

Maritime Acquisition Training Guide (MATG)

**Part 1: Project Team Guidance**

**Issue Version: 2.0**

**Dated: 14 Feb 23**

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**Disclaimer**

This document contains guidance to be used alongside JSP 822. In cases of divergence, JSP 822 is the authoritative document. Intelligent analysis is crucial to acquisition of training, and therefore the application of this guidance may be modified with justification from the Authority.

**Amendment Record**

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| --- | --- | --- |
| **Version No.** | **Date** | **Comments** |
| 1.0. | NK | Original publication of the MATLOD. |
| 1.1. | Jan 18 | - |
| 2.0. | Feb 23 | Major revision reflecting updates to JSP 822 v5, the commencement of the Selborne contract and RN organisation design changes as a result of the Transformation programme. Change of name from MATLOD to  MATG to enable the guide to cover both TLOD and PLOD (Individual Training) aspects, making the important distinction of the LODs explicit. |
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## Review Cycle

This document should be reviewed annually or when the key reference documents [JSP 822](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/SitePages/TESRR.aspx#jsp-822-volumes) or [BR3d (1)](http://web.apps.royalnavy.r.mil.uk/fpgo/BRd_0001_4999/BRd_0003/BRd_3_1/01_Homepage.html) are updated, whichever is earliest.

## Point of Contact

For further information on this document or to provide feedback on its contents, please contact [MTAO Group Mailbox.](mailto:navypeople-ftmtaomailbox@mod.gov.uk)

## Other Training References

* [Knowledge in Defence (KiD)](https://www.kid.mod.uk/index.htm) – Accessed through the Defence Gateway
* [JSP 507 - Investment Appraisal and Evaluation](https://modgovuk.sharepoint.com/sites/IntranetFinanceHub/SitePages/JSP-507.aspx)
* [JSP 655 - Defence Investment Approvals](https://www.kid.mod.uk/maincontent/business/jsp655/index.htm)
* [JSP 822 – Defence Direction and Guidance for Training and Education](https://modgovuk.sharepoint.com/sites/defnet/HOCS/Pages/JSP822.aspx)
* [JSP 906 – Defence Principles for a Coherent Capability](https://modgovuk.sharepoint.com/sites/defnet/HOCS/Pages/JSP906.aspx)
* [JSP 912 Human Factors Integration for Defence Systems](https://modgovuk.sharepoint.com/sites/defnet/HOCS/Pages/JSP912.aspx)
* [JSP 939: Defence Policy for Modelling & Simulation (M&S)](https://modgovuk.sharepoint.com/sites/defnet/HOCS/Pages/JSP939.aspx) [1](#_bookmark0)
* [RN BRd 3, Vol 1, Pt. 9, Ch. 95 – Individual Training](http://web.apps.royalnavy.r.mil.uk/fpgo/BRd_0001_4999/BRd_0003/BRd_3_1/ch95.pdf)
* Maritime Training Strategy v4 ([Part 1](https://modgovuk.sharepoint.com/sites/defnet/Navy/Official%20Sensitive%20Documents/Maritime-Training-Strategy-Complete-Pt1-V4-FAW-OS.pdf#search%3Dmaritime%20training%20strategy) and [Part 2](https://modgovuk.sharepoint.com/sites/defnet/Navy/Documents/Maritime-Training-Strategy-Complete-Pt2-V4.pdf#search%3Dmaritime%20training%20strategy)).
* [Def Stan 03-044](http://stanmis.gateway.isg-r.r.mil.uk/ArchivedDefStan/Edit/4231) – A Generic Process for the Verification and Validation of Modelling and Simulation and Synthetic Environments Systems.
* [Def Stan 03-050](http://dstan.gateway.isg-r.r.mil.uk/standards/defstans/03/050/000003000.pdf) – DTEC Modelling and Simulation (M&S) Standards Profile (DMSP).

1 StratCom (through the Defence Simulation Centre) is the Defence Modelling and Simulation Coherence Technical Authority.

**Contents**

[Section 1: Introduction 4](#_bookmark1)

[Section 2: Training Points of Contact 6](#_bookmark7)

[Section 3: Defence & Maritime Acquisition Context 6](#_bookmark8)

[Section 4: Training Policy 9](#_bookmark15)

[Section 5: Training Responsibilities 10](#_bookmark22)

[Section 6: Training Building Blocks 12](#_bookmark32)

[Section 7: Training contribution to Acceptance 20](#_bookmark53)

[Section 8: Interface with other DLODs 21](#_bookmark56)

[Section 9: Training Governance 22](#_bookmark62)

**Annexes:**

[Annex A:](#_bookmark71) Defence Training Continuum…………………………………………………………………A-1 [Annex B:](#_bookmark72) Indicative Training and Acquisition Phases…..……………………………………………B-1 [Annex C:](#_bookmark74) Initial and Through Life Training Costs………………………………………...................C-1 [Annex D:](#_bookmark79) Cross Defence Lines of Development Dependencies ………...…….……....................D-1 [Annex E:](#_bookmark83) Training Steering Group TORs …........................................……………….……...........E-1

# Section 1: Introduction

## Context

* 1. The full potential of any capability can only be realised with sufficient suitably trained and qualified personnel to operate and sustain it. Therefore, training is a fundamental pillar of the Royal Navy’s Operational Capability. Further, addressing training requirements of new or updated capabilities early with acquisition often results in decreased through-life costs, improved equipment availability, improved safety, and higher morale amongst those with the skills to undertake their role(s).
  2. It is the Project Team’s (PT)[2](#_bookmark2) delegated responsibility to fund, plan, integrate and support the through-life training requirements of any upgraded or new capability[3](#_bookmark3) as part of the wider support solutions envelope (SSE).[4](#_bookmark4) Early engagement with the customer through the RN Capability area and Training authorities can help mitigate the risks of unnecessary or significant delay and cost borne from not properly considering the training requirement.
  3. The RN provides support, governance and assurance activities to enable the PT to successfully deliver these requirements through the Future Training (FT) and Maritime Acquisition & Training Organisation (MTAO). The MTAO is also able to provide qualified and experienced support for Training Steering Group (TSG) meetings, discussions with Training Needs Analysis (TNA) and Training Solution suppliers, and the QA of deliverables.
  4. Defence doctrine defines the PLOD as the provision of sufficient, capable personnel (‘capable’ requires Individual Training (IT) solutions).[5](#_bookmark5) The Training Line of Development (TLOD) is the rehearsal of military capability and therefore the need for a Team and Collective Training (CT) capability. Within the RN, the PLOD and therefore IT is owned by Director Personnel and Training (Dir P&T) and the TLOD and therefore CT is owned by Director Force Generation (Dir FGEN) as the Training Requirements Authority (TRA) and Commander Fleet Operational Standards and Training (COMFOST) as Training Delivery Authority (TDA), different parts of the organisation with separate management plans and funding lines. The MTAO works for Dir P&T and is charged with assuring the IT aspects of the PLOD, but can signpost PTs to suitable points of contact (PoC) within Dir FGEN and COMFOST’s organisation for TLOD aspects.
  5. Although Individual, Team and Collective training are closely linked, and some team elements of training can be covered within IT analysis, design or delivery processes, the delivery structures and governance of Team and CT (the TLOD) differs to those for IT (PLOD). For simplicity, and since a PT is responsible for delivering both IT and CT requirements, both will be referred to as training for the remainder of the document.

2 Project Team refers to the Delivery Agency team (e.g. DE&S, SDA, or DD) responsible for delivering any new or upgraded capability. They are also known as Delivery Teams (DTs) or Design Authorities (DAs).

3 [KiD - Training Facilities and Simulators](https://www.kid.mod.uk/maincontent/business/engineering/content/tech_guidance/eng_ms_trainingsystems.htm)

4 [CDA 7](https://www.kid.mod.uk/maincontent/business/sse_21/content/cda7.htm) [– Training and Training Equipment.](https://www.kid.mod.uk/maincontent/business/sse_21/content/cda7.htm) Older projects may still be using the legacy SSE which uses Key Support Areas and subordinate Governing Policies. These projects should refer to [GP 2.8 – Training and Training Equipment.](https://www.kid.mod.uk/maincontent/business/sse_9/content/ksa2/gp208.htm) It is expected that all projects using the legacy SSE will be complete by May 23, and from then it will be retired.

5 For definitions for the PLOD and TLOD see [Defence Lines of Development (DLoD) - KiD.](https://www.kid.mod.uk/maincontent/general/sg_dlod.htm) For definitions of IT and CT see [JSP 822 v5,](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/JSP822Volume10)  [Vol. 10 - Glossary.](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/JSP822Volume10)

* + - **Personnel** Line of Development
    - Trains the people in the workforce
    - Also manages other HR functions
    - Mainly training for **individuals** and small teams
    - **Dir P&T's** output is 'Sufficient, capable, motivated people'

PLOD

TLOD

* Training Line of Development
* Receives personnel from the PLOD
* Trains operational units
* Mainly **collective** training for teams
* **COMFOST's** output is "trained and assured formed units"
* Fully trained workforce
* Ready to 'fight and win' as part of a team
* Delivering Defence Effect in all operational environments

Deployed workforce

**Figure 1:** NC PLOD and TLOD Information

* 1. Failure to adequately address the Training requirements significantly increases the risk that the provision of any individual, team and or collective training will not be fully considered, particularly during the early stages of capability design. There is plenty of evidence that this failure results in:

1. Unnecessary and significant delays in bringing the capability into service, particularly if Approval to Develop or Approval to Embody is delayed until the Training requirements are satisfied by the PT.
2. Delays and increased costs of retrospectively analysing training requirements and supplying an adequate training solution (and/or changing existing training solutions); increased through-life costs (due to the need to supply and support of interim training arrangements until a steady state training solution is ready, and the reduced availability and reliability of platform equipment); and/or an inability of Defence to fully (or, in some cases, even partially) realise the capability once in-service.
   1. Lessons learned from DE&S, Defence Digital and SDA projects emphasise that:
3. Adequate consideration of training requirements early in the project offers benefits to performance, cost, and time. Not just to training, but to the bringing into service and the supportability of the capability required from the new, or changed, equipment.
4. A key factor in the effective and efficient consideration of training needs is the and holding an initial Training Steering Group[6](#_bookmark6) (TSG) meeting in time to adequately inform the Equipment approvals and procurement. The TSG can provide advice and authoritative endorsement of PT decisions in the intelligent application of the Defence Systems Approach to Training (DSAT) process to training needs analysis; and the supply and support of the training solution (if analysis determines a change to training is needed), and the drumbeat of any further TSG involvement required.

**Aim and Scope**

* 1. The aim of the Maritime Acquisition Training Guide (MATG) is to provide guidance to PTs for the provision of through-life training requirements for a new or updated capability in the maritime domain. It expands on the direction provided in [Core Development Area (CDA) 7 –](https://www.kid.mod.uk/maincontent/business/sse_21/content/cda7.htm)

6 In JSP 822 this is referred to as the Training Needs Analysis Steering Group (TNASG) but this is misleading as it’s Terms of Reference (ToRs) cover more broader training considerations and so will be referred to as the TSG throughout this document.

[Training and Training Equipment](https://www.kid.mod.uk/maincontent/business/sse_21/content/cda7.htm) of the Support Solution Envelope (SSE), [JSP 822 v5 (Defence](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/SitePages/TESRR.aspx#jsp-822-volumes) [Direction and Guidance for Training and Education](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/SitePages/TESRR.aspx#jsp-822-volumes)) and [RN BRd 3, Vol 1, Pt. 9, Ch. 95 – Individual](http://web.apps.royalnavy.r.mil.uk/fpgo/BRd_0001_4999/BRd_0003/BRd_3_1/ch95.pdf) [Training](http://web.apps.royalnavy.r.mil.uk/fpgo/BRd_0001_4999/BRd_0003/BRd_3_1/ch95.pdf) but is not intended to form the basis of any contractual arrangement.

* 1. Note that as part of ensuring appropriate supportability arrangements are put in place for the new/changed capability in a timely manner, the PT should inform the shore side enterprise early in the planning for the introduction of new/changed equipment. This broader audience can then consider any changes it may need to make to its organisation’s (e.g. dockside maintainers) training to support the new/changed capability.

# Section 2: Training Points of Contact

* 1. The following positions within the RN have the lead for the assurance of Training at various stages of the CADMID cycle.

## Develop Directorate (Pre-Concept - Concept)

[Director Develop (POCs](https://modgovuk.sharepoint.com/sites/IntranetNavy/SitePages/Director-Develop.aspx) and Organisation)

## Navy Acquisition Directorate and People & Training Directorate (Concept – Manufacture)

[Director Navy Acquisition](https://modgovuk.sharepoint.com/sites/IntranetNavy/SitePages/Dir-Navy-Acquisition.aspx) (POCs)

[Workforce Planning and Talent Management](https://modgovuk.sharepoint.com/teams/50011/SitePages/Home.aspx) (POCs and Links) [Future Training & MTAO](https://modgovuk.sharepoint.com/sites/IntranetNavy/SitePages/Future-Training-Maritime-Training-Acquisition-Organisation.aspx) (POCs and more detail)

## Training Management Group (In-Service – Disposal)

[TMG SharePoint](https://modgovuk.sharepoint.com/teams/59845/SitePages/Training-Management-Group.aspx) (inc. Training Capability Managers) [Selborne Front Door Guidance](https://modgovuk.sharepoint.com/teams/53362/02FrontDoor/Forms/DocumentCategory.aspx?id=%2Fteams%2F53362%2F02FrontDoor%2F20210330%5FTMG%5FDRAFT%5FFront%20Door%20%26%20Change%2DO%2Epdf&parent=%2Fteams%2F53362%2F02FrontDoor) (Document dated May 21)

## Director Force Generation (TLOD TRA)

[Director FGEN SharePoint](https://modgovuk.sharepoint.com/teams/59175)

## Commodore Fleet Operational Standards and Training (TLOD TDA)

[COMFOST SharePoint](https://modgovuk.sharepoint.com/teams/55846) (POCs)

## Advice & Consultancy

## Future People Capability & Future Training (FPCAP & FT)[7](#_bookmark9) (General/Customer)

[MTAO Group Mailbox.](mailto:navypeople-ftmtaomailbox@mod.gov.uk)

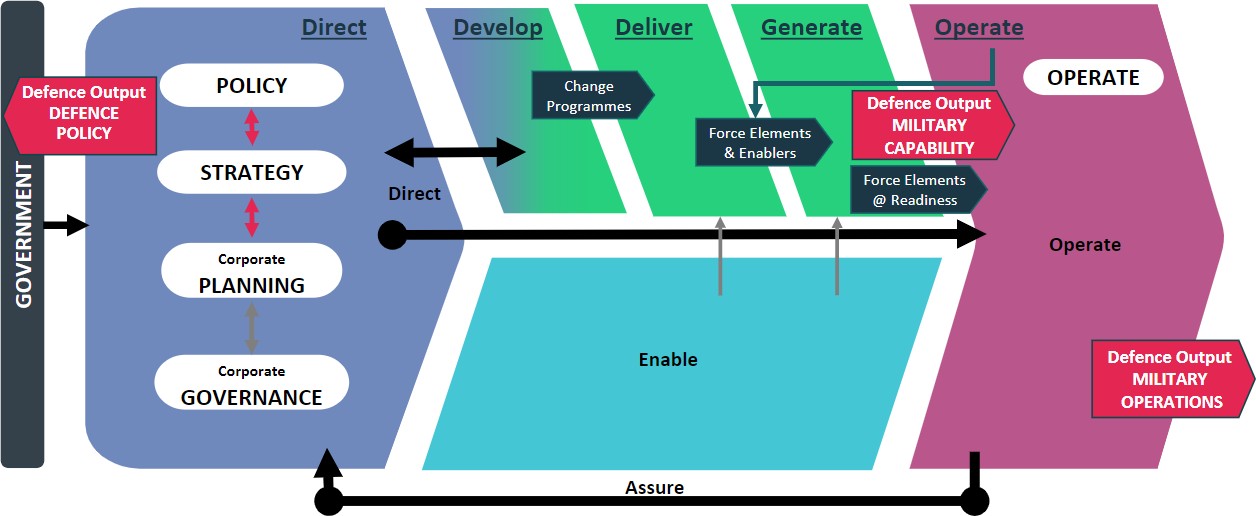
## Defence Simulation Centre

[Front Door Mailbox](mailto:ukstratcom-dsc-enquiries@mod.gov.uk)

# Section 3: Defence & Maritime Acquisition Context

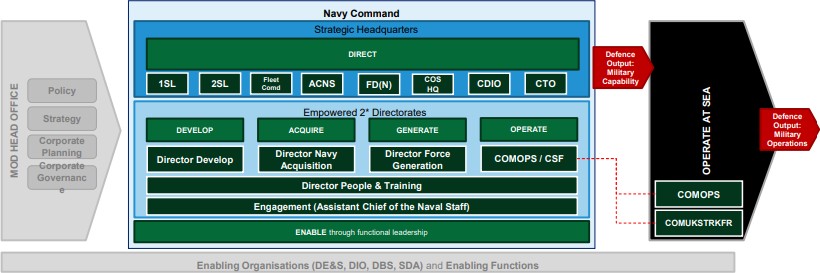
* 1. **Defence Operating Model.** The [Defence Operating Model](https://modgovuk.sharepoint.com/sites/DOM/SitePages/aint001.aspx) (DOM) (Fig. 1) shows how capability is about achieving effect in relation to identified requirements and parameters or constraints[8](#_bookmark10). The DOM is based on the 5 core functions: [Direct,](https://modgovuk.sharepoint.com/sites/DOM/SitePages/bGEN020.aspx) [Develop,](https://modgovuk.sharepoint.com/sites/DOM/SitePages/bGEN027.aspx) [Deliver,](https://modgovuk.sharepoint.com/sites/DOM/SitePages/bGEN033.aspx) [Generate](https://modgovuk.sharepoint.com/sites/DOM/SitePages/bGEN038a.aspx) and [Operate](https://modgovuk.sharepoint.com/sites/DOM/SitePages/bGEN039.aspx). The capability model can be applied to all levels of requirement setting, by seeing it as a performance gap model and therefore should be the foundation of all analysis. Unless training can be related to delivering an endorsed capability effect, i.e. closing an identified performance gap, it should not be undertaken.

7 Submarine Individual Training Coherence Organisation (OF5 Area) is due to be established in April 2023 and Future Training/FT/MTAO SM team will form part of this team. Contact details can be obtained via the FPCAP/FT Team as required. 8 In some instances DNO, in it’s role as a Customer and a Delivery Agent, [operates outside DOM.](https://modgovuk.sharepoint.com/sites/DOM/SitePages/bGEN030.aspx)



**Figure 2:** Defence Operating Model

* 1. **Navy Command Operating Model**. The Navy delivers its outputs through the six core functions of Direct, Develop, Acquire, Generate, Operate and Enable[9](#_bookmark11). Within Enable are a series of cross-cutting functions that map directly to wider the Defence Functions set out in the DOM and their corresponding structures. This shortens decision chains and drives much clearer lines of accountability. Within this framework, the Directorates, which broadly correspond to the core functions, have significant delegated authority – including full budgetary levers and unambiguous ownership of specific intra-TLB outputs [10](#_bookmark12)



**Figure 3:** Navy Command Operating Model

* 1. The Navy Acquisition Directorate is responsible for providing professional internal programme management and intelligent customer capability to hold the Royal Navy’s delivery partners to account for the delivery of major programmes. The Force Generation Directorate is responsible for integrating the Defence Lines of Development (DLoDs) for in- service capabilities so that the Royal Navy has the forces required to meet planned Defence outputs. They both work with the Navy People & Training Directorate which attracts, recruits, trains and allocates Royal Navy people across the Whole Force to support the Navy’s priorities and deployable activities sustainably, providing career support for their time in service and beyond.

9 [How the NCHQ works – Navy Command Operating Model](https://modgovuk.sharepoint.com/sites/defnet/Navy/Documents%20Three/How-the-Navy-Delivers.pdf)

10 5 Directorate HQs: Develop, Acquisition, Force Generation, Operations and People & Training.

* 1. **Finance and Military Capability (FMC) Operating Model**[**11**](#_bookmark13)**.** The Financial Operating Model (FOM) is designed to strengthen the link between managing Defence’s finances and delivering military capability. It operates within the restrictions of Defence and follows the direction set out in the DOM. The aim is for military capability to be planned, resourced and delivered across all the DLODs and for balance of investment decisions to be taken which create the best Defence outputs from the resources available. Capability comprises eight DLODs as well as the overarching theme of ‘Interoperability’, any of which may give rise to a new training requirement, as could the operating environment, the nature of the threat it will face, and how it will contribute to any larger coalition. Under the [Through-Life Capability](https://www.kid.mod.uk/maincontent/business/cm/cm.htm) [Management](https://www.kid.mod.uk/maincontent/business/cm/cm.htm) (TLCM) philosophy, all elements that comprise capability must be adequately planned, delivered and generated through-life.



**Figure 3:** Relationship between Capability and DLODs

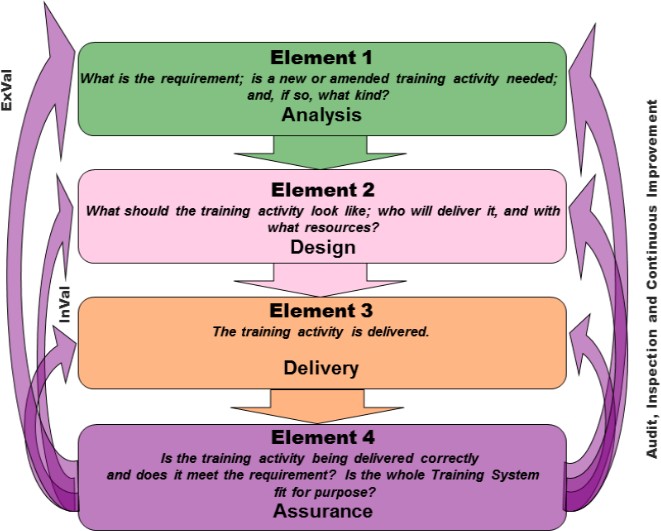
* 1. **FINMILCAP and** [**Through-life Capability Management**.](https://www.kid.mod.uk/maincontent/business/cm/cm.htm) FINMILCAP and TLCM should ensure that the requirements of Defence policy be translated into an approved programme that delivers the required capabilities, through-life, across all DLODs. It is therefore critical that Training is planned, delivered and generated in a manner that is consistent with all other DLODs to ensure provision of a coherent capability through-life. As Training can prove to be one of the most expensive through-life elements, potentially accounting for more than 30% of the whole life costs (WLC) of a project; the organisation introducing a new capability must have a firm appreciation of all known training factors which could threaten project affordability.
  2. The ‘CADMID/T’[12](#_bookmark14) is adopted to support the acquisition of maritime capability. Other more agile models are available with appropriate justification. However, the success of these and the CADMID/T cycle depends on the best possible cost and time estimation, both at first and then at important decision/approval points. Acquisition is carried out wherever possible on a modular basis so that equipment can be updated through-life.

11 Finance and Military Capability Operating Model - Version 1

12 Concept, Assessment, Demonstrate, Manufacture, In-Service Disposal/Termination (CADMID/T). E-Learning packages: [Navy](https://dle.ice.mod.gov.uk/course/view.php?id=10501)  [Acquisition System Awareness](https://dle.ice.mod.gov.uk/course/view.php?id=10501) and [Capability and Acquisition (CAPAC) Fundamentals](https://dle.ice.mod.gov.uk/course/view.php?id=23664) available on the Defence Learning Environment (DLE) provide further information on CADMID/T. This document refers to CADMID as the most frequently used, however it equally applies to the CADMIT cycle.

# Section 4: Training Policy

* 1. **Support Solution Envelope**. The support solution that the PT develops during the acquisition of a capability or equipment solution details how that solution will be supported and maintained through-life up until disposal. The Support Solutions Envelope (SSE) consists of signposts to policy and advice and guidance of how to develop a comprehensive support solution[13](#_bookmark16). SSE consists of 19 Core Development Areas (CDAs) and six Cross-Cutting Themes (CCTs). For Training, the relevant CDA is [CDA 7](https://www.kid.mod.uk/maincontent/business/sse_21/content/cda7.htm) [- Training and Training Equipment](https://www.kid.mod.uk/maincontent/business/sse_21/content/cda7.htm). Older projects may still be using the legacy SSE which uses Key Support Areas and subordinate Governing Policies. These projects should refer to [GP 2.8 – Training and Training Equipment](https://www.kid.mod.uk/maincontent/business/sse_9/content/ksa2/gp208.htm). It is expected that all projects using the legacy SSE will be complete by May 23, after which it will be retired.
  2. **Defence Systems Approach to Training (DSAT).** Key to success of delivering Training in maritime acquisition is the intelligent application DSAT, explained in detail in Joint Service Publication (JSP) 822.[14](#_bookmark17) When applied correctly, DSAT should deliver training that is safe, risk-focussed, appropriate, effective, efficient and accountable training to trainees. There are several key roles which are relevant for Training, in particular the TRA and the TDA.[15](#_bookmark18) The DSAT process comprises four elements, plus management and governance activities that govern all Defence training[16](#_bookmark19), both IT and CT[17](#_bookmark20), across the Whole Force[18](#_bookmark21) (Figure 3). Further direction for DSAT in maritime IT, is provided in [RN BRd 3, Vol](http://web.apps.royalnavy.r.mil.uk/fpgo/BRd_0001_4999/BRd_0003/BRd_3_1/ch95.pdf)  [1, Pt. 9, Ch. 95 – Individual Training](http://web.apps.royalnavy.r.mil.uk/fpgo/BRd_0001_4999/BRd_0003/BRd_3_1/ch95.pdf) but may differ for CT. The training continuum detailing IT and CT can be seen at Annex A.



**Figure 4:** The Four Elements of DSAT

13 [Support Solutions Envelope - KiD](https://www.kid.mod.uk/maincontent/business/sse_21/content/sse_about.htm)

14 [JSP 822 v5, Vol. 1-10 – Defence Direction and Guidance for Training and Education](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/SitePages/TESRR.aspx)

15 See [JSP 822 v5, Vol. 1, Ch. 3, Para 11, p. 8](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/SitePages/JSP-822--Volumes---PDF-format.aspx) for the full list and more detail.

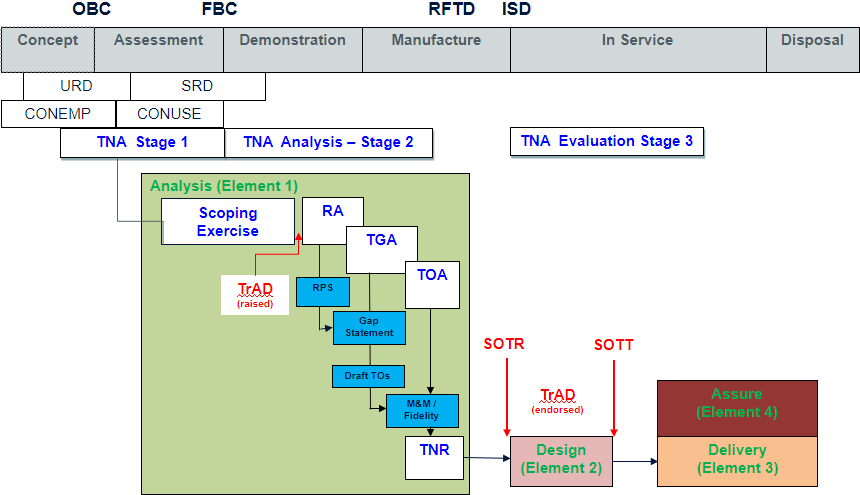
16 Complete inventory of DSAT activities found in [JSP 822 v5, Vol. 1, Sect.4, Fig. 5, p. 15](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/SitePages/TESRR.aspx)

17 DSAT Training Continuum (including Individual, Team and Collective) found at [JSP 822 v5, Vol. 1, Sect. 3, Fig, 2, p. 8.](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/JSP%20822%20PDF%20Format/Forms/AllItems.aspx?id=%2Fsites%2Fpeople%2Dtesrr%2Dpolicy%2FJSP%20822%20PDF%20Format%2FJSP%20822%20%2D%20Vol%201%20%2D%20Introduction%20%2D%20v5%20%2D%20Sept%202022%2Epdf&parent=%2Fsites%2Fpeople%2Dtesrr%2Dpolicy%2FJSP%20822%20PDF%20Format) More detail can be found in Vol 2 (IT) and Vol. 3 (CT).

18 The Whole Force encompasses Regular and Reserve personnel, MOD Civil Servants and civilians, including the Ministry of Defence Police and contractors. It is noted that training sourced through the pan-Governmental ‘Civil Service Learning’ is not subject to DSAT. Any other Civil Service training must be compliant with DSAT.

## DSAT and CADMID Relationship

* 1. The relationship between DSAT and the CADMID acquisition model is captured at Figure 4. Normally the Scoping Exercise is carried out during the Concept stage and subsequent Outline Business Case (OBC) cost estimates. As the maturity of the design information increases during the Assessment phase this analytical work is reviewed and developed (if required) to inform Full Business Case (FBC). The more detailed analysis conducted during Role Analysis (RA), Training Gap Analysis (TGA), and Training Options Analysis (TOA) is usually carried out post-FBC. The analysis should be conducted to meet the PT milestones such as to inform the business / operational case for wider resource and risk commitments, such as: awarding an equipment commercial contract, implementing significant doctrinal change, relocating a training establishment (TE), or changing an organisation’s structure. The analysis should start at the earliest point in the development of new capability (FT/MTAO can provide further advice).



**Figure 5:** Relationship between the Defence Capability Model and Training (for new capability)[19](#_bookmark23)

# Section 5: Training Responsibilities

* 1. In accordance with the NCOM, the Navy Acquisition Directorate provides internal programme management and acts as an intelligent customer for Delivery Agents/PTs. The Senior Responsible Owner (SRO) is responsible for articulating the requirements on each of the DLODs, probably through the Programme Manager.
  2. The Delivery Agent/PT is responsible for delivering a through-life training capability on behalf of the SRO. However, successfully doing this requires input from a number of key stakeholders from across Navy Command’s other Directorates, particularly Dir P&T. Additionally, in implementing a coherent and effective training solution, there is a dependency and input from a number of the DLODs (see [Section 8](#_bookmark57)).

## Key FLC Stakeholders

19 Amended figure based on existing figure in the JSP that uses legacy acquisition terminology [(JSP 822 v5, Vol. 1, Sect. 3, Fig. 3, p.](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/JSP%20822%20PDF%20Format/Forms/AllItems.aspx?id=%2Fsites%2Fpeople%2Dtesrr%2Dpolicy%2FJSP%20822%20PDF%20Format%2FJSP%20822%20%2D%20Vol%201%20%2D%20Introduction%20%2D%20v5%20%2D%20Sept%202022%2Epdf&parent=%2Fsites%2Fpeople%2Dtesrr%2Dpolicy%2FJSP%20822%20PDF%20Format)  [11)](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/JSP%20822%20PDF%20Format/Forms/AllItems.aspx?id=%2Fsites%2Fpeople%2Dtesrr%2Dpolicy%2FJSP%20822%20PDF%20Format%2FJSP%20822%20%2D%20Vol%201%20%2D%20Introduction%20%2D%20v5%20%2D%20Sept%202022%2Epdf&parent=%2Fsites%2Fpeople%2Dtesrr%2Dpolicy%2FJSP%20822%20PDF%20Format)

* 1. **In-Service Capability management.** Sitting within one of the six Deputy Directorates of Force Generation Directorate[20](#_bookmark24), these managers are responsible for integrating the Defence Lines of Development for in-service capability to generate force elements that can be used to deliver operational capability.
  2. **Workforce Planners.** The RN Workforce Planners are often the TRA for individual steady state training[21](#_bookmark25) and can validate the analysis of personnel billets affected by the new operational requirement and training conducted in the Scoping Exercise (TNA Stage 1) and RA stage (taking place in TNA Stage 2). However, there may also be a requirement to include for a CT TRA (FGEN for up to Tier 1 training) or other FLC TRAs. In these cases, a lead TRA should be established[22](#_bookmark26).
  3. **Training Management Group and Fisher Consortium.** Within P&T, the Training Management Group (TMG) has the overall TDA responsibility for most in-service IT, delivered through the joint RN-industry organisation through the Fisher Consortium[23](#_bookmark27) from Apr 21[24](#_bookmark28). However, other TDAs exist including Fleet Operational Standards & Training (FOST) and the RAF’s 22 Training Group (22 Trg Gp)’s Electro-Mechanical Training Contract. Depending upon the nature of the new capability the effects on training could directly affect infrastructure, training equipment, policy and workforce. Most Training Capability Managers (TCMs) also sit under the TMG and will provide support to the PTs to assist in integrating and implementing the identified training support solution into established training.
  4. **Future Training & MTAO.** The Future Training (FT) team, also part of the P&T Directorate, is responsible for assuring the individual training for new and updated capabilities being introduced over the medium to long term (circa 5-10 years)[25](#_bookmark29). The FT team also conducts the quality assurance of Training Needs Analysis (TNA), purely from a training management aspect (it is the TCMs who deliver the SME assurance), the majority of which is outsourced. The MTAO is part of the FT team and comprises training specialists embedded at MOD Abbey Wood (as a team and singleton posts within specific project teams) and is charged with delivering specialist training support, advice, guidance and direction to project teams and capability sponsors to ensure that the training and personnel implications of DE&S, Defence Digital and SDA decisions are considered as an integrated component of project team work and at the earliest opportunity. From 1 Apr 23 further Directorate P&T Org design will split these teams, with a new OF5 SM Coherence being created and taking on the SM related elements of Future Training and MTAO.

## Project Team Responsibilities.

* 1. The PT is responsible for introducing a new or updated capability are responsible for all new training associated with that capability[26](#_bookmark30). Although the specifics of this will be unique to each project, they normally include the following aspects:
     1. Provision of through-life Individual and Collective training solutions as required for the target audience iaw Authority Input[27](#_bookmark31).
     2. Training for the whole target audience iaw Authority input. This can include but not limited to both operators and maintainers under the Operate, Maintain, Diagnose and Repair (OMDR) concept.

20 Aviation, Littoral Strike, Ships, Submarines, Support and Royal Fleet Auxiliary.

21 [RN BRd 3 v1, Vol 1, Pt. 9, Ch. 95, Para 9502b](http://web.apps.royalnavy.r.mil.uk/fpgo/BRd_0001_4999/BRd_0003/BRd_3_1/ch95.pdf)

22 See [JSP 822 v5, Vol 2. Ch 2, Sect. 2.2, Para. 7, p. 4](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/SitePages/JSP-822--Volumes---PDF-format.aspx)

23 Consortium of Capita, Raytheon, Fujitsu, Elbit Systems UK, University of Lincoln.

24 [RN BRd 3, Vol 1, Pt. 9, Ch. 95, Para 9502](http://web.apps.royalnavy.r.mil.uk/fpgo/BRd_0001_4999/BRd_0003/BRd_3_1/ch95.pdf)c – Training Delivery Authority More information about the TMG can be found in the TMG Operating Model (dated Sep 21)

25 [RN BRd 3, Vol 1, Pt. 9, Ch. 95, Para 9502](http://web.apps.royalnavy.r.mil.uk/fpgo/BRd_0001_4999/BRd_0003/BRd_3_1/ch95.pdf)h & 9502i

26 [CDA 7 – Training and Training Equipment (T&TE)](https://www.kid.mod.uk/maincontent/business/sse_21/content/cda7.htm)

27 Depending on the project this may require an Interim and Steady state solution. See JSP 822 for definitions and more information.

* + 1. Cross-over training for personnel already qualified on legacy equipment.
    2. Training for other groups as identified by the TNA process, such as instructors, FOST sea riders, etc.
  1. The PT will be responsible for:
     1. The production of a Training Strategy/Training Plan that identifies key training milestones supporting the wider capability programme.
     2. The production of the Scoping Exercise Report (SER) to identify the target audiences to be trained for the capability, indicative numbers of personnel requiring training, high level tasks that personnel will require training in, timings of when training is required to be in place, potential locations of where training could be delivered, and possible options for solutions of how training could be delivered.
     3. Developing a Training Solution Procurement Strategy. For the vast majority of cases, this should indicate the required level of integration into legacy RN training delivered via the Selborne programme by the Fisher consortium.
     4. The commissioning and management of the TNA programme, including whether this will be via the Engineering Decision Support (EDS) scheme, the Fisher consortium, the Original Equipment Manufacturer (OEM), or via alternative means.
     5. Integrated Logistic Support (ILS) and equipment data, as well as updated doctrine, concepts and tactics to inform TNA and Training Solution procurement. All such data must be free of Intellectual Property, Export Control, and ITAR restrictions suitable for sharing with both TNA and training solution contractors, including the Fisher consortium.
     6. The initial procurement, installation, and integration of all specific training media, including hardware, software, and training documentation with a through-life support solution, including integration in the Selborne programme via the Fisher consortium.
     7. The funding of updates to the capability specific training media and equipment.
     8. The provision of capability specific training infrastructure or required changes to legacy training infrastructure.
     9. The production of a Training Support & Transition Plan.

# Section 6: Training Building Blocks

## Training and Education Principles

* 1. The following principles underpin Training in both the P and TLOD:
     1. **System of Systems Approach (SOSA)**. To deliver agile and affordable capabilities, Defence must acquire and build systems that work together (interoperate) and achieve the necessary flexibility, commonality and reuse. The SOSA is the enabling mechanism by which Defence will ensure that all delivered systems are procured and built in accordance with the vision ‘Enabling enhanced capability through achieving commonality, reuse and the interoperability of independently procured systems’[28](#_bookmark33).
     2. **Value for Money**. All training systems must deliver value for money (VfM). The

28 See [JSP 906 – Defence Principles for a Coherent Capability](https://modgovuk.sharepoint.com/sites/defnet/HOCS/Pages/JSP906.aspx) for more details.

National Audit Office uses three criteria to assess the VfM of government spending

i.e. the optimal use of resources to achieve the intended outcomes, these are: economy, efficiency and effectiveness. VfM is defined as the relationship between these three factors and is illustrated in Figure 6.

**Quantitative**

**Outcomes**

**Outputs**

**Inputs**

**Costs (£)**

**Qualitative**

**Effectiveness**

**Efficiency**

**Economy**

**Value for Money**

**Figure 6:** Value for Money Model

* + 1. **Interoperability Requirements**. Unless there is an agreed business reason, all relevant training systems will need to adhere to the Defence Direction for Technology Enhanced Learning (DTEL)[29](#_bookmark34) and the Defence Modelling and Simulation Coherence (DMaSC)[30](#_bookmark35). This allows them to be interoperable and suitable for expansion in the future if requires. It is particularly important for simulators to abide by DMaSC so that they can be used in conjunction with other MOD and Allied simulators to provide collective training.
    2. **Through-Life Considerations**. [TLCM](https://www.kid.mod.uk/maincontent/business/cm/cm.htm) should ensure delivery of the required capabilities, through-life. It is critical that Training is planned, delivered and generated in a manner that is consistent with all other DLODs to ensure provision of a coherent capability through-life. The need for iteration is imperative through the life of a project as information matures and develops.
    3. **Export Controls & Intellectual Property Rights.** When procuring training a PT needs to be aware of any potential export controls that may apply to the equipment the training relates to, particularly International Traffic in Arms Regulations (ITAR)[31](#_bookmark36). This is especially true if the training will be delivered through a third party such as contractors of the Electro-Mechanical Training Contract (EMTC) or the Team Fisher and the Selborne contract. Advice and guidance for this is provided in the [Commercial Toolkit](https://www.kid.mod.uk/maincontent/business/commercial/index.htm) on the KiD, as well as specifics on [Intellectual Property Rights,](https://www.kid.mod.uk/maincontent/business/commercial/content/topics/ipr_ov.htm) [Overseas Procurement](https://www.kid.mod.uk/maincontent/business/commercial/content/topics/opia.htm). More policy is also found in [JSP 248](https://modgovuk.sharepoint.com/sites/defnet/HOCS/Pages/JSP248.aspx)[32](#_bookmark37), and [DEFCON 528](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/JSP822Volume2/Documents%20Referenced%20in%20Volume%202/Forms/AllItems.aspx?id=%2Fsites%2Fpeople%2Dtesrr%2Dpolicy%2FJSP822Volume2%2FDocuments%20Referenced%20in%20Volume%202%2FChapter%203%20%2D%20Defence%20Guidance%20on%20Training%20Analysis%2F3%2E3%20%2D%20Training%20Needs%20Analysis%20Steering%20Group%2FDEFCON%20528%20%2D%20Import%20and%20Export%20Licences%2Epdf&parent=%2Fsites%2Fpeople%2Dtesrr%2Dpolicy%2FJSP822Volume2%2FDocuments%20Referenced%20in%20Volume%202%2FChapter%203%20%2D%20Defence%20Guidance%20on%20Training%20Analysis%2F3%2E3%20%2D%20Training%20Needs%20Analysis%20Steering%20Group) and the Defence Intellectual Property Rights [SharePoint](https://modgovuk.sharepoint.com/teams/9513/SitePages/Home.aspx).

## Training Building Blocks

* 1. The approach taken must be tailored to the specific needs of each project/programme.
  2. **Early Training Activity**. Opportunities to minimise the training burden through equipment design should be investigated early in acquisition cycle [33](#_bookmark38). The development of the System Requirements Document (SRD) and the Human Factors Integration (HFI) Working

29 [JSP 822 v5, Vol. 6, Ch 2, p. 2](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/SitePages/JSP-822--Volumes---PDF-format.aspx)

30 [JSP 939 v2.1, Pt. 2, Para 8, p. 1 – Summary of DMaSc Rules.](https://modgovuk.sharepoint.com/sites/defnet/HOCS/Pages/JSP939.aspx)

31 [2017DIN04-101](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/JSP822Volume2/Documents%20Referenced%20in%20Volume%202/Forms/AllItems.aspx?id=%2Fsites%2Fpeople%2Dtesrr%2Dpolicy%2FJSP822Volume2%2FDocuments%20Referenced%20in%20Volume%202%2FChapter%203%20%2D%20Defence%20Guidance%20on%20Training%20Analysis%2F3%2E3%20%2D%20Training%20Needs%20Analysis%20Steering%20Group%2F2017DIN04%2D101%20%20Assets%20Subject%20to%20Special%20Controls%20%E2%80%93%20United%20States%20Export%20Control%20Regulations%2Epdf&parent=%2Fsites%2Fpeople%2Dtesrr%2Dpolicy%2FJSP822Volume2%2FDocuments%20Referenced%20in%20Volume%202%2FChapter%203%20%2D%20Defence%20Guidance%20on%20Training%20Analysis%2F3%2E3%20%2D%20Training%20Needs%20Analysis%20Steering%20Group)

32 [Assets Subject to Special Controls: Export Controlled Articles Subject to US Laws and Regulations](https://modgovuk.sharepoint.com/sites/defnet/HOCS/Pages/JSP248.aspx)

33 [CDA 7 – Training and Training Equipment](https://www.kid.mod.uk/maincontent/business/sse_21/content/cda7.htm)

Group provide a mechanism for this work to be taken forward. In addition, an embedded training capability provides a tool that could close the training gap and provide a mechanism to combat skill fade. Often these decisions need to be made prior to the TNA being finalised and the appropriate Training stakeholders engaged.

* + 1. **Stakeholders**. Identify all key project stakeholders and establish project Training through-life management chains and dependencies with other DLODs. This activity should be undertaken by the PT supported by the MTAO. A Training Steering Group (TSG) should be established (further details can be found at [Section 9](#_bookmark62)).
    2. **CONEMP and CONUSE**. The requirement for activity in the non-equipment DLODs need to be captured within the Concept of Employment (CONEMP) which is then later developed into a Concept of Use (CONUSE)[34](#_bookmark39). Within the CONEMP the Training implications of introducing a new military capability should be identified to enable smooth capability integration to be achieved. Initially input will be provided by Navy Command.
    3. **Requirements and Acceptance Policy.**
       1. **User Requirements**. Initially Navy Command should offer potential training URs for inclusion in the URD. Future Training may provide further input on the potential training requirements. It is essential that training requirements are captured within a URD to ensure that funding is approved for training.
       2. **System Requirements**. Navy Command should be consulted when generating System Requirements (SRs) which will be required to address the training of the new capability and/or its training solution. There must be traceability between requirements and test, evaluation and acceptance activities. Training solutions may have their own URD and SRD that will be developed at the appropriate stage.
    4. **Assumptions Capture**. A key component of project management is the identification and impact analysis of assumptions that affect the project. Training assumption impact needs to be managed effectively. The commencement of Training assumptions capture needs to happen at the earliest opportunity. The assumptions then need to be endorsed and managed by the Training Steering Group (TSG). The Master Data Assumptions List (MDAL) and the Cost Data Assumptions List (CDAL) of wider project’s Through Life Management Plan should be used to maintain Training as integral to the wider project it supports[35](#_bookmark40). The following areas should be considered:
       1. Assumptions made about the training target population or audience (e.g. what experience level and therefore rank of maintainer and operator will be required, etc.).
       2. Assumptions made regarding training throughput (e.g. average appointment lengths, any need for spare throughput capacity, etc.).
       3. Assumptions made on when training is required to start, finish and how often it may be required, including whether an interim solution is required (e.g. will a contractor be needed to provide interim training whilst the steady state solution is developed?).
       4. Assumptions made on training location, particularly resulting from

34 [Capability Integration – Products - KiD](https://www.kid.mod.uk/maincontent/business/tlcm/content/capabilityintegration/ciproducts.htm?zoom_highlight)

35 [TLMP & MDAL – KiD](https://www.kid.mod.uk/maincontent/business/tlm/content/tlm_tlmp_section5.htm?zoom_highlight) & [CDAL - KiD](https://www.kid.mod.uk/maincontent/business/engineering/content/fe/fe_cdal.htm?zoom_highlight)

policy guidance.

* + - 1. Assumptions on how to deliver training, including any policy / concepts and doctrine guidance.
      2. Assumptions on whether training will need to be integrated into existing training solutions (e.g. existing simulators / trainers, etc. – this could be a significant cost.).
      3. Assumptions on what will need to be trained; drawing upon the CONEMP (can also be very high level, e.g. maintainer training / maintenance managers / operators / command appreciation, etc.).

1. **Training Risks**. In terms of risk and opportunity identification, the most obvious source of information is the assumptions and constraints data. As with assumptions and constraints, the training risks should be integrated with the wider project risks to avoid duplication of effort and to maintain Training as integral to the wider project it supports. At a minimum the following training risks should be considered, documented, addressed, and updated/maintained:
   1. Risk to military capability and effects of not having a training solution ready in time to meet the In-Service Date (ISD),
   2. Impact of not having a training solution adequately resourced through-life of the capability,
   3. Being unable to articulate training requirements in time to inform training solution design, including identifying and addressing Intellectual Property, Export Controls / ITAR and any licensing needs / constraints to inform the design process,
   4. Training requirements articulation, design, and development through unavailability and/or immaturity of key information,
   5. Risks to personnel structures through inappropriate training and/or lack of throughput capacity,
   6. Doctrinal development and validation through training not capturing doctrinal requirements,
   7. Risks to organisations (especially FLC) if training is inadequate or not appropriately resourced,
   8. Training infrastructure (including existing training solutions, associated hardware and software) of ability to deliver the new training solution, e.g. new software being DMaSC-compliant and compatible with other requirements of existing Training-LANs (notably with respect to architecture, processing power and cooling), additional classroom requirement should additional through-put be in excess of the existing training estate accommodation,
   9. Risks to logistics support activity through inadequate training.
   10. **Training Strategy/Training Plan**. This should provide a roadmap of how the PT intends to deliver the human capability element[36](#_bookmark41). The document should include route to

36 [CDA 7 (Training and Training Equipment) - KiD](https://www.kid.mod.uk/maincontent/business/sse_21/content/cda7.htm)

market for TNA, potential training solutions including procurement strategy, scope of delivery options, and methods and media options and implementation[37](#_bookmark42). The Training Support Plan (TSP) should form an element of the strategy (it may also be an annex to the ILSP, maintained by the ILSM. By this means, training is addressed in the TLMP). The Training Strategy is a live document and should be subject to regular review. The TSG will need to endorse the Training Strategy.

* 1. It is imperative that the Training Strategy reflects the programme and therefore, there are no set times when activity must be undertaken. However, the Training acquisition activity should not be undertaken in isolation and needs to support project milestones and outputs. Further detail of Training activities undertaken at each block mapped to the optimum phase of the CADMID cycle is presented at [Annex B.](#_bookmark72)
  2. **Route to Market for TNA**. The PT is responsible for the commissioning and management of the TNA programme. Not all parts of the TNA may be required and, if they are, they do not need to be contracted with the same provider. For very large or complex programmes, it may be more appropriate to fully compete the TNA requirement[38](#_bookmark43). This route is used where a prime contractor has insufficient training expertise or if the procurement is commercial-off-the-shelf and/or the prime contractor offers only a standard training programme. The PT should initially consult with FT/MTAO to identify and agree the most appropriate TNA procurement approach, timings and route to market for their project. Options typically include:
     1. The prime contractor undertakes the TNA(s) as part of the overarching contract. This is the most common choice for major or medium-sized projects because the prime contractor usually has a sizeable and experienced training department. Where a prime contractor has insufficient training expertise (or if the procurement is commercial-off-the-shelf and the prime contractor offers only a standard training programme) it may be sub-contracted to a commercial provider. In order for the TNA to be undertaken by the prime or its sub-contractor, the overarching contract must have sufficient detail in the URD, SRD and contract to specify the TNA requirement.
     2. The PT contracts a commercial provider to undertake the TNA(s) via a suitable commercial framework such as the Managed Learning Service (MLS)[39](#_bookmark44). For DE&S the EDP is the default route to market[40](#_bookmark45) but other preferred contractors exist depending on type of activity[41](#_bookmark46).
  3. Once the PT has consulted with MTAO to decide the most appropriate procurement strategy for the TNA, the TNA outputs should become contracted deliverables, with defined delivery and quality timetables. MTAO should be consulted to formulate the Statement of Requirement (SOR) for the outsourced TNA in accordance with the Future Training TNA QA endorsed TNA approach (initially outlined in the Training Strategy). Part 2 (Training Analysis Standards) of this document outlines the quality criteria that should be used to develop the TNA SOR including contract deliverables and contract management processes. Provision must be included for review of the deliverables by the TSG and PT and for subsequent amendment and endorsement.
  4. **Training Requirement Definition**. In March 1990 the House of Commons Defence Committee recommended that the Ministry of Defence (MOD) substantially increase their research and development in simulation technology. At that time the MOD estimated that the

37 Maritime Training Strategy v4 [(Part 1](https://modgovuk.sharepoint.com/sites/defnet/Navy/Official%20Sensitive%20Documents/Maritime-Training-Strategy-Complete-Pt1-V4-FAW-OS.pdf#search%3Dmaritime%20training%20strategy) and [Part 2)](https://modgovuk.sharepoint.com/sites/defnet/Navy/Documents/Maritime-Training-Strategy-Complete-Pt2-V4.pdf#search%3Dmaritime%20training%20strategy). Update expected in 2023.

38 Whilst FT/MTAO can advise on options for TNA provision, the PT must ensure that the DE&S or NCHQ Commercial function approve the TNA procurement approach and are consulted accordingly.

39 For example Knowledge Pool. Policy contained in 2022DIN07-124 – MOD Managed Learning Service – Procurement of External Training for MOD Personnel.

40 [Engineering Design Partner (DE&S Intranet)](https://modgovuk.sharepoint.com/teams/2228/pages/Information%20Page.aspx?title=Engineering%20Delivery%20Partner%20%28EDP%29&itempath=https%3A//modgovuk.sharepoint.com/teams/2228/Functions/Engineering&cat=Policy%20and%20Processes&xsdata=%3D&sdata=UzdsNkRSVzl5dGpWRHdKNFdDMmtJZDd5eWdtOGl4S2JMSzFYcHVJb0xSVT0%3D&ovuser=be7760ed-5953-484b-ae95-d0a16dfa09e5%2CBenjamin.Hendy100%40mod.gov.uk&OR=Teams-HL&CT=1674745414554&clickparams=eyJBcHBOYW1lIjoiVGVhbXMtRGVza3RvcCIsIkFwcFZlcnNpb24iOiIyNy8yMzAxMTEwNTYwMCIsIkhhc0ZlZGVyYXRlZFVzZXIiOmZhbHNlfQ%3D%3D)

41 For example the [DE&S Programme Delivery Partner (DE&S Intranet)](https://modgovuk.sharepoint.com/teams/2228/Domains/GeneralProgrammes/pages/Information%20Page.aspx?title=DE%26S%20Programme%20Delivery%20Partner%20&itempath=https%3a//modgovuk.sharepoint.com/teams/2228/Domains/GeneralProgrammes&author=Price%2c%20Matthew%20%28DES%20CEO-CorpComms-IntComms-BP4%29&cat=Director%20Programmes&cat1=Delivery%20partner&c1=%27%27&c2=%27undefined%27&c3=%27undefined%27&c4=%27undefined%27&c5=%27undefined%27&c6=%27undefined%27&c7=%27undefined%27&c8=%27undefined%27&c9=%27undefined%27&c10=%27undefined%27&c11=%27undefined%27&c12=%27undefined%27&c13=%27undefined%27)

3000 or so simulators in use across the three Services had cost in excess of £450M with a further spend of £700M planned for the following 10 years. Then, as now, it was recognised that members of the Armed Forces must train effectively to achieve and maintain individual and collective operational capability. Simulators, in combination with the more traditional forms of training, have a key role in the achievement of this objective.

* 1. In 1992 the National Audit Office (NAO)[42](#_bookmark47) examined the acquisition, utilisation and effectiveness of these simulators used in training. The examination covered all three Services but concentrated on the RAF due to the high number and cost of flight simulators alongside their special relevance to RAF training and flight safety. In summary the NAO report concluded that the MOD should:
     1. Ensure acquisition choices are based on improved and more timely definition of training needs through the introduction of TNA and,
     2. Formulate a clear plan, with well-defined priorities, for future acquisitions.
  2. JSP 822 advocates the use of a TNA process for the identification of the training needs and solution. It is a systematic, iterative, output based approach that provides an audit trail of analysis to determine the requirement for training and, if required, enable design of specialist training and acquisition of training equipment/services. The process takes a three-phase approach with a number of stages and deliverables. It is essential that the training solution recommendations include implementation and acceptance requirements and plans sufficient to move the next phase of the project forward cost effectively, in line with timescales and resources available.
  3. The MATG provides firm guidance for the conduct of a rigorous, DSAT-compliant TNA. Nonetheless, its contents should not preclude deviation from the procedures it describes, in instances where intelligent analysis are better served by alternative means. Any such deviations must be unambiguously proposed and endorsed by the TSG prior to work being commenced.

**Stage 1 Deliverable**

**Scoping Exercise Report**

**Stage 2 Deliverables**

**RA**

**TGA**

**TOA**

**Final Report**

**Stage 3 Deliverable**

**TNE**

**Figure 7:** TNA Deliverables

* 1. **TNA Overview** (further detail on Individual TNA is outlined in Part 2 and JSP 822, Part 2 for Collective TNA):

## Stage 1 - Scoping Exercise Report

* + 1. The Scoping Exercise Report (SER) is the initial analysis of the training requirement and options for meeting the training requirement and making a broad order estimate of the risk and resource implications associated with each option. The process first needs to confirm if new or modified training is the solution (or part of the solution) to the problem (normally indicated as a performance deficiency in a job or role). This will include initial estimates of the requirements that will be further refined (as required) during the TNA and will also include identification of the method of and

42 Ministry of Defence: Use of Simulators in Training - National Audit Office Report, dated 7 September 1992

resources needed for the subsequent steps of this process. Dependencies with other DLODs will also need to be clearly established and considered.

* + 1. It is recommended that SER is undertaken to complement other Concept phase activity and inform the Outline Business Case. Estimates of initial and through-life costs that fall upon the PT should be identified at this stage (see [Annex](#_bookmark74) C for potential areas of cost). It should be noted that this process does not identify the training solution prior to the TNA but based on the analysis of likely costs that are supported by good judgement assumptions, it presents an indicator of required resource for training and therefore a suitable resource constraint on the future Analysis work.

|  |  |
| --- | --- |
| **Capital Cost Items** | **Annual Through-Life Support Costs** |
| * Training Media * Integration into Existing Training Solutions * Training Support Systems * First of Class Training * Reference Documentation * Training Design * New or Refurbished Training Infrastructure * IT Infrastructure * Risk Mitigation | * Live and Workplace Training * Instructors * Train the Trainer Courses * Training Support Staff * Training Administrators * Travel and Subsistence * Consumables and Utilities * Training Design * Training Publications * Facilities Management (FM) (Hard and Soft) * Tech Refresh for Training Equipment |

**Figure 8:** Potential Sources of Training Whole Life Costs

* + 1. In the Assessment phase a review of the SE should be undertaken, this may require the SER to be ‘up-issued’ and/or re-written. This work should be a re- validation and refinement of the underpinning analysis conducted during the SE. The analysis process is iterative and so the growing quantity, maturity and granularity of available data will enable the SE[43](#_bookmark48) to provide:
       1. Assumptions validated[44](#_bookmark49) against maturing information.
       2. Greater visibility and understanding of Risk exposure[45](#_bookmark50).
       3. Greater accuracy applied to through-life cost estimates to inform the Main Gate Business Case.
       4. Performance Criteria for any potential training solutions to be articulated in greater detail.

## Stage 2 – TNA Development

* + 1. The TNA Development is broken down into 4 deliverables [46](#_bookmark51)(individual/collective):
       1. **Deliverable 1 – Role Analysis/Task Analysis**. This establishes the

43 Ultimately, the SER bounds the analysis to be undertaken during the TNA Development Phase and recommends the approach to be taken during Stage 2 TNA.

44 Against those stated in the Master Data Assumption List (MDAL).

45 As detailed in the Risk Register.

46 This represents the standard approach to TNA. The adopted approach and required deliverables needs to be project specific.

operational/workplace performance, conditions and standards required of individual and collective tasks (i.e. team, sub-unit, unit and formation) for the new or changed operational requirement. It will also identify likely annual trainee throughput that will in turn inform the Statement of Trained Requirement (SOTR).

* + - 1. **Deliverable 2 – Training Gap Analysis/Teamwork Error Analysis**. This identifies the training gap between the *new* operational/business need and *current* training provision in terms of knowledge, skills and attitudes.
      2. **Deliverable 3 – Training Options Analysis**. This looks at different combinations of methods and/or media, which will bridge or partially bridge the training gap(s). It will make a recommendation as to a cost-effective training solution.
      3. **Deliverable 4 – Training Needs Report**. The Training Needs Report provides the requirement and the TSG endorsed training solution with a draft RPS/Competency Framework (CF) and draft Formal Training Statement (FTS) with a draft implementation plan.
  1. **Quality Assurance (QA).** The Quality Assurance (QA) of the TNA, in assuring validity, is very important. The QA of the TNA is not just a checklist of the content by using quality criteria, as this only involves assessment of the reliability: it must also consider the validity aspects of the relevant subject matter expert input to the final recommendation. Only the combination of quality criteria, validity of source data and objective management will assure that the overall process is “fit for purpose”. It is important to note that everyone involved in the TNA is responsible for quality and all TSG members will have specific roles with respect to assuring that the final recommendation is cost-effective. It is important that the QA function is separate from the conduct of TNA to allow independent review.
  2. **TNA Contract Management**. The TNA contract, whether provided through a prime contractor, sourced via commercial framework or open competition, requires proactive contract management to ensure its outputs are delivered to time, cost and quality. MTAO, as the Training advisors based at MOD Abbeywood, provide contract management support to PTs to ensure the conduct of the TNA is satisfactory. Early engagement by PTs with MTAO is strongly recommended to ensure that TNA contracts are sufficiently detailed to deliver the TNA outputs to time, quality and cost, iaw the overarching Training Strategy and TNAQA assurance. MTAO also advise PTs on suitable TSG membership, Training activities and coherence with other related projects, concepts and doctrine.
  3. **Training System and Media Procurement Strategy**. The TNA process will identify the most cost-effective training solution through-life. The procurement of training media and services should follow current commercial guidance and adopt a cross DLOD approach. Any training solution that has a modelling and simulation element will need to comply with DTEC rules that are outlined in JSP 822, Part 2. The PT should initially consult with MTAO to identify the most appropriate procurement and through-life support approach, route to market for the Training System Procurement in support of their project. MTAO also liaises with organisations that manage the support contract(s)[47](#_bookmark52) for a number of maritime training systems, including Maritime Composite Training System (MCTS) and will need to be engaged when updates to the training system is required.
  4. **Integration**. Course scheduling is a complex operation and specific training will need to be integrated into an existing course schedule and branch pipelines. There is the

47 The number of support contracts are currently being rationalised under Maritime Training Systems Through Life Availability and Support Services (MARTASS) project.

need to interface early with the Statement of Trained Requirement (SOTR) process that documents the quantitative requirement i.e. the number of trained personnel required by the Naval Service[48](#_bookmark54). The RN SOTR process is owned by Director People and Training as the Naval Service TRA, who is responsible for ensuring overall Profession structure and sustainability. It looks- out to 5-yr point, but typically deals with the next 18 - 36 months (however, the SOTR isn’t finalised until 12 months in advance of the Training Year). This then forms the demand for the Training Delivery Authority (TDA), which is responsible for generating the Statement of Training Task (SOTT) i.e. training supply.

* 1. **Training Delivery**. Training will be delivered by a Training Delivery Authority on behalf of Director People & Training (IT) or Director Force Generation (CT) unless it can be demonstrated that it is better value for money to use another route (as part of the TNA process).
     1. **Interim Training Solution.** The approach to training provision is that interim training will be based on the submission from contractors in response to successive system iterations through-life. The trigger for the transition to steady state will need to be identified based on system maturity/stability, the transition to ISD & IOC/FOC timelines.
     2. **Training the Trainers**. Consideration will be given to the most appropriate way of building an initial level of knowledge in the new equipment and systems. Provision should be made for attendance on the Interim Training courses. This should also include FOST(Ships) and FOST(Submarines) personnel who will be involved in the delivery of collective training.
     3. **Steady State Training**. The default option is that Team Fisher will be the predominant Training Provider of Steady State IT, although exceptions will exist[49](#_bookmark55). This will be based on interim training deliverables from each successive roll out of capability uplifts.

## Stage 3 - Training Needs Evaluation

* 1. JSP 822 outlines the need for a Training Needs Evaluation (TNE) of the training recommendations given in the TNA:

*“The purpose of the TNE is to evaluate the effectiveness and efficiency of the TNA process and the training solution that was recommended at the end of Stage 2 (Analysis). Firstly it should evaluate the TNA methodology through the process of CI, secondly it should evaluate the recommendation by reviewing the training solution it proposed. The rationale for this is that it may be some time (years) after the final report is endorsed before we are in a position to evaluate the proposed solution.”*

* 1. It then provides key Lessons Identified (LIs) and increased levels of confidence in resource and risk forecast information that can be applied to future / ongoing projects, thus continuously improving the whole Analysis and DSAT approach.

# Section 7: Training contribution to Acceptance

* 1. The Integrated Test, Evaluation and Acceptance Plan (ITEAP) provides the granularity of the project acceptance strategy and provides the detail relating to acceptance criteria. The criteria are developed based on the project outputs and SRD.
  2. User Acceptance will occur when there is sufficient evidence to demonstrate that all of

48 [RN BRd 3, Vol 1, Pt. 9, Ch. 95, Para 9502j](http://web.apps.royalnavy.r.mil.uk/fpgo/BRd_0001_4999/BRd_0003/BRd_3_1/ch95.pdf)

49 [RN BRd 3, Vol 1, Pt. 9, Ch. 95, Para 9502d](http://web.apps.royalnavy.r.mil.uk/fpgo/BRd_0001_4999/BRd_0003/BRd_3_1/ch95.pdf)

the validation criteria in the URD have been met. IOC/ISD takes into account all of the relevant DLODs as well as the equipment. The Training areas of the PLOD and TLOD will deliver compliance reports confirming DLOD readiness (including safety[50](#_bookmark58) and suitability). Therefore, it is imperative that early work of Training milestones is aligned to the programme capability milestones. This will need to be linked to the SRD compliance report summarising the verification outcome against each SR in order to provide Training compliance evidence.

# Section 8: Interface with other DLODs

* 1. Training must be able to influence decisions made elsewhere across the DLODs (particularly the ELOD), which could result in excessive training costs and threaten project affordability[51](#_bookmark59), as well as highlight potential risks associated with insufficient training provision[52](#_bookmark60) (See [Section 8](#_bookmark57)). It is essential that neither equipment nor support contracts are awarded without a sound understanding of the through-life impacts of their training requirement. The need for this coherent approach is driven by the Defence Operating and Acquisition models.
  2. The training component of the capability is reliant on output from a number of the DLODs. The main dependencies are outlined below:
     1. **Training**. The Training activities are detailed at [Section 5](#_bookmark22).

## Equipment.

* + - 1. The initial procurement and installation of all specific equipment, including; hardware, software and documentation required for training.
      2. The funding of updates to the aforementioned media as required for training.
      3. The provision of any required training infrastructure.
      4. The initial procurement and installation of all specific training media, including; hardware, software and training documentation.
      5. The provision of test facilities that should have utility in the training environment. They are responsible for ensuring maximum utility in training and an explanation of the cost associated with this provision.

## Personnel.

* + - 1. Recent organisational design within the Navy has allocated the governance of IT through the PLOD and CT through the TLOD.
      2. The PLOD will provide sufficient instructors and trainees to deliver the required training output, as articulated in the Statement of Trained Requirement (SOTR)[53](#_bookmark61).

## Infrastructure.

* + - 1. The DIO (expand) should consulted as they may be responsible for

50 Training will often form elements of the mitigation in the safety case and so there is the need for the PT Training lead to confirm these activities are being met.

51 For example the ELOD may seek to keep costs down rather than fund development of an intuitive user interface, which results in a more complex role for the operator, longer training and ultimately higher through life costs.

52 e.g. poor maintainer training may adversely impact equipment availability and lead to higher through life spares and replacement costs.

53 [JSP 822 v5, Vol. 10, p. 27 - SOTR](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/SitePages/JSP-822--Volumes---PDF-format.aspx)

providing sufficient and suitable training facilities to host the training requirement, as articulated by the ELOD[54](#_bookmark63). This may not be the case if the preferred steady state training solution is a K course[55](#_bookmark64).

* + 1. **Doctrine.** The CONEMP/CONUSE, the URD and any other pertinent extant documentation (for example MWC or DCDC) that will be utilised by Training to inform and shape the training requirement.[56](#_bookmark65)
    2. **Organisation.** Force structures required for the new capability or the training for the new training solution (Mil/CS/Contractor). Training may need to be more than military personnel and include MOD Civil Servants or Industry Partners.
    3. **Information.** The training documentation hosted/managed on a learning management system (e.g. Defence Learning Management Capability) will be provided by the lead equipment PT.

## Logistics

* + - 1. The proposed maintenance arrangements for the new equipment.
      2. The timely availability of technical manuals to support analytical work.
  1. [Annex](#_bookmark79) D provides further details on the cross-DLOD dependencies and potential associated cost drivers.

# Section 9: Training Governance

* 1. The governance heirachy for Training can be seen in Figure 11. The single key factor that drives a successful project is the formation of a Training Steering Group (TSG)[**57**](#_bookmark66)at the earliest opportunity within the Concept phase of the CADMID cycle. The TSG’s primary purpose is the management of the integration of Training within the project and is overseen by the Chairman from the PT who is to ensure that all the appropriate stakeholders are identified and actively engaged in the process (see Annex E). This is done through regular TSG meetings where deliverable timelines are agreed, stakeholder feedback coordinated and regular communication with the PT maintained to ensure they remain aware of projects progress. Cross-DLOD issues identified at the TSG will be raised up to the Capability Integration WG and potentially the Programme Board (PgB).

54 [Infrastructure and Defence Estate Policy - KiD](https://www.kid.mod.uk/maincontent/business/jsp850/content/1_policy_01.htm)

55 [RN BRd 3, Vol 1, Pt. 9, Ch. 95, Para 9503j](http://web.apps.royalnavy.r.mil.uk/fpgo/BRd_0001_4999/BRd_0003/BRd_3_1/ch95.pdf)

56 [Capability Integration – Products - KiD](https://www.kid.mod.uk/maincontent/business/tlcm/content/capabilityintegration/ciproducts.htm?zoom_highlight)

57 This body is often given different titles to reflect the different needs and stakeholders throughout the acquisition process. Referred to as a TNA Steering Group (TNASG) with a list of responsibilities wider than the TNA in [JSP 822 v5, Vol. 2, Sect. 3.3., p. 15.](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/JSP822Volume2) Name likely to change in v6 in Sep 23.

|  |  |
| --- | --- |
| Programme Board (PgB) | |
|  |  |
| Capability Integration Working Group (CIWG) | |
|  |  |
| Training Steering Group (TSG) | |
|  |  |
| Training Working Group(s) (TWG) (as required for larger programmes) | |

**Figure 9:** Training Governance Structure

* 1. Collectively the TSG members should identify the activities required to be undertaken, the milestones to be achieved and the training-related risks and issues associated with the project, the lead stakeholder for each action, and the dependencies with the overall project plan and with other DLOD activities. In addition, some of the stakeholders will act as endorsing members for all Training related documentation or content required for approval points and acceptance purposes.[58](#_bookmark67) It is therefore imperative that the roles and responsibilities of each member of the TSG are clearly defined and the individuals fulfilling those roles fully understand what is required of them.
  2. **Training Steering Group Membership**. The composition of the TSG is fundamental to the effective management of the Training aspects of a project throughout its life. It is the lead forum for Training issues and has the following core membership who are required for endorsement decisions:
     1. **Delivery Agent.** The Chair of the TSG will be decided by the Project Manager. It is recommended that the responsibility to chair the TSG be delegated to the ILSM or PT Training Lead. The PT will also provide the secretariat to the steering group.
     2. **Training Requirement Authorities.** The FLC owner of the training requirement. As the end-user of the trained output the TRA is the ultimate authority for training related decisions[59](#_bookmark68). However, there may also be a requirement for multiple TRAs (to represent CT or other FLC TRA). In these cases, a lead TRA should be established[60](#_bookmark69).
     3. **FLC Capability area.** Sitting within one of the six Deputy Directorates of Force Generation Directorate[61](#_bookmark70), these managers are responsible for integrating the Defence Lines of Development for in-service capability to generate force elements that can be used to deliver operational capability. They also run the CIWGs, which sit above the TSG in the governance structure shown in Figure 11. More than one Capability Desk may be required depending on the specifics of the training solution, for example one for both the operator and the maintainer.

58 Examples include the User Requirement Document (URD), System Requirement Document (SRD) or Training Needs Analysis (TNA) deliverables).

59 [JSP 822 v5, Vol 2. Ch 2, Sect. 2.2, Para. 3, p.](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/SitePages/JSP-822--Volumes---PDF-format.aspx) 3

60 See [JSP 822 v5, Vol 2. Ch 2, Sect. 2.2, Para. 7, p. 4](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/SitePages/JSP-822--Volumes---PDF-format.aspx)

61 Aviation, Littoral Strike, Ships, Submarines, Support and Royal Fleet Auxiliary.

## Training Assurance (FT/MTAO).

* + 1. **TNA Quality Assurance.** A training support specialist from Future Training who can:
       1. Advise that the steering group is representative of all the stakeholders affected by the new capability,
       2. Ensure the compliance of each deliverable with the methodology agreed at the Scoping Stage,
       3. Ensure that a clear audit trail exists for each decision made via appropriate Deliverables and that any references to data sources are valid.
       4. Advise that the steering group is representative of all the stakeholders affected by the new capability,
       5. Ensure the compliance of each deliverable with the methodology agreed at the Scoping Stage,
       6. Ensure that a clear audit trail exists for each decision made via appropriate Deliverables and that any references to data sources are valid.
  1. Other representatives should be added to the membership of the TSG where they can add value including any relevant TDAs, the TNA contractor, the FLC TCM and relevant Industry Partners.
  2. The detailed tasks the TSG is required to perform (Terms of Reference) can be found at [Annex](#_bookmark83) E).

## Annex A to MATG Pt 1

## Dated 14 Feb 23

## Defence Training Continuum

* 1. One of the key drivers in maintaining Force Elements at Readiness (FE@R) is the provision of sufficient capable and motivated personnel. Training and education makes a contribution to both the capable and motivated aspects of this requirement. The outputs of both individual and collective training combine to enhance performance and produce Force Elements at the appropriate level of Operational Capability to meet mandated Readiness Profiles.
  2. In Defence there is a training continuum that runs from individual through team to collective, definitions of each element are set out in Figure 5 below:

|  |  |  |
| --- | --- | --- |
| Individual | Team | Collective |

**Ph 1**

**Ph 2 Ph 3 Tier 0 Tier 0 Tier 1**

**Tier 2**

**Tier 2+**

**Tier 3**

## Figure A-1: Training Continuum –

## Individual/Team/Collective

* + 1. **Individual**. Training designed to develop the competencies (a mix of knowledge, skills and attitudes) of individual personnel.
    2. **Team**. Training which is aimed at generating the ability of teams and sub- teams to function as a cohesive entity and so deliver operational capability.
       1. A team is a sub-division of an individual unit’s personnel, for example a submarine would comprise teams operating as the Command Team, Ship Control Team, Propulsion Team, etc.
       2. A sub-team is where the above teams can be sub-divided further into sub- teams; for example the Command Team can be split into Command Information System, Sensor, Fire Control, Tactical Picture Compilation and Navigation sub- teams.
    3. **Collective**. Training which is aimed at improving the ability of units, or formations of units, to function as a cohesive entity and so enhance operational capability.
       1. Tier 1 training prepares units and sub-units to take their place within a tactical formation or Combined/Joint Force Component.
       2. Tier 2 training prepares tactical formations operating below the Combined/Joint Force Component level for operational employment.
       3. Tier 2+ Collective Training prepares one or more Combined/Joint Components for operational employment. It may be conducted in combined or joint contexts on a UK, NATO or Coalition Partner framework basis.

## INDICATIVE TRAINING ACTIVITIES AND THE ACQUISITION PHASES[62](#_bookmark73)

## Annex B to MATG Pt 1

## Dated 14 Feb 23

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| **Development Activity** | **Benefits & Risks** |
| **Concept** | |
| Identify Training stakeholders. | Effort in early planning for training reduces the risk of unforeseen costs appearing in the ‘in–service’ phases of the project. It is imperative that Training is not considered in isolation and that there is early engagement with the other DLODs.  If Training is not considered early in the project life-cycle it is probable that the costs and timescales associated with this enduring part of the capability will be underestimated and unnecessary significant additional costs and delays incurred.  This will result in either the necessity to request additional funding or deliver a poor training solution with an inevitable knock-on effect to the delivery of the capability.  Training SMEs are available through [MTAO](mailto:navypeople-ftmtaomailbox@mod.gov.uk) to provide advice and guidance as to the level of detail required at each stage as applicable to the specific project.  Training must not be considered in isolation and early identification of non- training solutions can eliminate/reduce potential training gaps and reduce the through-life costs.  Training must consider the implications for individual, team, and collective training. |
| Identify:   * Project Team / Delivery Team Manager responsible for training * Resources required to conduct Stage 1 Scoping Exercise Report and Stage 2 Training Needs Analysis (TNA) as required. * Respective Terms of Reference (TORs) to be issued.   Confirm Training Funding Lines are in place to support training through-life. |  |

62 This list will need to be applied pragmatically based on the nature and scale of the acquisition project.

## Annex B to MATG Pt 1

## Dated 14 Feb 23

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| Form a Training Steering Group (TSG) comprising training stakeholders to assure Training activity. |  |
| Engage with Future Training SMEs for assistance in considerations for the SER |  |
| Produce Scoping Exercise Report with as much detail as possible to inform Outline Business Case and obtain endorsement by TSG. If no internal resource exists, identify route to market to source it and derive the Statement of Requirement  (SOR) for the Scoping Exercise Report. |  |
| Capture training requirements, with inputs from user community, using URD and Concept of Employment (CONEMP). |  |
| In conjunction with other DLODs identify options to minimise the training burden. |  |
| Produce an initial Training Strategy incorporating an initial Level 0 plan/TLMP and  obtain endorsement by TSG. |  |
| List training assumptions in Master Data and Assumptions List (MDAL), identified risks in risk register and benefits in the benefits register. Also, identify if and when changes to or new Doctrine (notably, CONOPS / CONUSE) will be available in order to undertake the Role Profile Analysis (RPA) early in Stage 2 of the TNA, to detail the Operator and/or Maintainer tasks which need to be trained (or which no longer need to be trained); the RPA underpins the rest of the TNA process and its  deliverables. |  |
| **Assessment** | |
| Update the Training Strategy including: route to market, including considering Project SELBORNE as well as other routes to market (e.g. the OEMs or specialist training suppliers) for TNA, potential training solutions; procurement strategy; scope of delivery options; clarification of key commercial issues (e.g. IPR, software licenses, Export Controls / ITAR) to be addressed before contracting the TNA and/or Training Solution; and methods and media options and implementation (it may be that a separate TLOD/Training plan is developed from the overarching strategy). | As the technical solution becomes more refined the potential training solution can be refined alongside this. This will provide a better indication of the true costs of the training and will give a better indication of the Project’s through life cost.  By understanding the costs of the training options, and the implications on the provision of the capability, intelligent decisions can be made on possible trade-offs in full cognisance of the impact.  As the technical solution becomes more refined the potential training solution can be refined alongside this. This will provide a better indication of the true costs of the training and will give a better indication of the Project’s through life cost.  By understanding the costs of the training options, and the implications on the provision of the capability, intelligent decisions can be made on possible trade-offs in full cognisance of the impact.  Constraints on Training activity should also be formally captured and |

## Annex B to MATG Pt 1

## Dated 14 Feb 23

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|  | reviewed, while they are often a useful mechanism to bound a project they can be misinterpreted or used to avoid conducting a comprehensive  requirements capture. |
| Review SER and update (if required) with more refined data on the high-level training gaps and provide the through-life cost estimates of the potential training  solutions for the appropriate business case deliverables. |  |
| Capture training requirements appropriately in both URD and SRD. |  |
| Update training risks, issues, assumptions and benefits. |  |
| Identify route to market for TNA and derive a Statement of Requirement for TNA (including criteria for down select of TNA provider). |  |
| Provide Training input into the ITEAP. |  |
| **Demonstration** | |
| Undertake/commence/refine a Training Needs Analysis (TNA) and obtain endorsement from the Training Steering Group (TSG). | The TNA will provide an auditable trail of the technical process that determined the training solution and will provide information on the numbers and types of personnel requiring training, when and where they will be trained, and what they will be trained to do.  In order to satisfy the requirement to demonstrate best value-for-money the training solution development must be transparent and conducted in accordance with the appropriate references (JSP 822 / Defence Logistic Framework).  If Training Delivery Authorities (TDAs) are not included in the solution it is probable that the full costs will not have been captured, TDAs will be able to advise on infrastructures support costs that must be considered as part of  the solution. |
| Include in the contract a requirement for relevant Human Machine Interface / Human Computer Interaction (HMI / HCI) aspects of the equipment to be made  available to the training and training equipment solution provider. |  |
| Include in the contract a requirement for the timely provision of the equipment technical publications to support the TNA and Training Design process through life. |  |
| Develop the procurement strategy for training media that was identified in the  Training Strategy. |  |
| Update training risks, assumptions and benefits. |  |

## Annex B to MATG Pt 1

## Dated 14 Feb 23

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| Capture training requirements in Concept of Use (CONUSE). |  |
| Plan resources, including funding, for iterative updates to TNA products as required. |  |
| Upload Training input into ITEAP. |  |
| **Manufacture** | |
| Obtain endorsement of the Training Needs Analysis (TNA) from the TSG. | Timely implementation of the TNA recommendations under the governance of the TSG is key to delivering the human capability element. The RFTD must be agreed by the appropriate FLC as the FLC will be basing deployment of the capability on the assumption of fully trained individuals, teams and FE@R through collective training. Training is also likely to be required to be in place to support trials, test and acceptance activity.  Timely implementation of the TNA recommendations under the governance of the TSG is key to delivering the human capability element. The RFTD must be agreed by the appropriate FLC as the FLC will be basing deployment of the capability on the assumption of fully trained individuals, teams and FE@R through collective training. Training is also likely to be required to be in place to support trials, test and acceptance activity.  TNA outputs that have a commercial delivery agent require contracts to stipulate delivery will support the RFTD. |
| Produce implementation plan for TNA recommended solution(s) to meet the agreed Ready For Training Date (RFTD). |  |
| Reflect TNA outputs in specification (Training System URD/SRD/SOR) and commercial contracts (procurement/support) as necessary (Synthetic solutions SRD/SOR will need to reflect Defence Training & Education Capability (DTEC)  requirements as set out in JSP 822). |  |
| Training Steering Group (TSG)/Trg DLOD Working Group govern the transition of TNA outputs into interim and steady state training solutions. |  |
| Conduct Training Design activities for interim and steady state training solutions,  with funding if required (If this activity is being undertaken by industry then ensure appropriate assurance and validation process are in place). |  |
| Capture new requirements/amendments to the SOTR. |  |
| Monitor requirement for iterative update of TNA products |  |
| Deliver and evaluate First of Class (FOC) and Train-the-Trainer Training. |  |

## Annex B to MATG Pt 1

## Dated 14 Feb 23

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| Update Training input into ITEAP. |  | |
| Ensure Training Delivery Authority delivers Steady State training to meet the requirement. |  | |
| **In Service** | | |
| Continue to review and update the training plan, and training products, to maintain coherence with updates to equipment, concepts and doctrine, and personnel changes. | | Updates and modifications could introduce risk to performance and safety if impact on Training is not considered properly |
| Check, through continual management, that Training issues addressed during design and development are not compromised by any changes, updates or modifications. | |  |
| Conduct Training Needs Evaluation (TNE) (TNA Post Project Evaluation). | |  |
| **Disposal** | | |
| Consider the continuance of training elements necessary to support any new capability based on the current capability. | | If the capability for which this training was provided is being updated or enhanced, it is possible that elements of the training will still be needed to support any new training requirement. This must be determined before any training ceases so that the new DT can take over the responsibility for the continuation of what will become legacy training.  If equipment is being sold then consideration should be given to continual provision of training and equipment as part of the package. This could continue to make money for Defence.  If disposal of training equipment is not considered, it is probable that  unnecessary support costs will be incurred as the now obsolete training equipment is maintained in a safe condition. |
| Dispose of training equipment / media that have been procured in accordance with extant policy. | |  |
| Inform SOTR/SOTT of capability disposal plans such that reductions in trainee throughput are planned for. | |  |

## Annex C to MATG Pt 1

## Dated 14 Feb 23

## INITIAL AND THROUGH-LIFE TRAINING COSTS

1. **Potential Sources of Cost**. Potential sources of cost arising from all Training activities are identified below.
2. **Capital Costs.** Capital Costs (usually EPP funded) could potentially include:
   1. **Training Media**. Estimate ROM costs of potential training solution options that may meet the training requirement. These could include solutions such as CAI, CBT, Part Task Trainers (PTT), GFE, simulation, serious games, e-Learning, contractor courses, Private Finance Initiative (PFI), managed service, etc. Costs may be estimated by identifying[63](#_bookmark75) costs for similar in-service solutions and by approaching industry[64](#_bookmark76) for ROM estimates on a ‘without commitment or prejudice’ basis, however it should be noted that industry may charge to produce a ROM quote and it may take several months to produce.
   2. **Integration into Existing Training Solutions**. The cost of integration into existing training solutions must be established through the appropriate DE&S PT or FLC that manages the training solution. Solutions include MCTS, Bridge Simulators, SM Command Team Trainers, MTDS, CATT, CAST, DCCT, etc. It should be noted that integration into such systems may include costs for support functions, e.g. Training Support Systems, Support Staff, Training Design & Delivery, Facilities Management, Infrastructure, etc. – confirm with appropriate PT.
   3. **Interim Training Solution (ITS)**[**65**](#_bookmark77). An interim training solution, or First of Class training, may be required if steady state training is unavailable to support the first tranche(s) of trainees required to meet ISD. First of Class training may also be required for instructors to gain system familiarisation. It may be desirable to achieve the steady state solution in time for ISD, thereby removing the need for a First of Class or interim training solution.
   4. **Training Support Systems**. The training solution may require a LMS, LCMS, and TAFMIS to aid design and management of training. Training Support Systems must be compatible with existing MOD systems such as DLP, DITM, JPA.
   5. **Reference Documentation**. Access to technical reference documentation will be required to support training analysis and design. Access to such documentation may require funds to be provisioned to cover any IPR and International Trade in Arms Regulations (ITAR)[66](#_bookmark78) restrictions.
   6. **Training Design**. Training Design, including instructional design, will be required to be conducted in support of the training solution. It should not be assumed that training design for new capabilities is covered within existing partnering agreements with a single Service (sS). Use of LCMS systems may facilitate the training design process through-life.
   7. **New or Refurbished Training Infrastructure**. Classrooms, buildings, ranges, berths, etc. may all need to be built or refurbished as part of the new training solution. Opportunities for sharing and re-using such facilities with other training should be exploited. There may also be a need to upgrade support facilities such as messes, catering, car parking, etc.

63 Identify costs with the PT or FLC supporting the training system.

64 Contact with industry should only be made after successful completion of Commercial Awareness training (DACMT’s Introduction to Commercial Practice On-line training is suggested).

65 May not be required if steady state solution ready in time.

66 United States’ ITAR regulations may apply to US systems or companies; clearance must be sought through sponsoring PT.

## Annex C to MATG Pt 1

## Dated 14 Feb 23

* 1. **IT Infrastructure**. If new IT infrastructure is required, it should be compatible with MOD systems[67](#_bookmark80). IT infrastructure could include items such as servers, LANs, workstations, software licences, projectors, SMART boards, etc. SCIDA & IT Security Accreditation requirements of any proposed Training Solutions should also be considered.
  2. **Risk Mitigation**. Costs to mitigate any identified training risks must be provisioned.

1. **Annual Through-Life Support Costs**. Annual through-life support costs could potentially include:
   1. **Instructors**. A range of instructor options should be investigated, including military (various ranks), MOD Civil Servant and industry. For military instructors, clearance with the respective Personnel desk should be sought. Costs for military and Civil Servant instructors should be based on the respective workforce capitation rate.
   2. **Training Support Staff**. Additional staff may be required to support some training events, e.g. to be role players, to assess training, to manage exercises, etc. These could be military or civilian, either full time or only required for specific training events.
   3. **Travel and Subsistence**. If trainees are required to travel to undergo training it should be costed for, including any additional allowances payable for foreign travel, etc.
   4. **Consumables and Utilities**. Training consumables may comprise stationery, materials, ammunition, tools, etc., whereas utilities would include items such as electricity, heating, water and sewerage, air conditioning, telephone line rental, IT line rental and network line rental. Specialist clothing and Personal Protective Equipment (PPE) may be required for some training events.
   5. **Training Design**[**68**](#_bookmark81)**.** Continuous training design (and instructional design) support will be required to maintain changes to training documentation arising from changes to policy, doctrine, equipment, etc. This could be simplified through use of modern LCMS systems. It should not be assumed that this would fall under any existing partnering arrangements.
   6. **Training Publications**. Publications which may support training include handouts, charts, maps, booklets, web sites, blogs, wikis, etc., all of which would have to be produced and maintained through-life.
   7. **Train the Trainer Courses**[**69**](#_bookmark82). Train the Trainer courses will be required if instructional staff are likely to have to operate complex training solutions. These will be required in time for ISD as well as through-life to account for staff turnover, and may require additional classroom facilities and facilitative delivery. This should not be confused with the Defence Train the Trainer courses delivered by DCTS.

67 For instance MODNET Official/Secret, TRIBUNE.

68 Training Design and Instructional Design likely to require through life support to cater for updates to training – do not assume current service provider, if any, will conduct Training Design and Instructional Design.

69 Likely to be required through life to cater for staff turnover; to be annotated in relevant SOTR.

## Annex D to MATG Pt 1

## Dated 14 Feb 23

## CROSS DEFENCE LINES OF DEVELOPMENT DEPENDENCIES

|  |  |  |
| --- | --- | --- |
| **CAPABILITY and Training Line of Development** | | |
|  | **Resource Requirements** | **Potential Costs / Considerations for Training Solutions** |
| **T** | What training is required to deliver the training? e.g. instructor training. This may also include management training where culture change issues are being addressed. It may include training of school support staff on new equipment and/or processes, e.g. training related to new infrastructure, Health and Safety requirements etc. that can all carry a significant  through life resource cost. | Train the trainer (both in subject matter and how to train) using the specific training solution, staff and trainee induction, support staff training, technical staff training. |
| **E** | What equipment requirements are there for the training? This needs to capture management and administrative equipment for TEs, as well as training aids / media. Does this require additional equipment, simulators, part task trainers etc. | Hardware (screens, projectors, computers, desks, pens, handouts, reference books, etc.), software and licences (operating system (stand alone and / or server), Office applications, training software (Computer Aided Instruction (CAI), Computer Based Training (CBT), Simulators, etc.), Learning Content Management System (LCMS), Learning Management System (LMS), Management Information System (MIS), Personnel Management System (e.g. Military Joint Personnel Administration (JPA), Civil Service MyHR, commercial  supplier equivalent), etc. |
| **P** | Staff numbers that need to be considered could include:  Students, Instructors, Management, Administrative and Supervisor numbers – especially where just in time training and workplace initiatives are likely. What start standards, age, rank, experiences are required and how will the training requirement affect this? The Training Solution will need to  cover bridging from existing courses. | SME time to develop new material, Instructors, Training Designers, Exam Bank, Reprographics, Quality Control and Assurance (internal auditor), Course Planners, Course Managers, Course / Section Admin, Head of Section, Head of Department, Command Staff, Physical Training Instructors (PTIs) and Gym Staff, Medical and Dental Staff, Chaplaincy Staff, Mess Staff and Hotel Services, Security Guards and MOD Police, Cleaners, Catering Staff, Stores Staff, Technicians (Training Equipment, Information Technology (IT) Infrastructure and Domestic Services), Grounds maintenance staff,  Course Booking, Resource and Finance Staff, Secretariat, etc. |
| **I** | What are the information requirements for the training, and  what resource issues does this generate? (e.g. workforce) | Training subject matter (specific and underpinning), Updates (noting frequency and  magnitude of changes), Personal Information (staff and trainees), Training Assessment |
|  | This will include all the DSAT documentation. | Results, Technical information Drills and Standard Operating Procedures (SOPs) (hard and soft copies of Books of Reference (BRs), JSPs, Technical Manuals, etc.), CONOPS,  CONEMP, Programme / Project key dates and milestones, etc. |

## Annex D to MATG Pt 1

## Dated 14 Feb 23

|  |  |  |
| --- | --- | --- |
| **D** | Are Doctrine and Concepts mature? – are there any resource impacts tied to their development? (likely to be greater where Doctrine and Concepts are immature), e.g. requirement for knowledge training of leaders / managers to cover new Doctrine and Concepts, as well as technical skills training  required of operators | Technical information Drills and SOPs (hard and soft copies of BRs, JSPs, Technical Manuals, etc.), CONOPS, CONEMP, etc. |
| **O** | What organisational structures are needed for the new training? – what resource impact does this generate? e.g. can Training HQs, assurance / validation structures cope with increased training burdens? | Organisation required to deliver training include but are not limited to MOD (Main  Building), Northwood / NATO Exercises, sS and Defence TE, sS Personnel, DCTS and the DLE, Training Administration and Financial Management Information System (TAFMIS), JPA & HRMS, Defence Estates, Training Equipment supply and through life management, Contractors (e.g. BAe, Thales) and Financial / Commercial teams in MOD / DE&S / sS,  Recruiting, etc. |
| **I** | What infrastructure impacts are there? e.g.: classrooms, exercise areas, ranges, accommodation, access roads etc. | Defence Estates Support, Grounds maintenance, Power Supply, Water / Sewage, Information storage (hard and soft versions), Information Management (www / Defence Net / Secret), Offices, Classrooms, Workshops, Labs, Simulators, Government Furnished  Equipment (GFE) including Chilled Water, Air Conditioning and Hydraulics etc. |
| **L** | Logistic resources might include spare part requirements for training equipment (e.g. simulator parts, Audio-tech spares), as well as spares for administrative consumables that could  be expensive – e.g. printing resources, vehicle fuel, etc. | The design and development, acquisition, storage, transport, distribution, maintenance, evacuation and disposition of training material; the transport of personnel; the acquisition, construction, maintenance, operation, and disposition of facilities; the acquisition or  furnishing of services, medical and health service support. |
| **X** | What resource impacts from cross-DLOD planning? Do resource impacts in Training justify changes to other DLODs –  e.g. equipment types that are easier / cheaper to train; or new recruitment strategies to meet new personnel technical  standards? | Networks, systems and support personnel for linking training systems onsite, regionally, across UK and internationally. Translation of training material and protocols. Application of interoperability standards (e.g. High Level Architecture (HLA), Shareable Content Object Reference Model (SCORM) and the means to achieve this. |

## Annex E to MATG Pt 1

## Dated 14 Feb 23

## TRAINING STEERING GROUP TERMS OF REFERENCE

## Introduction

1. The [project name] Training Steering Group (TSG) has been established to manage the Training and Training Equipment of the XXXXXX project in accordance with the principles of JSP 822 and the SSE.

## Membership

1. The composition of the TSG will change depending on the focus of the group throughout the acquisition cycle. The core endorsing members of the TSG are:
   1. Delivery Agent (Chair)[70](#_bookmark84)
   2. Training Requirement Authorities
   3. FLC Capability area representatives
   4. Training Assurance (FT/MTAO)
   5. Future Training TNA QA
2. Other key stakeholders can be added as required to the membership of the TSG including:
   1. TNA Contractor
   2. FLC TCM
   3. Training Delivery Authorities[71](#_bookmark85)
   4. Industry Partners
   5. Other DLOD or Customer Representatives as required

## Primary Purpose

1. To manage the integration of the individual and collective training requirements and provide a clear view of progress to the XXXXXX Project Board.

## Secondary Purposes

1. Develop and maintain a Training Support Plan (TSP).
2. Scope the training aspects of the project including potential hurdles and key milestones.
3. To ensure that any training related issues are adequately captured and endorsed in all Project documentation (e.g. ITEAP, TLMP, URD/SRD etc)
4. Ensure the Defence Acquisition processes for Training is followed.

70 DE&S, DD, SDA. Although the Chair, as per [JSP 822 v5 Vol. 1,](https://modgovuk.sharepoint.com/sites/people-tesrr-policy/SitePages/JSP-822--Volumes---PDF-format.aspx) it will be the TRA that has the final say on non-quorum decision- making.

71 TMG for most, but not all, RN IT. CT TDA is FOST.

## Annex E to MATG Pt 1

## Dated 14 Feb 23

1. Endorse the most cost-effective training solution recommendation.
2. To commission and endorse any training analysis work that needs to be conducted. Including:
   1. Co-ordinate the activities of all contributors to the TNA.
   2. Brief potential Contractors and act as a point of contact for any requests for information or subject matter expertise.
   3. Endorse proposals affecting the TNA process or that amend outputs.
   4. Review and co-ordinate amendments to TNA outputs.
3. To recommend or quality assure recommendation of the most cost-effective training solution.
4. To assist the design and implementation of the chosen training strategy.
5. To provide a forum whereby training issues can be discussed by all key stakeholders.
6. To identify and manage training related risks.
7. To support XXXXXX Project board to facilitate the introduction of the training by the Ready for Training Date (RFTD).
8. To agree the Training Maturity Assessment to be passed to the XXXXXX Project Board.