Holder/AM(MF)/ MilCAM to facilitate the delivery of a safe environment within which Airworthiness may be sustained. | Awareness  Supervised Practitioner  Practitioner  Expert |
| ACS4 Aircraft Systems – The Aircraft System function encompasses the knowledge and understanding of Aircraft System(s) that when required in a role ensures safe and effective military aircraft operation. | Awareness  Supervised Practitioner  Practitioner  Expert |
| ACS5 Air Safety Management – The Air Safety Management function encompasses knowledge and understanding of specialist safety management requirements and techniques. | Awareness  Supervised Practitioner  Practitioner  Expert |
| ACS6 Release to Service and Military Permit to Fly Management – The Release To Service (RTS) and Military Permit to Fly (MPTF) management function encompasses knowledge and understanding of preparing RTS/MPTF (In-Service) Recommendations. | Awareness  Supervised Practitioner  Practitioner  Expert |

For the Air Environment these ACS areas are further broken down into lower-level competencies. The ACS is used to define competence requirements for Airworthiness but can be used as a reference when assessing competence of other staff. For example, the DE&S Airworthiness Competency Assessment Tool (DASCAT) can be used to assess competence.

Assessment of competence within the Air Environment is managed by the [Director General Air Safety Policy Instruction (DGAPI) 03](https://modgovuk.sharepoint.com/teams/5020/Library/Air%20Safety%20Portal%20Documents/Air%20Safety%20Documents/DGAPIs/20220817_%20DGAPI%2003%20V3.0%20O.pdf), which refers to the ACS and means in which competence with respect to safety must be assessed.

### Land Systems & Platforms

This section details the specific competencies and requirements applicable to the Land Systems & Platforms Regulated Environment.

To see the specific Effective Indicators for each Assessment Level against all of the Land Systems Competences; see the Land Systems Engineering Functional Competences [here](https://modgovuk.sharepoint.com/sites/IntranetCivilianHRPeoplePortal/Documents/Forms/AllItems.aspx?id=%2Fsites%2FIntranetCivilianHRPeoplePortal%2FDocuments%2FLand%5FSystems%5FEngineering%2Epdf&parent=%2Fsites%2FIntranetCivilianHRPeoplePortal%2FDocuments).

In addition, the key competencies from the Land Systems Engineering Functional Competences Framework are captured in Table 4 below alongside the competency levels and placeholder cells, which may be used by the Regulated Environment specific evaluator to identify the required level for each safety-related role.

Table 4: Land Systems & Platforms Competencies

| **Land Systems Competence Areas** | **Land Systems Engineering Functional Competence** | **Levels** | **ESR / SSR / SR / SD / SM <For Evaluator Delete as Appropriate>** |
| --- | --- | --- | --- |
| Land Systems Competence Area 1 – Land Systems Operations | LSFC1.1 – Land Vehicles Operations | Awareness  Practitioner  Expert | To be determined by the evaluator who shall determine the competency level required for each Role. The required competency level should also be recorded in the relevant Assignment Specification. |
| LSFC1.2 – Soldier System Operations | Awareness  Practitioner  Expert |
| LSFC1.3 – Operational Infrastructure | Awareness  Practitioner  Expert |
| Land Systems Competence Area 2 – Land Systems Design | LSFC2.1 – Land Vehicle Design | Awareness  Practitioner  Expert |
| LSFC2.2 – Soldier System Design | Awareness  Practitioner  Expert |
| LSFC2.3 – Electrical and Mechanical Systems | Awareness  Practitioner  Expert |
| LSFC2.4 – Systems Integration | Awareness  Practitioner  Expert |

### Maritime Systems & Platforms

This section details the specific competencies and requirements applicable to the Marine Systems & Platforms Regulated Environment.

To see the specific Indicators of Knowledge and Experience for each Assessment Level against all of the Marine Systems Competences; please see the Maritime Engineering Functional Competence Framework [here](https://modgovuk.sharepoint.com/sites/IntranetCivilianHRPeoplePortal/Documents/Forms/AllItems.aspx?id=%2Fsites%2FIntranetCivilianHRPeoplePortal%2FDocuments%2FMaritime%5FEngineering%2Epdf&parent=%2Fsites%2FIntranetCivilianHRPeoplePortal%2FDocuments).

In addition, the key competencies from the Maritime Engineering Functional Competence Framework are captured in Table 5 below alongside the competency levels and placeholder cells, which may be used by the Regulated Environment specific Evaluator to identify the required level for each safety-related role.

Table 5: Marine Systems & Platforms Engineering Function Competences

| **Maritime Systems Engineering Functional Competence** | **Levels** | **ESR / SSR / SR / SD / SM <For Evaluator Delete as Appropriate>** |
| --- | --- | --- |
| ME1 – Naval Architecture and Warship Engineering | Awareness  Supervised Practitioner  Practitioner  Expert | To be determined by the evaluator who shall determine the competency level required for each Role. The required competency level should also be recorded in the relevant Assignment Specification. |
| ME2 – Marine Engineering (Mechanical) Knowledge | Awareness  Supervised Practitioner  Practitioner  Expert |
| ME3 – Marine Engineering (Electrical) Knowledge | Awareness  Supervised Practitioner  Practitioner  Expert |
| ME4 – Marine Engineering (Naval Electronic Combat Systems) Knowledge | Awareness  Supervised Practitioner  Practitioner  Expert |
| ME5 – Maritime Safety and Environmental Knowledge | Awareness  Supervised Practitioner  Practitioner  Expert |
| ME6 – Warship In-Service Support | Awareness  Supervised Practitioner  Practitioner  Expert |

### Nuclear Systems

This section details the specific competencies and requirements applicable to the Nuclear Systems Regulated Environment.

To see the specific Indicators of Knowledge and Experience for each Assessment Level against all of the Nuclear Systems Competences; please see the Nuclear Competence Framework [here](https://modgovuk.sharepoint.com/sites/mod-dneskillscommunityportal/Shared%20Documents/Forms/AllItems.aspx?id=/sites/mod-dneskillscommunityportal/Shared%20Documents/2023_Nuclear%20Competence%20Framework_ver_2.0_O.pdf&parent=/sites/mod-dneskillscommunityportal/Shared%20Documents).

In addition, the competence groups from the Nuclear Competence Framework are captured in Table 6: Nuclear Competence Groups below alongside the placeholder cells, which may be used by the Regulated Environment specific Evaluator to identify the required level for each safety-related role.

Table 6: Nuclear Competence Groups

| **Nuclear Competence Groups** | **ESR / SSR / SR / SD / SM <For Evaluator Delete as Appropriate>** |
| --- | --- |
| Competence Group 1 – Nuclear Safety and Security | To be determined by the evaluator who shall determine the competency level required for each Role. The required competency level should also be recorded in the relevant Assignment Specification. |
| Competence Group 2 – Defence Nuclear Programme Management |
| Competence Group 3 – Nuclear Emergency Response |
| Competence Group 4 – Concept, Assessment and Design of Nuclear Systems and Infrastructure |
| Competence Group 5 – Manufacturing, Testing, Commissioning and Acceptance of Nuclear Systems and Infrastructure |
| Competence Group 6 – In-service, Support and Maintenance of Nuclear Systems and Infrastructure |
| Competence Group 7 – Nuclear Liabilities Management (Decommissioning and Disposal) |

### Ordnance, Munitions and Explosives (OME)

This section details the specific competencies and requirements applicable to the OME Regulated Environment.

To see the specific Effective Indicators for each Assessment Level against all of the OME Competences; see the WOME Functional Skills Framework [here](https://modgovuk.sharepoint.com/sites/IntranetCivilianHRPeoplePortal/Documents/Forms/AllItems.aspx?id=%2Fsites%2FIntranetCivilianHRPeoplePortal%2FDocuments%2FWOME%5FFunctional%5FSkills%5FFramework%2Epdf&parent=%2Fsites%2FIntranetCivilianHRPeoplePortal%2FDocuments).

The Weapons OME (WOME) Skills Framework uses Explosives Substances & Articles (ESA) National Occupational Standards (NOS), to assess competence. These not only benefit the MOD but provide a criterion of good practice across the whole sector thereby enabling all employers to engage in a national strategy to sustain national WOME capability. The ESA NOS are external standards approved by the Qualification and Curriculum Authority (QCA) which sit as part of the wider National Occupational Standards framework.

Each area of the ESA NOS cascades into more specific units of competence which are divided into Performance Criteria & Knowledge Requirements with statements of the contexts in which users should demonstrate their competence, making it easier to match a role or a person to a specific standard. The ESA NOS are listed by functional area, however not all of the units within each ESA NOS functional area are included in MyHR (to avoid duplication with other skills frameworks and core competences).

The Functional Areas of the ESA NOS and number of units (competences) which are in MyHR are captured in Table 7: Functional Areas of the ESA NOS below.

Table 7: Functional Areas of the ESA NOS

|  |  |  |
| --- | --- | --- |
| **ESA NOS Functional Area  included in MyHR** | **Number of competences included in MyHR** | **Competences applicable to SSR/SR/SD/SM Roles <For Evaluator Delete as Appropriate>** |
| 1. Research, Design & Development | 14 |  |
| 1. Safety Management | 22 | WOME SM 2.3, 2.4, 2.4A, 2.9, 2.12 |
| 1. Test & Evaluation | 20 |  |
| 1. Manufacture | 14 |  |
| 1. Maintenance | 16 |  |
| 1. Procurement | 3 |  |
| 1. Storage | 18 |  |
| 1. Transport | 14 |  |
| 1. Facilities Management | 5 | WOME FM 9.1, 9.2, 9.3 |
| 1. Not Used (Not Included in MyHR) | 0 |  |
| 1. Disposal | 27 |  |
| 1. Not Used (Not Included in MyHR) | 0 |  |
| 1. General | 9 |  |

From these 13 Functional Areas, the Safety Management and Facilities Management Functional Areas include specific units (competences) which apply to roles with safety responsibilities within both Defence Munitions (DM) and OME Delivery Teams (DTs), as presented in Table 8 and Table 9: Defence Specific OME Competence Areas. See the WOME Functional Skills Framework [here](https://modgovuk.sharepoint.com/sites/IntranetCivilianHRPeoplePortal/Documents/Forms/AllItems.aspx?id=%2Fsites%2FIntranetCivilianHRPeoplePortal%2FDocuments%2FWOME%5FFunctional%5FSkills%5FFramework%2Epdf&parent=%2Fsites%2FIntranetCivilianHRPeoplePortal%2FDocuments).

Table 8: WOME ESA NOS Competence Areas

| **ESA NOS Functional Areas (relevant to safety-related roles)** | **Competence Areas (Units)** | **Levels** | **ESR / SSR / SR / SD / SM  <For Evaluator Delete as Appropriate>** |
| --- | --- | --- | --- |
| 2. Safety Management (SM) | WOME SM 2.3 Review the factors affecting the safety of specific explosive substances and/or articles. | Basic  Skilful  Expert | To be determined by the evaluator who shall determine the competency level required for each Role. The required competency level should also be recorded in the relevant Assignment Specification. |
| WOME SM 2.4 Analyse the acceptability of safety control measures for specific explosive substances and/or articles. | Basic  Skilful  Expert |
| WOME SM 2.4A Review safety control measures for specific explosive substances and/or articles. | Basic  Skilful  Expert |
| WOME SM 2.9 Determine and implement aggregated risk control measures for explosives. | Basic  Skilful  Expert |  |
| WOME SM 2.12 Investigate explosives-related safety incidents. | Basic  Skilful  Expert |
| 9. Facility Management (FM) | WOME FM 9.1 Define explosives facilities requirement. | Basic  Skilful  Expert |
| WOME FM 9.2 Ensure explosives facilities are fit for purpose. | Basic  Skilful  Expert |
| WOME FM 9.3 Conduct safety checks on explosives facilities. | Basic  Skilful  Expert |

Table 9: Defence Specific OME Competence Areas

|  |  |  |  |
| --- | --- | --- | --- |
| **Defence Specific OME Competence** | **Competence Area** | **Levels** | **ESR / SSR / SR / SD / SM  <For Evaluator Delete as Appropriate>** |
| Environment (Context) | WOME Env 1 – Domain Regulatory Requirements (see Note 1 below) | Basic  Skilful  Expert | To be determined by the evaluator who shall determine the competency level required for each Role. The required competency level should also be recorded in the relevant Assignment Specification. |

**Note 1**

The OME environment differs from the other Regulated Environments as it is key that there is an understanding of operating and acquisition context. There are significant differences in cultures and ways of working between the different armed forces, acquisition approaches and supply chains.

Although OME is regulated by the Defence Ordnance Safety Regulator (DOSR), Weapons DTs deliver into all other domains. Safety-related assignments will need knowledge of regulatory requirement for the domain they are supplying equipment to and may require competence assessment by the domain regulator e.g. Airworthiness, Maritime, Nuclear and Land.

DOSR mandate a specific 2nd Party Assurance regime for OME known as OSRP. Staff in safety-related assignments will need to be familiar with this process.

DOSR Regulations mandate that an independent Safety Advisor (SA) is appointed. The SA must be able to demonstrate competence in applicable UK legislation, regulations, and policy. DOSG WS can provide this function. Staff in safety-related assignments must be at least aware of the necessity to engage with DOSG through the lifecycle of OME.

DOSR Regulations mandate competence assessment against ESA NOS. Any equivalence with other Competence Frameworks (e.g. SYSSAF) will need to be documented and the assessment should be looking for competence in OME.

# Annex D – Competency Discussion Outcome Evidence & Record Sheet

**(Evaluators to complete relevant sections during Competency Discussion)**

**When returning document before competency discussion, you should also attach your C.V. and a copy of your Letter of Appointment. Further information and guidance can be found in the Guidance for Assignment Holders ASP specific to the assignment being assessed for.**

|  |  |  |
| --- | --- | --- |
| **Assignment associated with evidence** |  | |
| **Assignment Holder** | Name: | Date of taking up assignment: XX/XX/XXXX |
| ASP Safety Tag: SM | |
| **Date of Competency Discussion** | XX/XX/XXXX | |
| **Evaluators** | Evaluator 1: | |
| Evaluator 2: | |
| Evaluator 3 (optional): | |

The following sections focus on the three main stages of the Competency Discussion process. The stages in the Competency Discussion process are captured in Figure 6. The document contains tables to be populated by both the assignment holder and evaluator. Areas to be populated by the assignment holder are Grey and areas to be populated by the evaluator are Lilac.

Figure 6: Five Stages of the Competency Discussion Process

The 3 main stages that are focussed on in the following sections are:

* Stage 2: Application and Understanding of the Acquisition Safety Process
* Stage 3: Understanding of Safety Risks Through the Lifecycle
* Stage 4: Taking a Whole Systems View of Safety

## Summary of Core Areas and Competencies

The following sections focus on Stages 2-4 of the Competency Discussion, and consider the five Core Areas that each applicant’s Competency Discussion will be assessed against. This section provides a summary of the five Core Areas and their comprising Behaviours and Competencies.

| **Core Areas** | **Behaviours & Competencies** | **Level** |
| --- | --- | --- |
| Area 1 – DE&S Success Profile Behaviours | * Seeing the Big Picture * Changing and Improving * Making Effective Decisions * Leadership * Communicating and Influencing * Working Together * Developing Self and Others * Managing a Quality Service * Delivering at Pace * Safety Focus * Working as one with our Customer | <TBC by Evaluator depending on Role> |
| Area 2 – Engineering Function Competency | **EFCF 1 – Improve Engineering Capability** – Explores innovative opportunities and exploit emerging technology to develop, sustain and enhance Defence capability.  **EFCF 2 – Application of Analytical Techniques** – Applies systems thinking and analytical techniques to refine the approach, achieve intended outcomes and challenge assumptions.  **EFCF 3 – Technical Requirements, Evaluation and Acceptance** – Develops well-formed requirements and evaluates technical solutions against verified acceptance criteria whilst promoting best practice  **EFCF4 – Technical Decision Making** – Applies technical expertise and uses available evidence to make informed technical decisions on complex issues,  **EFCF 5 – Technical Risk Management** – Assesses, communicates and manages technical risk associated with engineering activities to enable regulatory compliance and deliver operational effectiveness. | <TBC by Evaluator depending on Role> |
| Area 3 – Systems Safety Competences | **SYSSAF 1** – Compliance with MOD policy and instructions, legislation and procedures for system safety management  **SYSSAF 2** – Complies with the principles of System Safety management  **SYSSAF 3** – Complies with MOD requirements for System Safety Management through life  **SYSSAF 4** – Adoption of a safety risk management process consistent with the level of safety risk  **SYSSAF 5** – Applies engineering and scientific knowledge within a domain and complies with applicable specialist safety requirements, procedures and regulations | <TBC by Evaluator depending on Role> |
| Area 4 – Systems Thinking and Integration Competence | * **Applying systems theory in practice** – Ensuring safety judgements are based upon an understanding of basic systems concepts (such as emergence and hierarchy) * **Taking account of relationships between equipment, systems and people when taking safety decisions** – Ensuring safety judgements are made based upon an understanding of how elements of the system work together. * **Examining systems from multiple perspectives** – Ensuring safety judgements are based upon a diverse range of views of the system (such as an operational perspective or sustainment perspective). * **Applying appropriate management styles for the safety system issue being considered** – Knowing when to think slow and apply systems thinking and when it is OK to take shortcuts and think fast. Focussing on the task at hand whilst exploring the wider context. Having the paradoxical mindset (Big-Picture Thinking and Attention to Detail, Strategic and Tactical, Analytic and Synthetic, Courageous and Humble, Methodical and Creative). Being adaptable. Abstracting. Having foresight and vision. | <TBC by Evaluator depending on Role> |
| Area 5 – Application of Domain Technical Discipline & Specialism | **Air Systems and Platforms**   * ACS1 – Core Function * ACS2 – Type Airworthiness * ACS3 – Continuing Airworthiness Support * ACS4 – Aircraft Systems * ACS5 – Air Safety Management * ACS6 – Release to Service and Military Permit to Fly Management   **Land Systems and Platforms**   * LSFC 1.1 – Land Vehicle Operations * LSFC 1.2 – Soldier Systems Operations * LSFC 1.3 – Operational Infrastructure * LSFC 2.1 – Land Vehicle Design * LSFC 2.2 – Soldier System Design * LSFC 2.3 – Electrical and Mechanical Systems * LSFC 2.4 – Systems Integration   **Maritime Systems & Platforms**   * ME1 – Naval Architecture and Warship Engineering * ME2 – Marine Engineering (Mechanical) knowledge * ME3 – Marine Engineering (Electrical) knowledge * ME4 – Marine Engineering (Naval Electronic Combat Systems) * ME5 – Maritime Safety & Environmental Knowledge * ME6 – Warship In-Service Support   **Nuclear Systems**   * Competence Group 1 – Nuclear Safety and Security * Competence Group 2 – Defence Nuclear Programme Management * Competence Group 3 – Nuclear Emergency Response * Competence Group 4 – Concept, Assessment and Design of Nuclear Systems and Infrastructure * Competence Group 5 – Manufacturing, Testing, Commissioning and Acceptance of Nuclear Systems and Infrastructure * Competence Group 6 – In-service, Support and Maintenance of Nuclear Systems and Infrastructure * Competence Group 7 – Nuclear Liabilities Management (Decommissioning and Disposal)   **OME**   * WOME SM 2.3 – Review the factors affecting the safety of specific explosive substances and/or articles. * WOME SM 2.4 – Analyse the acceptability of safety control measures for specific explosive substances and/or articles. * WOME SM 2.4A – Review safety control measures for specific explosive substances and/or articles. * WOME SM 2.9 – Determine and implement aggregated risk control measure for explosives. * WOME SM 2.12 – Investigate explosives-related safety incidents. * WOME FM 9.1 – Define explosives facilities requirement. * WOME FM 9.2 – Ensure explosives facilities are fit for purpose. * WOME FM 9.3 – Conduct safety checks on explosives facilities. | <TBC by Evaluator depending on Role> |

## Stage 2: Application and Understanding of the Acquisition Safety Process

This Stage considers the following Core Areas:

* Area 1 – DE&S Success Profile Behaviour
* Area 3 – Systems Safety Competences
* Area 5 – Regulated Environment, Technical Discipline & Specialism

| **Supporting Evidence**  *To be completed by Assignment Holder* | |
| --- | --- |
| Safety Competence including experience with formal system safety management (e.g., ASEMS, safety management tools, safety case development) |  |
| Experience of producing, approving, or obtaining safety artefacts (e.g., Naval Authority Certificates, CCUs, etc.) |  |
| Previous experience of holding and executing formal safety responsibilities. |  |
| Previous experience of making difficult, complex, or challenging decisions and communicating (2 way) effectively where safety was at stake. |  |
| Experience and understanding of the specific Regulated Environment (platform, equipment, etc.) related safety management systems. |  |

| **Safety Training** | **Please refer to the Training Matrix.** | **Date Completed** |
| --- | --- | --- |
| Formal Systems and Environment Safety Training |  |  |

| **Requirements and Evidence**  *To be completed by Evaluator* | | **Assessment Outcome:**  - Competent  - Competent with Caveat(s)  - Not Yet Competent |
| --- | --- | --- |
| Safety Competence including experience with formal system safety management (e.g., ASEMS, safety management tools, safety case development). |  |  |
| Experience of producing, approving, or obtaining safety artefacts (e.g., Naval Authority Certifications, CCUs, etc.) |  |  |
| Previous experience of holding and executing formal safety responsibilities |  |  |
| Previous experience of making difficult, complex, or challenging decisions and communicating (2 way) effectively where safety was at stake. |  |  |
| Experience and understanding of the specific Regulated Environment (platform, equipment, etc.) related safety management systems |  |  |

| **Safety Training** | **Please refer to the Training Matrix.** | **Evaluators Comments** |
| --- | --- | --- |
| Formal Systems and Environment Safety Training |  |  |

## Stage 3: Understanding of Safety Risks Through the Lifecycle

This Stage considers the following Core Areas:

* Area 2 – Engineering Function Competency
* Area 5 – Regulated Environment, Technical Discipline & Specialism

| **Supporting Evidence**  *To be completed by Assignment Holder* | |
| --- | --- |
| Qualifications |  |
| Membership and Registrations |  |
| Understanding of safety risks across Equipment and Service Lifecycle (CADMID) and the different types of risk at each stage (e.g., maintenance related issues during in-service). |  |
| Experience and understanding of the specific platform, equipment or domain related technical risks arising at each stage (e.g., airworthiness considerations in air domain). |  |

| **Requirements and Evidence**  *To be completed by Evaluator* | | **Assessment Outcome:**  - Competent  - Competent with Caveat(s)  - Not Yet Competent |
| --- | --- | --- |
| Qualifications |  |  |
| Membership and Registrations |  |  |
| Understanding of safety risks across Equipment and Service Lifecycle (CADMID) and the different types of risk at each stage (e.g., maintenance related issues during in-service). |  |  |
| Experience and understanding of the specific platform, equipment, or domain technical risks at each stage (e.g., airworthiness considerations in air domain). |  |  |

## Stage 4: Taking a Whole Systems View of Safety

This Stage considers the following Core Areas:

* Area 4 – Systems Thinking and Integration Competence
* Area 5 – Regulated Environment, Technical Discipline & Specialism

| **Supporting Evidence**  *To be completed by Assignment Holder* | |
| --- | --- |
| Systems integration experience (e.g., platform / combat system integration, mechanical / electrical integration). (Matched against competencies) |  |
| Evidence of thinking through “whole system” usage risks. This includes interaction of environmental, human factors and technical risks (e.g., aircraft used in hot, dry climate at lower altitudes). |  |

| **Requirements and Evidence**  *To be completed by Evaluator* | | **Assessment Outcome:**  - Competent  - Competent with Caveat(s)  - Not Yet Competent |
| --- | --- | --- |
| Systems integration experience (e.g., platform / combat system integration, mechanical / electrical integration). (Matched against competencies) |  |  |
| Evidence of thinking through “whole system” usage risks. This includes interaction of environmental, human factors and technical risks (e.g., aircraft used in hot, dry climate at lower altitudes). |  |  |

## Summary and Recommendations

| **Summary and Recommendations**  *To be completed by Evaluator* | |
| --- | --- |
| **Overall Assessment – Commentary** | |
| **Decision**  **Select Appropriate Assessment:**  - Competent  - Competent with Caveat(s)  - Not Yet Competent | **Recommended caveats including additional training requirements and target completion dates, specifying whether the caveat is MAJOR or MINOR:** |
| If found competent for INSERT APPLICABLE ROLE, does the Assignment Holder have potential to hold an INSERT APPLICABLE ROLE assignment?  Yes / No | **Recommended caveats for candidate deemed to have potential to hold higher safety responsibility assignment:** |
| **Evaluator 1 Signature, Date and Position** |  |
| **Evaluator 2 Signature, Date and Position**  **(Where required)** |  |

1. As defined by SSR. [↑](#footnote-ref-2)
2. There is a big difference between knowing *how to* systems think and *doing* systems thinking when required. [↑](#footnote-ref-3)