**Successor Role Based TNA**

**Aide-Memoire**

|  |  |  |
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# Document Information:

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| Date | Reason For Change | Author |
| 11/10/2016 | Minor Update to Duty Scoping Report format | Kevin Parkes |
|  |  |  |
|  |  |  |
|  |  |  |

# References:

|  |  |  |
| --- | --- | --- |
| Reference | Title | Reference No. |
| 1 | FSM Crew Training - TNA SOR | MOD: KP-800-02 dated 20 May 2016 |
| 2 | Defence Systems Approach to Training – Direction and Guidance for Individual and Collective Training | MOD: JSP 822 (V2.0 Mar 16) |
| 3 | Individual and Team Training Needs Analysis Process | BAES(MS): Teamcenter Ref tbd |
| 4 | Successor Document Review Procedure | PI-Eng-199 at latest issue |
| 5 | MoD Guide to Investment Appraisal and Evaluation | JSP 507 (V6.0 Jan 14) |

# Forward

This aide-memoire provides guidance on the information to be provided in the Successor TNA programme deliverables. It is intended to be applied intelligently with tailoring where necessary. The aide-memoire accompanies a set of document templates to be used for the deliverables.

Section1 provides an overview of the TNA process required by the Customer.

Section 2 provides mapping of the TNA deliverables as stated in the Successor Crew Training TNA SOR against the requirements of JSP 822 (V2.0 Mar 16) for individual and collective TNA.

Section 3 provides a style guide for the deliverables to ensure consistency across the document suite. Where possible this has been implemented in the document templates.

Sections 4 to 12 provide descriptions of each report under the following headings:

1. **Overview** – a diagram illustrating the required elements of each deliverable as stated in Annexes D and E of the Successor Crew Training TNA SOR.
2. **Purpose** - a statement to indicate the purpose of the document within the TNA process.
3. **Features** – describes key or unique features of the document or supporting processes (which may differ significantly from the analyst’s previous experience), particularly in respect to role-based analysis and the Customer’s specific requirements for Successor.
4. **Inputs and Dependencies** – lists the sources of information and any other dependencies (e.g. access to SMEs) that are anticipated to be required to conduct the analysis and produce the document.
5. **Outputs** – suggests in detail what information is to be provided in each part of the document.
6. **TNA Process and Interfaces** – indicates where the information contained in the document will be used in the next stage of the TNA or training design process, and any details of specific processes to be followed where relevant.

Notes:

1. The full TNA process can be found in the Individual and Team Training Needs Analysis Process [Teamcenter ref: tbd].
2. The TNA will be conducted in line with JSP 822 (V2.0 Mar 2016) as tailored by the Successor Crew Training TNA SOR which should be referred to for direction and guidance.
3. Documents should only use the approved Successor TNA programme document templates.
4. Document style and format should be in accordance with the style sheet at section 3 of this aide-memoire.
5. Data should be colour-coded to indicate its source, and to indicate voids, in accordance with 3.3 below.
6. The style of writing in documents should reflect Service Writing conventions as defined in JSP 101. Where Successor programme conventions differ from JSP 101, the Successor conventions take precedence.
7. Terminology used in documents should reflect that used in JSP 822 (V2.0 Mar 2016) unless otherwise stated in the Successor Crew Training TNA SOR.

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# Acronyms and Abbreviations

ASQ At Sea Qualified

AST At Sea Trainee

BAE(SM) BAE Systems Submarines

BMR Basic Manning Requirement

BR Book of Reference

BSQ Basic Submarine Qualification (continuation)

C2 Command and Control

CBA Cost Benefit Analysis

CEO Collective Enabling Objective

C&I Control and Indications

CRTGS Collective Residual Training Gap Statement

CTO Collective Training Objective

CTPS Collective Training Performance Statement

CWTS Collective Workplace Training Statement

DIF Difficulty Importance Frequency

DLMC Defence Learning and Management Capability

D-PS Duty Performance Statement

DRF Document Review Form

EA Environmental Analysis

EO Enabling Objective

EPSS Electronic Performance Support System

FSM Future Submarine

FTS Formal Training Statement

HSE Health and Safety Executive

i.a.w In Accordance With

IMS Integrated Management Schedule

IP Industry Partner

ITAR International Trade in Arms Regulations

JPA Joint Personnel Administration (system)

JSP Joint Service Publication

KSA Knowledge Skills Attitudes

MoD Ministry of Defence

MOTE Measure of Training Effectiveness

MRT Manoeuvring Room Trainer

NNPPI Naval Nuclear Propulsion Plant Information

OA Overlay Analysis

ONR Office for Nuclear Regulation

OPDOC Operational Document

PBS Product Breakdown Structure

PSA Polaris Sales Agreement

RFTD Ready for Training Date

RN Royal Navy

RTGS Residual Training Gap Statement

SDD System Design Description

SISOB Single Integrated Submarine Operating Base (HMNB Clyde)

SME Subject Matter Expert

SMQ Submarine Qualification(initial)

SMT Specific Measurable Time-bound

SOR Statement of Requirement

SOTR Statement of Trained Requirement

STEG Successor Training Endorsement Group

TAFMIS Training and Finance Management Information System

tbd to be decided

TCTA Team and Collective Task Analysis

TDT Task Description Table

TGA Training Gap Analysis

TNA Training Needs Analysis

TO Training Objective

TOA Training Options Analysis

T-PS Team Performance Statement

TPS Training Performance Statement

TrAD Training Authorisation Document

TY Training Year

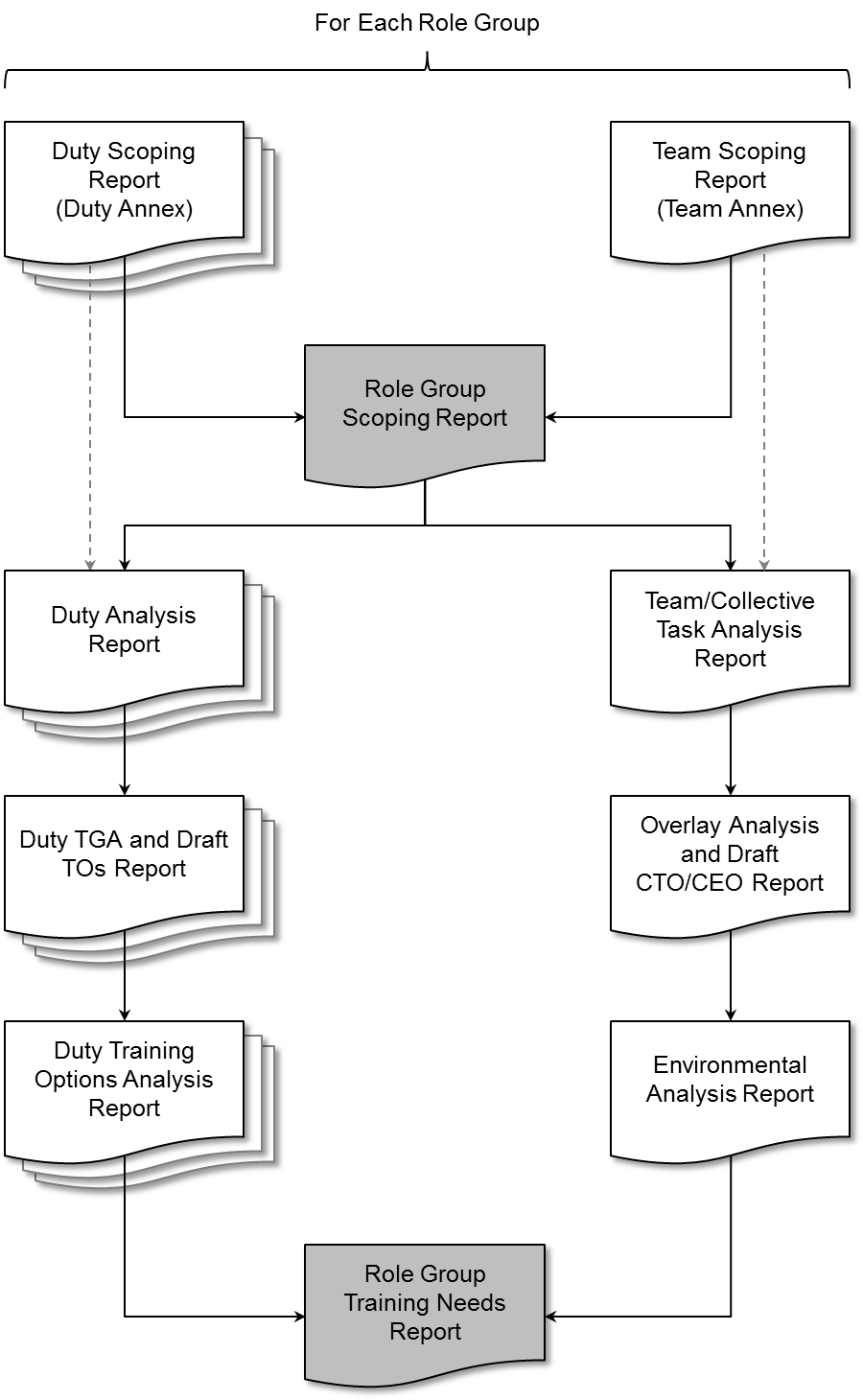
WLC Whole Life Costs

WTS Workplace Training Statement

# Successor TNA Overview



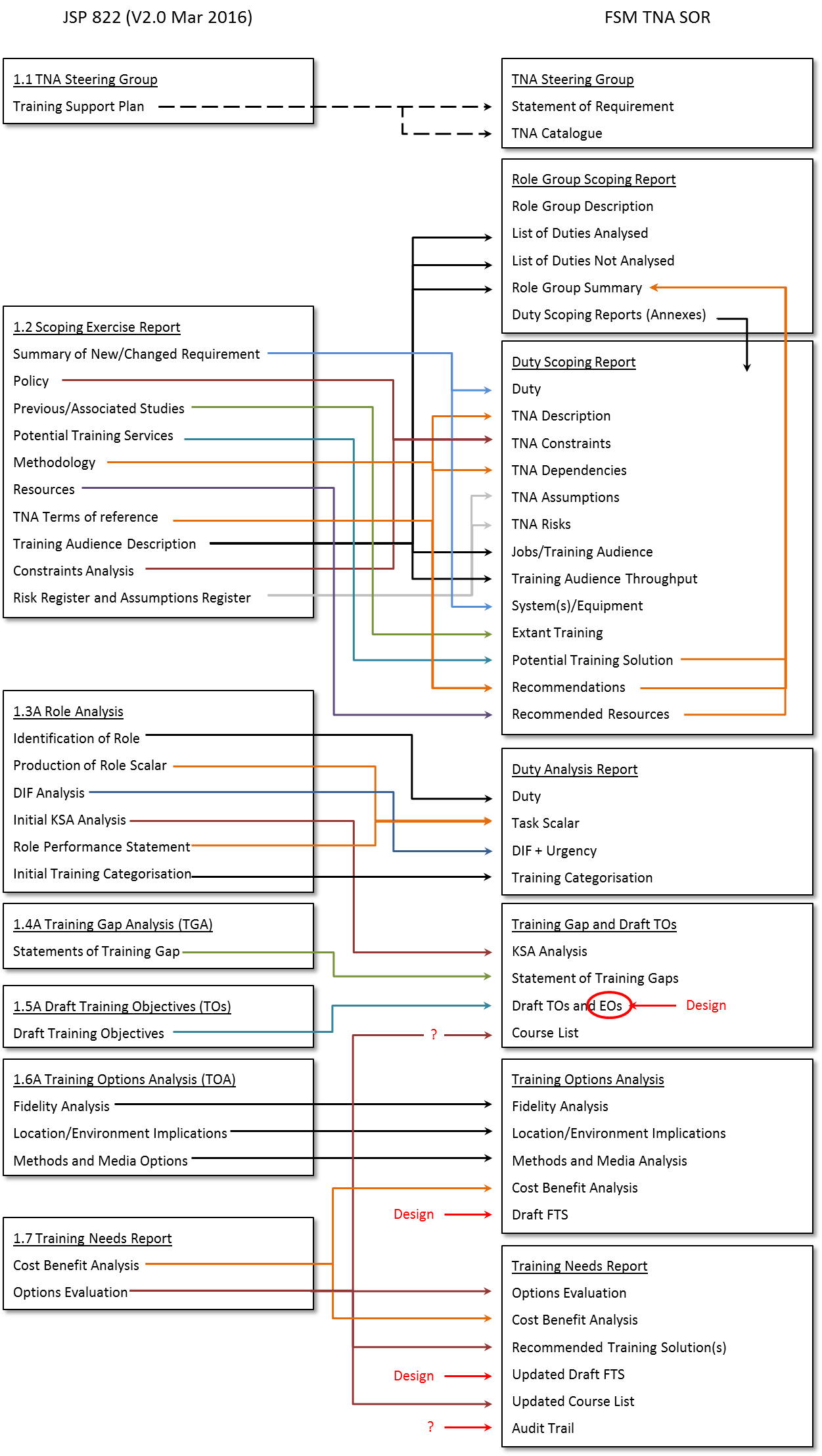
**Figure 1 Successor TNA Process**



**Figure 2 Successor TNA Process Simplified Diagram**

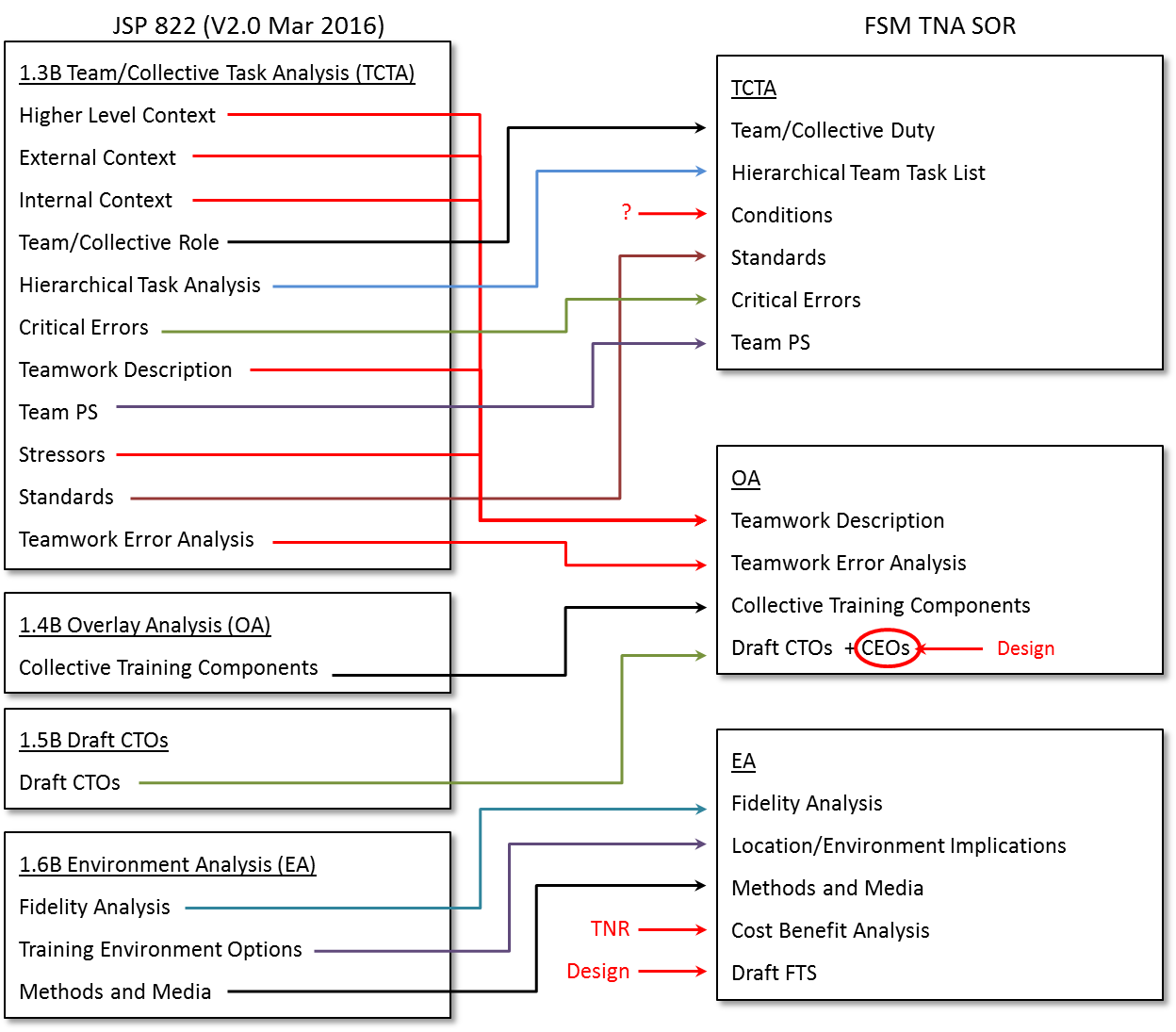
# Customer Required Tailoring to TNA Deliverables

## Individual TNA



**Figure 3 Individual Training Reports Tailoring**

## Team and Collective TNA



**Figure 4 Team and Collective Training Reports Tailoring**

# Document Style Sheet

Documents should use the template indicated in the Inputs and Dependencies section of the applicable section below. The following shows the default style to be used in all documents. Where possible this has already been set up in the templates which are based on the mandated Successor project templates. The principles of Defence Writing in JSP 101 should be followed where possible.

## Page Format

|  |  |
| --- | --- |
| Page Margins | Left 2 cm; Right 2 cm; Top 2 cm; Bottom 1.25 cm |
| Header | Centre: protective marking |
| Footer | Left: Document reference/revision; Centre: protective marking; Right: page number |
| Page size | Normally A4. Use A3 pages for large tables, etc. A3 pages should start on an odd page number and end on an even page number to simplify printing. Use “Intentionally Blank” pages where necessary. |

## Headings and Text

|  |  |
| --- | --- |
| Heading 1 | Arial; 16 pt; black; bold; left justified; space before 12 pt; space after 3 pt; number level 1 hanging 2 cm |
| Heading 2 | Arial; 14 pt; black; no emphasis; left justified; space before 12 pt; space after 3 pt; number level 2 hanging 2 cm |
| Heading 3 | Arial; 13 pt; black; no emphasis; left justified; space before 12 pt; space after 3 pt; number level 3 hanging 2 cm |
| Heading 4 | Arial; 12 pt; black; no emphasis; left justified; space before 12 pt; space after 3 pt; number level 4 hanging 2 cm |
| Heading 5 | Arial; 11 pt; black; no emphasis; left justified; space before 12 pt; space after 3 pt; number level 5 hanging 2 cm |
| Paragraph text | Arial; 11 pt; black; no emphasis; left justified; space before 6 pt; space after 6 pt; single line spacing; number P1 hanging 2 cm |
| Paragraph numbering | Number every paragraph sequentially: P1, P2, P3, etc. Restart at P1 after every heading |

## Text Colour

|  |  |
| --- | --- |
| BAE Systems  (Maritime-Submarines and Combat Systems) data | Black (0, 0, 0) |
| Rolls Royce data | Blue (0, 0, 255) |
| Babcock data | Dark Green (0, 102, 0) |
| Voids | Red (255, 0, 0) |

## Acronyms and Abbreviations Section

|  |  |
| --- | --- |
| Layout | Section break continuous before; section break next page after; 2 columns |
| Paragraph | Single line spacing; space before 6 pt; space after 6 pt; hanging 2 cm |
| Text | Arial; 11 pt; black; no emphasis |
| Format | *Abbreviation* Tab *definition* e.g. RN Royal Navy |

## Bullet List

|  |  |
| --- | --- |
| Level 1 | Indent 2 cm; bullet solid circle •; text hanging 3 cm |
| Level 2 | Indent 3 cm; bullet open circle o; text hanging 4 cm |
| Level 3 | Indent 4 cm, bullet solid square ▪; text hanging 5 cm |
| Paragraph format | Arial; 11 pt; black; no emphasis; left justified; space before 6 pt; space after 6 pt; single line spacing |
| Punctuation | Start each bullet point with a capital letter; end each bullet point with a full stop except when leading to a sub-bullet where a colon should be used. |

## Number List

|  |  |
| --- | --- |
| Level 1 | Indent 2 cm; lower case letter and full stop a.; text hanging 3 cm |
| Level 2 | Indent 3 cm; number in brackets (1); text hanging 4 cm |
| Level 3 | Indent 4 cm, lower case letter in brackets (a); text hanging 5 cm |
| Paragraph format | Arial; 11 pt; black; no emphasis; left justified; space before 6 pt; space after 6 pt; single line spacing |
| Punctuation | Start each bullet point with a capital letter; end each bullet point with a full stop except when leading to a sub-bullet where a colon should be used. |

## Tables

|  |  |
| --- | --- |
| Borders | Solid line; ½ pt; black |
| Row Height | At least 0.4 cm; auto resize; don’t allow to break across pages (preferred) |
| Cell Margins | Left 0.19 cm; right 0.19 cm; top 0.1 cm; bottom 0.1 cm |
| Heading row(s) | Fill: light grey (217,217,217); repeat heading row(s) on each page |
| Heading Text | Arial; 10 pt; black; bold; vertical centre; horizontal centre, no space before, no space after |
| Content row | No fill |
| Content text | Arial; 10 pt; black; no emphasis; vertical top; horizontal left, no space before, no space after |
| Table caption | Position: 1 line above table; Arial; 10 pt; bold; left justified; format: **Table number table title** e.g. “**Table 2 Training Gaps**”; *use References>Insert Caption>Label: Table* to insert table number |

## Diagrams, Pictures, Flow Charts, etc.

|  |  |
| --- | --- |
| Graphic | Produce in an appropriate tool. Copy graphic from tool and paste into document as a picture |
| Borders | No border |
| Position | Centred |
| Graphic caption | Position: 1 line below graphic; Arial; 10 pt; bold; centred; format: **Figure number graphic title** e.g. “**Figure 1 Process Flow Diagram**”; use *References>Insert Caption>Label: Figure* to insert figure number |

## General

|  |  |
| --- | --- |
| Punctuation | Leave 2 spaces after a full stop, question mark or exclamation mark. Leave 1 space between words and after commas, semi-colons, colons, etc. |
| Line spacing | Use single line spacing. Leave one line between paragraphs. |
| Headings | Use template heading styles |
| Page numbers | Bottom right of page in format “n of x”; Title Page is page 1; continue from previous section |
| Protective Marking | Top and Bottom of each page; centred; Arial; 10 pt; bold; include descriptors as appropriate |
| References | Number each reference in [ ] e.g. [Ref 1]; number references and list in the reference table in the order they occur in the document |
| Acronyms and Abbreviations | First use in document spell out fully followed by the acronym or abbreviation in brackets ( ); subsequently use the acronym or abbreviation only; list all acronyms and abbreviations in the appropriate table in alphabetical order. |
| Numbers | Use numerals for numbers except where the number is the first word of a sentence in which case spell out the number; use ‘zero’ and ‘one’ instead of ‘0’ and ‘1’ if they may be confused for O and I in the text. |
| Hidden characters | Hide special characters (spaces, tabs, carriage returns, etc.) in Word by using the Show/Hide button before saving and circulating for review or approval. |
| Document format | Save as .docx for working. Save as .pdf for reviews and delivery. Store both formats in Teamcenter. Store only .pdf version in MCWE. |
| Other | See JSP 101 Chapter 6 for other guidance on Defence Writing. |

# Role Group Scoping Report

## Overview



**Figure 5 Role Group Scoping Report Required Elements**

## Purpose

The Role Group Scoping Report and its annexes meet the requirement of JSP 822 (V2.0 Mar 2016) as tailored by the Successor Crew TNA SOR for a TNA Stage 1 Scoping Report (1.2). The scoping exercise and report sets the scope and justifies the need for the TNA Stage 2 activities.

## Features

There will be a Role Group Scoping Report for each Role Group defined by the Customer. The report will be in 2 parts:

**Role Group Scoping Report** – contains introductory information and information and summary relating to the Role Group as a whole, and considers potential training solutions across the Role Group.

**Duty Scoping Report** – a self-contained annex (see section 5 below) for each duty and team identified from the BMR for roles within the scope of the Role Group, except for duties specifically excluded by the Customer, and considers potential training solutions specific to that duty.

## Inputs and Dependencies

Successor TNA Role Group Scoping Report Template

General Template Teamcenter Ref tbd

ITAR Template Teamcenter Ref tbd

NNPPI Template Teamcenter Ref tbd

PSA Template Teamcenter Ref tbd

JSP 822 (V2.0 Mar 2016)

Successor Crew TNA Catalogue

Successor Crew TNA Schedule

Role Group Summary

Basic Manning Requirement (BMR)

RN, MoD and other external policies

BAE Systems Operability SMEs

PI-Eng-199 Technical Document Review Process (Successor)

## Outputs

|  |  |
| --- | --- |
|  | **Executive Summary**  The Executive Summary is a précis of the report for readers who need to know what it is about and its key outcomes but who do not need the detail. It should include the key information, findings and recommendations from the report. It is not the report’s introduction and it should not introduce any new information that is not contained elsewhere in the report. |
|  | **Table of Contents**  The Table of Contents should list the contents of the of the report (automatically based on Heading styles). Insert entries for annexes manually (duty annexes will be saved as separate documents). Include a Table of Tables and Table of Figures as necessary based on the *Insert Caption* feature. |
|  | **References**  List all documents referenced from the report (but not the annexes) in the order they appear in the text. |
|  | **Definitions, Acronyms and Abbreviations**  Define key terms which may not be readily understood by the report’s target readership. Define all acronyms and abbreviations used in the report in alphabetical order. |
| **1** | **Introduction**  Provide a brief introduction to the report. Reference out to the TNA Catalogue for the requirement to conduct this particular Scoping exercise. State that the report consists of a Role Group Scoping Report and a series of duty annexes: the Duty Scoping Reports. |
| **2** | **Role Group Description**  *“A description of the Role Group Jobs, Duties etc”.* From the Role Group Summary provided by the Customer, list the jobs and duties covered by the TNA for this Role Group. Identify which jobs perform which duties. |
| **3** | **Scope of Duties[[1]](#footnote-1)** |
| **3.1** | **Duties to be Analysed**  *“A list of Duties in the Role Group that have been analysed in the Role Group Scoping Report annexes”*. List all the duties that are within the scope of the Role Group that will be analysed. |
| **3.2** | **Duties not to be Analysed**  *“A list of the Duties in this Role Group not taken forward for Scoping including audit trail and any justification”.* List all duties that will not be taken forward for analysis. Indicate if this was at the Customer’s request or as a result of the Scoping exercise. Reference any decisions agreed with the Customer (e.g. minutes of meetings, emails, etc.). |
| **4** | **Applicable Policies**  Identify all policies which will influence the conduct of the TNA or development of the training solution. These will include RN and MoD policies, and also external legislation and regulation provided by organisations such as the Health and Safety Executive (HSE), the Office for Nuclear Regulation (ONR), and national and international maritime organisations. |
| **5** | **Assumptions, Constraints, Dependencies and Risks**  State all assumptions, constraints, dependencies and risks which will affect the conduct of the TNA or development of the training solution. Those which only affect specific duties should be recorded in the applicable duty annex. Programme level assumptions and risks should be referenced where applicable. Those which relate only to the TNA or training solution development should be recorded in the training assumptions or training risks registers as appropriate. |
| **6** | **Previous and Associated Studies**  Identify any TNAs from previous classes which will be used as part of the TNA. These should be provided by the Customer as a reference if available. Other Successor TNAs which relate or interface to this TNA should also be identified. |
| **7** | **Summary of New and Changed Requirements**  Outline the changes from previous classes which are likely to drive new training requirements. These may be due to changes of systems or equipment, changes to how the boat is operated, or they may be due to changes in roles and responsibilities of job and duty holders. Describe how these are detailed against individual duties in the duty annexes. |
| **8** | **Existing Training Provision**  Describe the overall existing training pipeline(s) for the Role Group. Further detail of existing training applicable to each duty will be provided in the duty annexes. |
| **9** | **Role Group Summary**  *“A brief summary of the findings of the Duty Scoping Report including potential training solutions at a Role Group level and an estimate of the resources and timescales for the conduct of stage 2 analysis if required.”* Provide an early summary of possible training solution recommendations for Steady State and First of Class. These will be developed by intelligent analysis of the training solution recommendations for individual duties to provide coherent candidate training pipelines. The early training solution recommendations will be fully developed and analysed during the latter stages of the TNA Stage 2 process. Include an overview of TNA plan for Stage 2 and an estimate of the required resources. |
| **9.1** | **Potential Training Solutions**  Provide an overview of potential training solutions, methods and media which may be considered during the TNA. This list will not be exhaustive and will be further detailed against individual duties in the duty annexes. |
| **9.2** | **TNA Plan**  Provide a plan of key activities, dates and dependencies for the TNA Stage 2 activities, either as a list or as a Gantt Chart. Reference out to the Successor Crew TNA Schedule. |
| **9.3** | **Resources**  Provide an estimate of the resources required to conduct the TNA Stage 2 activities for this Role Group. These will be detailed against each duty in the duty annexes. |
| **10** | **Duty Scoping Reports**  *“The Scoping Reports for Duties in this Role Group (As annexed documents)”.* Using the table provided, list the Duty Scoping Reports, including applicable references, which form the annexes to this Role Group Scoping Report. |
| **11** | **Internal Review and IP Concurrence**  “*Internal review process, including the concurrence procedure with any IPs involved with that line of analysis”.* Carry out internal review of the report in accordance with PI-Eng-199. Before submission of the report for Customer review, record the conduct and outcome of the internal review here, referring out to the applicable DRFs, F-Eng-150 and F-Eng-151. |
| **12** | **Audit Trail** - Create an audit trial of all key meetings, discussions, decisions, interactions with SMEs and sources of information related to the report. An audit trail of issues relating to individual duties should be provided in the relevant duty annex to the report. The audit trail should include the following:   * **Id** – Number audit trail entries sequentially for easy reference. * **Date** – Date of the interaction. * **Interaction Type** – Record the type of interaction e.g. meeting, telephone conversation, e-mail, supply of data, validation, review, etc. * **People Involved** – Identify who was involved including their name, rank (if military), position and organisation. * **Topic/Discussion/Decisions/Information Provided** – Précis the interaction in terms of the topic and what was covered, decisions made, information provided, etc. Reference any minutes or other relevant documents or records. |
| **13** | **STEG Endorsement**  *“This will be endorsed by the STEG on completion of all the scoping reports for the duties undertaken by that Role Group”.* The process for document review and approval is i.a.w. PI-Eng-199. Any other process for endorsement or acceptance conducted by the Customer can be supplemental to or concurrent with PI-Eng-199 but must not replace it. Following STEG endorsement, record STEG endorsement here, referring to the applicable STEG meeting minutes, and then submit the report for acceptance through PI-Eng-199. |

## TNA Process and Interfaces

The information contained in the Role Group Scoping Report is used to justify further analysis and provides initial information for the analyst for the TNA Stage 2 activity. Risks and assumptions will be recorded and managed in the appropriate registers. Duty Annexes will be created as separate documents.

The Role Group Scoping Report is to be completed AFTER completion of all the related duty annexes (Duty Scoping Study Reports).

# Duty Scoping Report

## Overview



**Figure 6 Duty Scoping Report Required Elements**

## Purpose

The Duty Scoping Report is an annex to the Role Group Scoping Report and provides TNA scoping information for an individual duty. The same format is to be used for Team Scoping Reports, suitably tailored to reflect team rather than individual duty.

## Features

The Customer requires that each Role Group Scoping Report will contain an annex for each duty and team within the scope of the Role Group, with the exception of those duties specifically excluded by the Customer.

The Customer has stated explicitly the information that must be included as a minimum in each annex.

## Inputs and Dependencies

Successor TNA Duty Scoping Report Template

General Template Teamcenter Ref tbd

ITAR Template Teamcenter Ref tbd

NNPPI Template Teamcenter Ref tbd

PSA Template Teamcenter Ref tbd

Basic Manning Requirement (BMR)

Job Descriptions

Role Group Summary

BAE Systems Operability SMEs

Royal Navy SMEs

Integrated Management Schedule (IMS) at latest issue.

System Design Description (SDD) documents

Industry Partner SMEs

PI-Eng-199 Technical Document Review Process (Successor)

## Outputs

|  |  |
| --- | --- |
|  | **Executive Summary**  The Executive Summary is a précis of the report for readers who need to know what it is about and its key outcomes but who do not need the detail. It should include the key information, findings and recommendations from the report. It is not the report’s introduction and it should not introduce any new information that is not contained elsewhere in the report. |
|  | **Table of Contents**  The Table of Contents should list the contents of the of the report (automatically based on Heading styles). Include a Table of Tables and Table of Figures as necessary based on the *Insert Caption* feature. |
|  | **References**  List all documents referenced from the report in the order they appear in the text. |
|  | **Definitions, Acronyms and Abbreviations**  Define key terms which may not be readily understood by the report’s target readership. Define all acronyms and abbreviations used in the report in alphabetical order. |
| **1** | **Duty**  “*A description of the duty based on the BMR.*” An initial description of the duty should be taken from the BMR. Further detail can be found in the Job Description. |
| **2** | **TNA Description**  “*A summary of the perceived changes to the duty that warrant TNA activity for this duty and that may require training.*” The Successor duty should be compared with the equivalent duty from Vanguard class. Information on duties will be supplied by FSM as a reference. Further assessment can be provided by Operability SMEs. Changes driving further analysis may include new or updated systems and equipment resulting in new or modified tasks and/or the need for additional knowledge, skills or attitudes; or changes in the responsibilities of the duty due to changes in manning requirements. |
| **3** | **TNA Constraints**  “*Identified constraints that will impinge on the final training solution or the TNA analysis e.g. overriding policy or pre-selection of a prescribed training media (e.g MRT).”* Any constraints on the TNA or on the final training solution should normally be stated by the Customer. However, any constraints identified during the analysis driven by policy, safety, resource, legislation or the need for accreditation should be highlighted and agreed with the Customer. |
| **3.1** | **Duty Specific Constraints –** Include identified constraints, with references where possible, that are specific to this duty. |
| **3.1.1** | **Time Constraints -** “*TNA timeline and associated RFTD and procurement of training solution.*” The RFTD and any other time constraints relating to the duty should be stated. An RFTD for a duty or Role-Group which is earlier than the overall Successor programme RFTD may be required to meet specific needs such as preparation of First of Class crew for key events e.g. Cold and Hot Operations; or where there is a need to procure a long-lead item as part of the training solution. Start dates for key TNA activities may be constrained by data maturity or resource availability. |
| **3.2** | **General TNA Constraints Relevant to this Duty -** Include identified constraints, with references where possible, that are not specific to this duty but which have an impact on this duty. |
| **3.2.1** | **Time Constraints –** General time constraints not specific to this duty |
| **4** | **TNA Dependencies**  “*Dependencies on other sources of data for the conduct of the Phase 2 analysis.*” Identify *all* dependencies for the TNA Stage 2 activity. These may include, but are not limited to, Successor design data (from all IPs), relevant TNA outputs from Vanguard and Astute classes, information on all relevant extant RN courses, access to other RN data e.g. BRs, access to RN SMEs, access to RN and MoD stakeholders and reviewers. State as specifically as possible *what* is required, *when* it is required and *why* it is required. |
| **5** | **TNA Assumptions**  *“Early assumptions are made to allow Phase 2 analysis to progress. To include any origin or scrutiny of the assumptions (audit trail).”*  High level programme and TNA assumptions affecting the whole TNA should have been stated in the report main body. Assumptions recorded in the annex should relate to the particular duty. Some assumptions may need to be agreed with the Customer where voids exist in the source data, in order for the TNA to progress. All assumptions included in the annex should also be recorded in the TNA Assumptions Register. |
| **5.1** | **Duty Specific Assumptions –** Include all assumptions which are specific to this duty. |
| **5.2** | **Programme Level Assumptions Relevant to this Duty -** Include all assumptions which are not specific to this duty but which have an impact on this duty. |
| **6** | **TNA Risks**  “*Risks associated with the provision of the training solution for this duty. Impact, Likelihood & Mitigation.*” Any risks relating to the particular duty associated with the conduct of the TNA or the provision of the training solution should be stated and their probability, possible impact and mitigating actions recorded. High level programme and TNA risks affecting the whole TNA should have been stated in the report main body. All risks included in the annex should also be recorded in the TNA Risk Register. |
| **7** | **Jobs/Training Audience**  “*The post(s) that undertake the duty – must identify each unique UEL number.*” From the BMR identify every position that performs the duty including tally number, billet type (ASQ, AST or Echelon), rank/rate, specialisation/ sub-specialisation and job. |
| **8** | **Training Audience Throughput**  “*Early estimate of the throughput of trainees in the steady state (for jobs in 2.7).*” Provide an estimated annual training throughput for the duty. This should be based on 7 crews and should assume a draughting cycle of 3 years for Officers, 3 years for Senior Rates and 4 years for Junior Rates. |
| **9** | **System(s)/Equipment** – “*The systems/equipment utilised in the conduct of the duty. Must include relevant PBS references.*” Create a table which identifies all systems and major equipment (including PBS number) which are related to this duty. The primary source of information is SDD documents with clarification from Operability SMEs and system owners. The table should also indicate   * **PBS** – System/equipment PBS number * **Description** – System/PBS name as per PBS * **System Utilisation** – “*Use of the system in this duty – Supervise, Operate Maintain (include Diagnose & Repair).*” Indicate the level of involvement of the duty holder with the system or equipment in terms of Operation, Preventative Maintenance, Corrective Maintenance (including diagnosis and repair) and Supervision of any of these tasks. *Note: further clarification of involvement with systems can be sought from RN SMEs and Branch Managers but their responses should be treated with caution due to RN SME’s limited knowledge of Successor which may be different to previous classes.* * **System Change** – “*Degree of change from Vanguard legacy (or future Vanguard legacy) system for this duty.*” Identify any changes to legacy or future legacy systems or equipment which may impact Successor training for this duty. These changes may include, but are not limited to, physical differences, differences in control, differences in location or layout, and differences in implementation. Limit descriptions of changes to those that impact this duty. All *new* systems and equipment should be highlighted. * **Training Delta** - The perceived Successor training delta from Vanguard in terms of the key drivers for change and an estimate of the degree of change as follows:   + Red - New training or a major change to existing training is likely to be required for this system/equipment.   + Amber - Existing training may need significant changes due to changes in design, technology or operation.   + Yellow - Existing training should meet the need with only minor changes for updates in design or technology including the use of PMS for control and indication (C&I).   + Green – Existing training will meet any training need. |
| **10** | **Extant Training**  “*Identified existing training that is most applicable to this duty. List all potential courses.*” Identify all existing training which is applicable to this duty. Course information should have been included in the Role Group Summary supplied by the Customer. |
| **11** | **Potential Training Solution(s)** – “*Early identification of potential training solution based on extant training, degree of change, use of new technology, etc.*” Provide descriptions of any potential training solutions for Steady State and First of Class. If known, these should indicate any existing training which may meet some or all of the training need. Consideration should be given to the use of any alternate training methods and media. Consideration should also be given to any Customer preferences and future training strategies. Long-lead or high cost training media should be highlighted. Costs should not be included without prior Commercial approval. |
| **11.1** | **Steady State** |
| **11.2** | **First of Class** |
| **12** | **Recommendations**  “*Recommendations including any areas warranting further analysis. (Full, Narrow or None, can be per system if appropriate)*”. Identify all areas that require further analysis including justification. Provide justification for any areas where no further analysis is being recommended, indicating the training (or non-training) solution to be adopted. |
| **13** | **Recommended resources for further analysis**  “*Estimation of the resources required for further analysis, including time, personnel, data, funding dependencies.*” Estimate the resources required to conduct further analysis, taking account of dependencies identified in section 5 of the report. This should include as necessary   * TNA Analyst(s) * Design Data * TNA data from previous classes * Details of existing training * Other RN/MoD information (e.g. BRs) * Toolsets (e.g. TNA Management Database) * Operability SMEs * RN/MoD SMEs * SMEs from all IPs * Stakeholders and reviewers |
| **14** | **Internal Review and IP Concurrence**  *“Internal review process, including the concurrence procedure with any IPs involved with that line of analysis”.* Carry out internal review of the report in accordance with PI-Eng-199. Before submission of the report for Customer review, record the conduct and outcome of the internal review here, referring out to the applicable DRFs, F-Eng-150 and F-Eng-151. |
| **15** | **Audit Trail** - Create an audit trial of all key meetings, discussions, decisions, interactions with SMEs and sources of information related to the report. An audit trail of issues relating to individual duties should be provided in the relevant duty annex to the report. The audit trail should include the following:   * **Id** – Number audit trail entries sequentially for easy reference. * **Date** – Date of the interaction. * **Interaction Type** – Record the type of interaction e.g. meeting, telephone conversation, e-mail, supply of data, validation, review, etc. * **People Involved** – Identify who was involved including their name, rank (if military), position and organisation. * **Topic/Discussion/Decisions/Information Provided** – Précis the interaction in terms of the topic and what was covered, decisions made, information provided, etc. Reference any minutes or other relevant documents or records. |
| **16** | **STEG Endorsement**  *“Record of STEG endorsement or caveats. Duty Scoping Reports are to be endorsed by the STEG individually, they do not need to wait for completion of all duties in a Role Group.”* The process for document review and approval is i.a.w. PI-Eng-199. Following STEG endorsement, record STEG endorsement here, referring to the applicable STEG meeting minutes, and then submit the report for acceptance through PI-Eng-199. |

## TNA Process and Interfaces

The information contained in each Duty Scoping Report (duty annex) of the Role Group Scoping Report are used to justify further analysis of the duties and provides initial information for the analyst for the TNA Stage 2 activity. Risks and assumptions will be recorded and managed in the appropriate registers.

The Duty Scoping Reports must be completed BEFORE the Role Group Scoping Report.

# Duty Analysis Report

## Overview



**Figure 7 Duty Analysis Report Required Elements**

## Purpose

The Duty Analysis Report is the first interim deliverable of the Stage 2 analysis and provides a task level analysis for an individual duty. The key output provided by this report is the Duty Performance Statement (D-PS).

## Features

The contents of the Duty Analysis report are compatible with JSP 822 (V2.0 Mar 2016) in relation to Role Analysis but at the duty level only. The KSA analysis normally performed as part of Role Analysis is deferred to Training Gap Analysis. The report provides the draft D-PS but there is no amalgamation into a whole role performance statement at this stage. The Customer has stated explicitly the information that must be included as a minimum in each report.

## Inputs and Dependencies

Successor TNA Duty Analysis Report Template

General Template Teamcenter Ref tbd

ITAR Template Teamcenter Ref tbd

NNPPI Template Teamcenter Ref tbd

PSA Template Teamcenter Ref tbd

Basic Manning Requirement (BMR)

Job Descriptions

Role Group Summary

Role Group Scoping Report

Role Group Scoping Report Duty Annex

BAE Systems Operability SMEs

SMEs from all IPs

Integrated Management Schedule (IMS) at latest issue.

System Design Description (SDD) documents

Principles of Operation Documents

Operational Documentation (OPDOCS)

Maintenance Task Analysis

PI-Eng-199 Technical Document Review Process (Successor)

FSM for Validation

## Outputs

|  |  |
| --- | --- |
|  | **Executive Summary**  The Executive Summary is a précis of the report for readers who need to know what it is about and its key outcomes but who do not need the detail. It should include the key information, findings and recommendations from the report. It is not the report’s introduction and it should not introduce any new information that is not contained elsewhere in the report. |
|  | **Table of Contents**  The Table of Contents should list the contents of the of the report (automatically based on Heading styles). Include a Table of Tables and Table of Figures as necessary based on the *Insert Caption* feature. |
|  | **References**  List all documents referenced from the report in the order they appear in the text. |
|  | **Definitions, Acronyms and Abbreviations**  Define key terms which may not be readily understood by the report’s target readership. Define all acronyms and abbreviations used in the report in alphabetical order. |
| **1** | **Introduction**  Provide a brief introduction to the report which, without reproducing the SOR or JSP 822, includes the purpose of the report, the scope of the report, the method used for the analysis and a summary of the outcomes including any issues raised. Reference back to the applicable Role Group Scoping Report and Duty Annex. Highlight any changes from the scoping exercise which are not covered in section 5 of the Duty Analysis report. |
| **2** | **Duty**  *“A description of the duty based on the BMR.”* An initial description of the duty should be taken from the BMR. Further detail can be found in the Job Description. |
| **3** | **Task Scalar**  “A breakdown of the tasks which make up this duty. Tasks, Sub-Tasks & Task Elements as required with description of the Performance required.”. The task scalar is to be presented as a table which includes the following   * **Task Id** – Each task, sub-task and task element is to be uniquely numbered in the agreed format[Note 2]. * **Task** – Description of the performance required for the task[Notes 3, 4 & 5]. * **Sub-Task** – Description of the performance required for the sub-task[Notes 3, 4 & 5]. * **Task Element** – Description of the performance required for the task element[Notes 3, 4 & 5]. * **Conditions** – The conditions under which the task, sub-task or task element must be performed[Note 6]. * **Standards** - The standards to which the task, sub-task or task element must be performed[Note 6].   Note: *“Liaison with FSM at this stage to validate the Task Scalar and reassess the workload required for this TNA”.* The D-PS including Task Scalar, Conditions and Standards should be presented to FSM at this point for validation and re-assessment of workload impacts before further analysis to complete the table is conducted   * **DIF and Urgency –** Analysis of the task (as part of this Duty) for difficulty (including urgency, and physical complexity where appropriate), importance and frequency[Notes 7 & 8]. * **Initial Training Category –** Initial Training Category based on the DIF[Notes 7 & 8].   Notes   1. The task scalar is required to be a table rather than a graphical hierarchy which is normally associated with the term ‘scalar’. 2. Task numbering should be in accordance with the format agreed with the Customer. 3. Tasks, sub-tasks and task elements should be specific, measurable and time-bound (SMT) for conduct of the specific duty. 4. Tasks should only be decomposed until they provide a specific, measurable and time-bound description of the task performance and no further. In general, a sub-task or task element should be a discrete, standalone activity even though it may be part of a larger task. 5. Conditions and Standards should be defined at the highest level applicable and flow down. There is no need to repeat them at the lower level(s). 6. DIF and training categorisation should be carried out in accordance with the process in JSP 822 and applying the principles stated in the TNA SOR. 7. Details of the DIF (individual scores for each of D, I and F, including consideration of Urgency) and justification for the initial training category decision must be included, either in the main table or as an annex. 8. The table should be presented in landscape format and can be expanded to A3 size if required. |
| **4** | **Voids**  *“Capture and record any voids in data”*. List all voids, the reason for each void and the likely resolution including a resolution date. Indicate any impact of the void and reference any assumptions agreed with the Customer to allow the analysis to progress. All voids should be recorded in the TNA Voids Register. |
| **5** | **Updates to the Scoping Report**  Identify any updates to the applicable Scoping Report or the applicable Duty Annex, particularly in relation to constraints, time constraints, dependencies, assumptions or risks. Update the estimate of the resources required to conduct further analysis as identified during Task Scalar validation. |
| **6** | **Internal Review and IP Concurrence**  *“Internal review process, including the concurrence procedure with any IPs involved with that line of analysis”.* Carry out internal review of the report in accordance with PI-Eng-199. Before submission of the report for Customer review, record the conduct and outcome of the internal review here, referring out to the applicable DRFs, F-Eng-150 and F-Eng-151. |
| **7** | **Audit Trail**  “*Audit trail where this is not captured at a different level.*” Provide an audit trial of all key meetings, discussions, decisions, interactions with SMEs and sources of information related to the duty. If extensive, this may be added as an annex. The audit trail should include the following:   * **Id** – Number audit trail entries sequentially for easy reference. * **Date** – Date of the interaction. * **Interaction Type** – Record the type of interaction e.g. meeting, telephone conversation, e-mail, supply of data, validation, review, etc. * **People Involved** – Identify who was involved including their name, rank (if military), position and organisation. * **Topic/Discussion/Decisions/Information Provided** – Provide a précis of the interaction in terms of the topic and what was covered, decisions made, information provided, etc. Reference any minutes or other relevant documents or records. |
| **8** | **STEG Endorsement**  *“Review Duty Performance Statement in accordance with [SOR] Annex C.”* The process for document review and approval is i.a.w. PI-Eng-199. Any other process for endorsement or acceptance conducted by the Customer can be supplemental to or concurrent with PI-Eng-199 but must not replace it. The process for document review and approval is i.a.w. PI-Eng-199. Following STEG endorsement, record STEG endorsement here, referring to the applicable STEG meeting minutes, and then submit the report for acceptance through PI-Eng-199. |

## TNA Process and Interfaces

The Duty Analysis report follows on from the applicable Scoping Report Duty Annex as required and provides the task analysis which drives the Training Gap Analysis for the duty.

The task performance elements (task id, task, sub-task and task elements) will be subject to FSM validation before further analysis is performed. MoD review of the draft D-PS will be required after DIF and training categorisation i.e. on completion of the D-PS.

# Duty Training Gap Analysis and Draft Training Objectives Report

## Overview



**Figure 8 Duty Training Gap Analysis Report Required Elements**

## Purpose

The Duty Training Gap Analysis and Draft Training Objectives Report is the second interim deliverable of the Stage 2 analysis and provides an analysis of the gap between extant training and that required for Successor for an individual duty. The report also provides a list of draft TOs and EOs which address the training gap and a draft list of courses that will be required to deliver them.

## Features

The contents of the Duty Training Gap Analysis and Draft Training Objectives Report are compatible with JSP 822 (V2.0 Mar 16) in relation to Training Gap Analysis but are targeted at the duty level only with no amalgamation into a whole role TGA at this stage. Additionally, KSA Analysis deferred from the Role Analysis, and Enabling Objective development brought forward from Training Design are included; again at the duty level. The Customer has stated explicitly the information that must be included as a minimum in each report.

## Inputs and Dependencies

Successor TNA Duty TGA and TO Report Template

General Template Teamcenter Ref tbd

ITAR Template Teamcenter Ref tbd

NNPPI Template Teamcenter Ref tbd

PSA Template Teamcenter Ref tbd

Basic Manning Requirement (BMR)

Job Descriptions

Role Group Summary

Role Group Scoping Report

Role Group Scoping Report Duty Annex

Duty Analysis Report

BAE Systems Operability SMEs

SMEs from all IPs

System Design Description (SDD) documents

Principles of Operation Documents

Operational Documentation (OPDOCS)

Maintenance Task Analysis

Extant course data including TOs and EOs

PI-Eng-199 Technical Document Review Process (Successor)

## Outputs

|  |  |
| --- | --- |
|  | **Executive Summary**  The Executive Summary is a précis of the report for readers who need to know what it is about and its key outcomes but who do not need the detail. It should include the key information, findings and recommendations from the report. It is not the report’s introduction and it should not introduce any new information that is not contained elsewhere in the report. |
|  | **Table of Contents**  The Table of Contents should list the contents of the of the report (automatically based on Heading styles). Include a Table of Tables and Table of Figures as necessary based on the *Insert Caption* feature. |
|  | **References**  List all documents referenced from the report in the order they appear in the text. |
|  | **Definitions, Acronyms and Abbreviations**  Define key terms which may not be readily understood by the report’s target readership. Define all acronyms and abbreviations used in the report in alphabetical order. |
| **1** | **Introduction**  Provide a brief introduction to the report which, without restating the SoR or JSP 822, includes the purpose of the report, the scope of the report, the method used for the analysis and a summary of the outcomes including any issues raised. Reference back to the applicable Role Group Scoping Report Duty Annex and Duty Analysis Report. Highlight any major changes which have occurred since the previous reports which will impact the TNA going forward. |
| **2** | **Changes**  Report any changes relevant to this duty that have been made to the job or duty, or to the systems or equipment involved, since completion of the applicable Duty Analysis report. If the changes are significant, the Duty Analysis may need to be repeated or revised. |
| **3** | **KSA Analysis and Statement of Training Gap**  “Description of the knowledge, skills and attitudes to conduct the tasks for this duty (captured at the highest level where the same KSA are required for multiple tasks/sub-tasks, or an entire duty).” Produce a Statement of Training Gaps “in terms of performance delta (KSA) for the performance of the Duty against existing TOs and EOs”. Conduct a KSA analysis of the tasks identified in the Duty Analysis report for the duty. Do not analyse tasks with an Initial Training Category of 6 (no training required). Identify if and where the tasks or their KSA are covered in extant training. Identify tasks where new or updated training will be required and those where extant training is sufficient. Complete the table as follows:   * **Task Id** – taken from Duty Analysis * **Task/Sub-Task/Task Element** – taken from Duty Analysis * **Required Knowledge** – all system, procedural, regulatory, policy and other knowledge required to perform the task * **Required Cognitive Skills** – all cognitive skills required to perform the task * **Required Physical Skills** – all physical skills required to perform the task * **Required Attitudes** – all attitudes required to perform the task * **Extant Training** – where in extant training these tasks and KSA are already delivered * **Knowledge Gap** – additional knowledge required over extant training * **Cognitive Skills Gap** – additional cognitive skills required over extant training * **Physical Skills Gap** – additional physical skills required over extant training * **Attitudes Gap** – additional attitudes required over extant training * **Training Recommendation** – one of: new training, update extant training, use extant training   Notes   1. The page size and orientation are already set to A3 landscape in the template 2. Column widths can be adjusted to enhance presentation 3. Tasks, sub-tasks and task elements are listed in a single column to avoid having very narrow columns. Indent sub-tasks by 1 cm and task elements by 2 cm to create a visual hierarchy |
| **4** | **Draft Training and Enabling Objectives**  “The draft TOs and EOs (with Training Conditions and Standards) that would need to be trained to achieve the performance of the Duty.”. Develop TOs against task performance. Develop EOs against KSA. Complete the table as follows:   * **Task/KSA Id** – the related tasks, sub-task, task element or KSA Id taken from table 1 * **TO/EO Id** – a unique hierarchical Id for each TO and its supporting EOs * **Training/Enabling Objectives** – description of the TO or EO * **Training Conditions** – conditions to be achieved in training (which should reflect the Initial Training Category from the applicable Duty Analysis) * **Training Standards** –standards to be achieved in training (which should reflect the Initial Training Category from the applicable Duty Analysis)   Note: The Draft TOs and EOs should be presented to FSM at this point for validation. |
| **5** | **Course List**  *“Identify/Validate Successor Courses”*. Develop a draft list of courses which will deliver the TOs and EOs identified in Table 2. This should include extant courses, modified courses and new Successor specific courses.  For each category provide the following:   * **Serial** – Sequential unique serial for each table entry * **Course Number** – the official number of the course (supplied by the RN) if known * **Course Name** – the formal name for the course (supplied by the RN) if known * **Provider** – the establishment which currently provides or is expected to provide the course * **TOs/EOs** - List the TOs and EOs from Table 2 which will be delivered by each course |
| **5.1** | **Extant Courses**  Extant courses which can provide Successor training without change |
| **5.2** | **Modified Courses**  Extant courses which can provide Successor training following suitable modification |
| **5.3** | **New Successor Specific Courses**  New courses which will need to be developed to provide Successor training. |
| **6** | **Voids**  *“Capture and record any voids in data”*. List all voids, the reason for each void and the likely resolution including a resolution date. All voids should be recorded in the TNA Voids Register. |
| **7** | **Updates to Previous Reports**  Identify any updates to applicable previous reports, particularly in relation to constraints, time constraints, dependencies, assumptions or risks. Update the estimate of the resources required to conduct further analysis if required. |
| **8** | **Internal Review and IP Concurrence**  *“Internal review process, including the concurrence procedure with any IPs involved with that line of analysis”.* Carry out internal review of the report in accordance with PI-Eng-199. Before submission of the report for Customer review, record the conduct and outcome of the internal review here, referring out to the applicable DRFs, F-Eng-150 and F-Eng-151. |
| **9** | **Audit Trail**  “*Audit trail where this is not captured at a different level.*” Provide an audit trial of all key meetings, discussions, decisions, interactions with SMEs and sources of information related to the duty. If extensive, this may be added as an annex. The audit trail should include the following:   * **Id** – Number audit trail entries sequentially for easy reference. * **Date** – Date of the interaction. * **Interaction Type** – Record the type of interaction e.g. meeting, telephone conversation, e-mail, supply of data, validation, review, etc. * **People Involved** – Identify who was involved including their name, rank (if military), position and organisation. * **Topic/Discussion/Decisions/Information Provided** – Provide a précis of the interaction in terms of the topic and what was covered, decisions made, information provided, etc. Reference any minutes or other relevant documents or records. |
| **10** | **STEG Endorsement**  *“Review Statement of Training Gaps and draft TOs in accordance with [SOR] Annex C”.* The process for document review and approval is i.a.w. PI-Eng-199. Any other process for endorsement or acceptance conducted by the Customer can be supplemental to or concurrent with PI-Eng-199 but must not replace it. The process for document review and approval is i.a.w. PI-Eng-199. Following STEG endorsement, record STEG endorsement here, referring to the applicable STEG meeting minutes, and then submit the report for acceptance through PI-Eng-199. |

## TNA Process and Interfaces

The Duty TGA and Draft TO Report follows on from the Duty Analysis Report for the applicable duty and feeds into the Training Options Analysis for the duty. The TOs and EOs will require validating by FSM before proceeding.

The following provides an overview of the TGA process:

Identify the required Knowledge, Skills and Attitudes (KSA) against each task, sub-task and task element

Aggregate the KSA to the highest level for reporting

Identify if and where the task and/or KSA are covered in extant training

Identify tasks that will require additional or new training and those where extant training is sufficient in terms of the KSA gap

Develop TOs against task performance

Develop EOs against KSA

Produce a list of courses which will provide the required Successor training including extant courses, modified extant courses and new Successor specific courses

# Duty Training Options Analysis Report

## Overview



**Figure 9 Duty Training Options Analysis Report Required Elements**

## Purpose

The Duty Training Options Analysis Report is the third interim deliverable of the Stage 2 analysis and provides an analysis of how the training gap between extant training and that required for Successor for the duty can be delivered.

## Features

The contents of the Duty Training Options Analysis Report are compatible with JSP 822 (V2.0 Mar 16) in relation to training options analysis but targeted at the duty level only. Additionally, development of a draft FTS bought forward from Training Design is included in the TOA. There is no amalgamation into a whole role TOA at this stage. The Customer has stated explicitly the information that must be included as a minimum in each report.

## Inputs and Dependencies

Successor TNA Duty TOA Report Template

General Template Teamcenter Ref tbd

ITAR Template Teamcenter Ref tbd

NNPPI Template Teamcenter Ref tbd

PSA Template Teamcenter Ref tbd

Basic Manning Requirement (BMR)

Job Descriptions

Role Group Summary

Role Group Scoping Report

Role Group Scoping Report Duty Annex

Duty Analysis Report

Duty TGA and TO Report

BAE Systems Operability SMEs

SMEs from all IPs

Information on current RN training methods and media

Information and research on modern and emerging training methods and media

PI-Eng-199 Technical Document Review Process (Successor)

## Outputs

|  |  |
| --- | --- |
|  | **Executive Summary**  The Executive Summary is a précis of the report for readers who need to know what it is about and its key outcomes but who do not need the detail. It should include the key information, findings and recommendations from the report. It is not the report’s introduction and it should not introduce any new information that is not contained elsewhere in the report. |
|  | **Table of Contents**  The Table of Contents should list the contents of the report (automatically based on Heading styles. Include a Table of Tables and Table of Figures as necessary based on the *Insert Caption* feature. |
|  | **References**  List all documents referenced from the report in the order they appear in the text. |
|  | **Definitions, Acronyms and Abbreviations**  Define key terms which may not be readily understood by the report’s target readership. Define all acronyms and abbreviations used in the report in alphabetical order. |
| **1** | **Introduction**  Provide an introduction to the report which, without restating the SoR or JSP 822, includes the purpose of the report, the scope of the report, the method used for the analysis and a summary of the outcomes including any issues raised. Reference back to the applicable Role Group Scoping Report Duty Annex, Duty Analysis Report and Duty TGA and TO Report. Highlight any major changes which have occurred since the previous reports which will impact the TNA going forward. |
| **2** | **Changes**  Report any changes relevant to this duty that have been made to the job or duty, or to the systems or equipment involved, since completion of the applicable Duty TGA and TO Report. |
| **3** | **Fidelity Analysis** - “*Identification of the required fidelity for the training solution*”. Conduct a fidelity analysis of the training tasks identified in the Training Gap Analysis and Training Objectives Report for the duty. Do not analyse tasks the training recommendation is that the requirement can be met by extant training. Complete the table as follows:   * **Training Task/Sub-Task** – Insert the task id and description e.g. “1.2.3 Perform the battery discharge procedure.” * **Physical Fidelity**   + **Layout** – special arrangement of equipment, consoles and controls in relation to each other   + **Look** – visual appearance of equipment, consoles and controls in terms of size, shape, colour and luminescence   + **Feel** – tactile characteristics of equipment, consoles and controls in terms of texture and kinaesthetic characteristics * **Functional Fidelity**   + **Format** – design and layout of displays; presentation of visual and audio information   + **Content** – what data is displayed in terms of types of data, range, realism of data modelling   + **Response** – response to user inputs in terms of both time and content; frequency of updates; interaction between displays and systems * **Environmental Fidelity**   + **Sound** – background noise; equipment noise volume; resonance; echo; direction; communications chatter   + **Motion** – movement of the platform in terms of direction, range of movement, acceleration, deceleration, roll, yaw, g-cueing   + **Ambience** - lighting (type, brightness, colour, direction, control of); structure (space envelop, access, restrictions, obstacles, structure materials; sensory stimulation (temperature, air flow, humidity, smoke, smell)   + **Maritime Environment** – external environmental and geographical features and their effects on systems, sensors, infrastructure, performance of procedures * **Tactical/Cultural Fidelity**   + **Threats** – enemy characteristics in terms of number, location, tactics, weapons, sensors, etc.   + **Allies/Neutrals** – allies and neutral characteristics in terms of number, location, culture, weapons, sensors, etc.   + **Team Interactions** – command and control (C2) relationships, communications, situational awareness   Note: Each fidelity sub-category should be assessed against the table below. Record the fidelity factor and justification for the factor e.g. “2 Controls and switches should be in correct position in relation to the operator”.   |  |  |  |  | | --- | --- | --- | --- | | **Factor** | **Indicator** | **Definition** | **Impact** | | 0 | None | Not applicable | Has no impact on training | | 1 | Low | Replication not important | Little impact would be made on training except to add realism | | 2 | Medium | Replication moderately important | Significant impact would be made on training. The task contains elements that require exact replication | | 3 | High | Exact replication important | Has a significant impact and is essential to training | |
| **4** | **Location and Environmental Implications**  “*The constraints imposed by the training location and the impact of resource limitations.*” Identify any implications of the location of the training or the environment in which it is conducted such as constraints on training resources (physical and personnel); availability of real equipment; operational constraints; location at SISOB or remote establishments. |
| **5** | **Methods and Media Analysis**  “*Training Effectiveness comparison of suitable training methods & media which fully or partially meet the training requirement”.* Identify the range of training methods and media that could be used to deliver the training gap for the duty. This should include modern and emerging training technologies. Formulate various combinations of methods and media to create candidate solutions. Carry out a Measure of Training Effectiveness (MOTE) analysis against each candidate solution. Consideration should be given to the candidate solution’s ability to:   * Deliver the required training of the identified KSAs * Provide opportunities for practice and consolidation * Provide a means of assessment   The table shows the MOTE scoring system defined in the SOR.   |  |  |  |  | | --- | --- | --- | --- | | **Score** | **Effectiveness** | **Definition** | **Notes** | | 0.0 | 0% | Option totally unsuitable. | Requires amplifying comment | | 0.1 |  |  | Requires amplifying comment | | 0.2 | 25% | Option has extremely limited effectiveness – major shortcomings | Requires amplifying comment | | 0.3 |  |  | Requires amplifying comment | | 0.4 | 50% | Option has limited effectiveness – significant shortcomings | Requires amplifying comment | | 0.5 |  |  | Requires amplifying comment | | 0.6 | 75% | Option is reasonably effective – some minor or a major shortcoming | Might require amplifying comment | | 0.7 |  | Option is almost effective – minor shortcomings |  | | 0.8 | 100% | Option is just effective – the minimum to meet the entire need. |  | | 0.9 | >100% | Option provides more than bare minimum – some additional benefit. | Requires amplifying comment | | 1.0 | >>100% | Option provides significantly more than bare minimum – significant additional benefit. | Requires amplifying comment | |
| **6** | **Cost Benefit Analysis**  “Cost benefit analysis of the options”. A Cost Benefit Analysis of each candidate solution should be conducted in accordance with Annex F to the SOR, and the principles provided in the HM Treasury ‘Green Book’ and JSP 507. The costs used for the analysis should be the best costs available (using the same basis of costing to aid comparison), indicating the relative cost of one solution against another. Whole life costs should be used which include acquisition, through life and disposal costs. They will not be accurate and should not be included in the report as absolute figures. An example calculation of cost benefit is shown below.  Cost benefit should not be taken as the absolute decider for the recommended solution. Other factors should be taken into account including the MOTE for each solution, ability to address any residual gap, MoD policy and regulatory requirements. |
| **7** | **Draft Formal Training Statement**  “*The draft compilation of the Formal Training Statement for this duty*”. Develop a draft FTS for the duty. The training objectives should be taken from the TGA and TO report. The balance between training in a school and training in the workplace should be in line with the final Training Category from the Duty Analysis, and should reflect the most cost effective candidate training solution from the TOA. |
| **7.1** | **Training Performance Statement**   * **Duty Title** – From the BMR and/or TNA Catalogue (as per the title of the report) * **Duty Number** – from the TNA Catalogue * **TRA(s)** – Branch and/or trade sponsor * **Issue Status** – the revision number of the report * **TO Number** – from the TGA and TO report * **Training Objective (Performance)** – from the TGA and TO report * **Conditions** – conditions under which the TO is to be performed in the school * **Standards** – the minimum standard of performance of the TO to be achieved in the school * **Requirement** – indicate whether a core, legal and/or accreditation requirement * **Notes** – add any additional information that may support training design |
| **7.2** | **Workplace Training Statement**   * **Duty Title** – From the BMR and/or TNA Catalogue (as per the title of the report) * **Duty Number** – from the TNA Catalogue * **TRA(s)** – Branch and/or trade sponsor * **Issue Status** – the revision number of the report * **TO Number** – from the TGA and TO report * **Training Objective (Performance)** – from the TGA and TO report * **Conditions** – conditions under which the TO is to be performed in the workplace * **Standards** – the minimum standard of performance to be achieved in the workplace * **Requirement** – indicate whether a core, legal and/or accreditation requirement * **Notes** – add any additional information that may support training design |
| **7.3** | **Residual Training Gap Statement**   * **Duty Title** – From the BMR and/or TNA Catalogue (as per the title of the report) * **Duty Number** – from the TNA Catalogue * **TRA(s)** – Branch and/or trade sponsor * **Issue Status** – the revision number of the report * **TO Number** – from the TGA and TO report * **Training Objective (Performance)** – from the TGA and TO report * **Conditions** – from the TGA and TO report * **Standards** – from the TGA and TO report * **Reason(s)** – identify any performance, conditions or standards which cannot be achieved during school or workplace training and why * **Consequences** – identify any consequences of the gap on operational performance and how the gap can be resolved |
| **8** | **Voids**  *“Capture and record any voids in data”*. List all voids, the reason for each void and the likely resolution including a resolution date. All voids should be recorded in the TNA Voids Register. |
| **9** | **Updates to Previous Reports**  Identify any updates to applicable previous reports, particularly in relation to constraints, time constraints, dependencies, assumptions or risks. Update the estimate of the resources required to conduct further analysis if required. |
| **10** | **Internal Review and IP Concurrence**  *“Internal review process, including the concurrence procedure with any IPs involved with that line of analysis”.* Carry out internal review of the report in accordance with PI-Eng-199. Before submission of the report for Customer review, record the conduct and outcome of the internal review here, referring out to the applicable DRFs, F-Eng-150 and F-Eng-151. |
| **11** | **Audit Trail**  “*Audit trail where this is not captured at a different level.*” Provide an audit trial of all key meetings, discussions, decisions, interactions with SMEs and sources of information related to the duty. If extensive, this may be added as an annex. The audit trail should include the following:   * **Id** – Number audit trail entries sequentially for easy reference. * **Date** – Date of the interaction. * **Interaction Type** – Record the type of interaction e.g. meeting, telephone conversation, e-mail, supply of data, validation, review, etc. * **People Involved** – Identify who was involved including their name, rank (if military), position and organisation. * **Topic/Discussion/Decisions/Information Provided** – Provide a précis of the interaction in terms of the topic and what was covered, decisions made, information provided, etc. Reference any minutes or other relevant documents or records. |
| **12** | **STEG Endorsement**  *“Review Training Options and early draft FTS in accordance with [SOR] Annex C”.* The process for document review and approval is i.a.w. PI-Eng-199. Any other process for endorsement or acceptance conducted by the Customer can be supplemental to or concurrent with PI-Eng-199 but must not replace it. The process for document review and approval is i.a.w. PI-Eng-199. Following STEG endorsement, record STEG endorsement here, referring to the applicable STEG meeting minutes, and then submit the report for acceptance through PI-Eng-199. |

## TNA Process and Interfaces

The Duty TOA Report follows on from the Duty TGA and TO report for the applicable duty and feeds into the Training Needs Report.

# Team/Collective Task Analysis Report

## Overview



**Figure 10 Team/Collective Training Analysis Report Required Elements**

## Purpose

The Team/Collective Task Analysis report is the first deliverable of the Team and Collective Stage 2 TNA. It gives an introduction to the role of the team, and identifies and provides an initial analysis of the team’s tasks.

## Features

A Team/Collective Task Analysis Report will be provided for each of the ship’s major teams. The contents of the report are a tailored version of the TCTA described in JSP 822 (V2.0 Mar 16). The Customer has stated explicitly the information that must be included as a minimum in each report so task conditions have been added, and the Teamwork Description and Teamwork Error Analysis have moved to the later Overlay Analysis Report.

## Inputs and Dependencies

Successor TNA TCTA Report Template

General Template Teamcenter Ref tbd

ITAR Template Teamcenter Ref tbd

NNPPI Template Teamcenter tbd

PSA Template Teamcenter Ref tbd

Basic Manning Requirement (BMR)

Job Descriptions

Role Group Summary

Role Group Scoping Report

Role Group Scoping Report Duty Annex

BAE Systems Operability SMEs

SMEs from all IPs

OPDOCS

PI-Eng-199 Technical Document Review Process (Successor)

## Outputs

|  |  |
| --- | --- |
|  | **Executive Summary**  The Executive Summary is a précis of the report for readers who need to know what it is about and its key outcomes but who do not need the detail. It should include the key information, findings and recommendations from the report. It is not the report’s introduction and it should not introduce any new information that is not contained elsewhere in the report. |
|  | **Table of Contents**  The Table of Contents should list the contents of the of the report (automatically based on Heading styles). Include a Table of Tables and Table of Figures as necessary based on the *Insert Caption* feature. |
|  | **References**  List all documents referenced from the report in the order they appear in the text. |
|  | **Definitions, Acronyms and Abbreviations**  Define key terms which may not be readily understood by the report’s target readership. Define all acronyms and abbreviations used in the report in alphabetical order. |
| **1** | **Introduction**  Provide an introduction to the report which, without restating the SoR or JSP 822, includes the purpose of the report, the scope of the analysis, the method used for the analysis and a summary of the outcomes including any issues raised. Reference back to the applicable Role Group Scoping Report Duty (Team) Annex (Duty (Team) Scoping Report). |
| **2** | **Team Collective Duty**  *“A description of the duty based on the BMR/SME input”.* Provide a description of the team duty including the key activities or objectives of the team and the watches or stations under which the team is required. Identify the members of the team in the table provided. |
| **3** | **Hierarchical Team Task List**  *“Analysis of the relevant Task Performance for each Task”.* Develop a hierarchical team task list identifying the missions, tasks and sub-tasks within the scope of the team as follows:   * **Team Mission** – State the mission or objective of the team. * **Team Task** – Identify the tasks required to be performed to achieve the mission. * **Sub-Task** – List any sub-tasks which form part of each task. * **Role** – Identify who within the team is responsible for performed each task or sub-task. * **Conditions** – “The conditions under which the Task must be performed”. State the conditions under which the team task must be performed. The Conditions statements should specify the physical location, level of supervision, environment or specific command/s the team or members of the team are s to react to, for example, 'given orders by…', or given input from…' * **Standards** – “The standards to which the Task must be performed”. State the standards to which the team task or sub-tasks must be performed. The TCTA should include metrics (wherever possible and appropriate) and/or other measures of performance against each task to permit subsequent evaluation.   Note: The Hierarchical Team Task List should be presented to FSM at this point for validation and re-assessment of workload impacts before further analysis is conducted. |
| **4** | **Critical Errors**  *“Analysis of the critical errors that must be satisfied by the proposed training. In terms of risk to the capability. Note, all relevant individual training analysis will be required before this stage.”* Identify what can go wrong conducting a team task and how these errors are managed e.g. Platform Management System (PMS) failure. The criticality of errors should be expressed in terms of risk to delivery of the capability. Complete the table as follows:   * **Task** – State the task name * **Critical Error** – Identify each critical error related to the task * **Management of the Error** – State how the error is managed |
| **5** | **Team Performance Statement**  *“Analysis of the sequencing and performance of each Task”.* Describe each task performed by the team using a Task Description Table. The TDT captures the detail and should be used to describe each team task, which will then provide a statement of the required Performance against each Mission Task. Guidance and examples can be found in JSP 822 (V2.0 Mar 16) Part 2 Section 1.2 Paragraph 88 Page 49. Complete the table as follows:   * **Task** – Task title and number, including linked Joint and Mission Tasks in the hierarchy. * **Purpose** - The capability effect generated. * **Initiating Condition** - When the task commences and/or what triggers its Performance. * **Terminating Condition** - When the task completes and/or what triggers its completion. * **External Context** - A description of the external context, including necessary interactions. * **Sub-Tasks** - Any sub-tasks necessary to complete the task. * **Plan** - The sequencing of the task with other tasks. * **Teamwork Description** - This will be captured in the Overlay Analysis and CTO Report for the team. * **Inputs** - (content, origin and means):   + **Internal Inputs** - from other team members and how they are delivered.   + **External Inputs** - from other teams and how they are delivered. * **Products/Outputs** - (content, destination and means):   + **Internal** - The products of any interactions that feed other team members.   + **External** - The products of any interactions that feed other teams. * **Other Outcomes** - Any other product of the task that should be noted; e.g. resource use. * **Critical Errors** - Errors that could be expected, their consequences and their management. * **Teamwork Stressors** - Demands that can increase stress on the team and hence test teamwork. * **Standards** - The Standards of Performance, including assessment metrics or measures. |
| **6** | **Voids**  *“Capture and record any voids in data”*. List all voids, the reason for each void and the likely resolution including a resolution date. All voids should be recorded in the TNA Voids Register. |
| **7** | **Updates to the Scoping Report** – Identify any updates to the applicable Scoping Report or the applicable Annex, particularly in relation to constraints, time constraints, dependencies, assumptions or risks. Update the estimate of the resources required to conduct further analysis as identified during Hierarchical Team Task List validation. |
| **8** | **Internal Review and IP Concurrence**  *“Internal review process, including the concurrence procedure with any IPs involved with that line of analysis”.* Carry out internal review of the report in accordance with PI-Eng-199. Before submission of the report for Customer review, record the conduct and outcome of the internal review here, referring out to the applicable DRFs, F-Eng-150 and F-Eng-151. |
| **9** | **Audit Trail**  “*Audit trail where this is not captured at a different level.*” Provide an audit trial of all key meetings, discussions, decisions, interactions with SMEs and sources of information related to the duty. If extensive, this may be added as an annex. The audit trail should include the following:   * Id – Number audit trail entries sequentially for easy reference. * Date – Date of the interaction. * Interaction Type – Record the type of interaction e.g. meeting, telephone conversation, e-mail, supply of data, validation, review, etc. * People Involved – Identify who was involved including their name, rank (if military), position and organisation. * Topic/Discussion/Decisions/Information Provided – Provide a précis of the interaction in terms of the topic and what was covered, decisions made, information provided, etc. Reference any minutes or other relevant documents or records. |
| **10** | **STEG Endorsement**  *“Review Team Performance Statement in accordance with [SOR] Annex C”.* The process for document review and approval is i.a.w. PI-Eng-199. Any other process for endorsement or acceptance conducted by the Customer can be supplemental to or concurrent with PI-Eng-199 but must not replace it. The process for document review and approval is i.a.w. PI-Eng-199. Following STEG endorsement, record STEG endorsement here, referring to the applicable STEG meeting minutes, and then submit the report for acceptance through PI-Eng-199. |

## TNA Process and Interfaces

The Team and Collective Task Analysis Report follows on from the applicable Duty (Team) Scoping Report (Role Group Scoping Report Duty (Team) Annex) and leads into the Overlay Analysis and Draft Training Objectives Report for the team.

# Overlay Analysis and Draft CTO Report

## Overview



**Figure 11 Overlay Analysis Report Required Elements**

## Purpose

The Overlay Analysis and Draft CTO Report is the second deliverable of the Team and Collective Stage 2 TNA. It provides an analysis of the team’s tasks and the errors that may occur, defines the behaviours and attitudes required to perform the each task successfully, identifies which tasks require training and how, and defines draft Collective Training Objectives that need to be trained to achieve the required performance.

## Features

An Overlay Analysis and Draft CTO Report will be provided for each of the ship’s major teams, following on from each team’s TCTA Report. The contents of the report are a tailored version of the Overlay Analysis Report and Draft CTOs described in JSP 822 (V2.0 Mar 16). The Customer has stated explicitly the information that must be included as a minimum in each report so the report combines the Overlay Analysis and draft CTOs, and includes the Teamwork Description and Teamwork Error Analysis normally found in the TCTA Report, and draft CEOs brought forward from Element 2 Design.

## Inputs and Dependencies

Successor TNA Overlay Analysis Report Template

General Template Teamcenter Ref tbd

ITAR Template Teamcenter Ref tbd

NNPPI Template Teamcenter Ref tbd

PSA Template Teamcenter Ref tbd

Basic Manning Requirement (BMR)

Successor Key and Whole Boat Scenarios [Teamcenter Ref 0000100770]

Job Descriptions

Role Group Summary

Role Group Scoping Report

Role Group Scoping Report Team Annex

Team/Collective Training Analysis Report

Course List for current classes

BAE Systems Operability SMEs

SMEs from all IPs

OPDOCS

FSM for validation

PI-Eng-199 Technical Document Review Process (Successor)

## Outputs

|  |  |
| --- | --- |
|  | **Executive Summary**  The Executive Summary is a précis of the report for readers who need to know what it is about and its key outcomes but who do not need the detail. It should include the key information, findings and recommendations from the report. It is not the report’s introduction and it should not introduce any new information that is not contained elsewhere in the report. |
|  | **Table of Contents**  The Table of Contents should list the contents of the of the report (automatically based on Heading styles). Include a Table of Tables and Table of Figures as necessary based on the *Insert Caption* feature. |
|  | **References**  List all documents referenced from the report in the order they appear in the text. |
|  | **Definitions, Acronyms and Abbreviations**  Define key terms which may not be readily understood by the report’s target readership. Define all acronyms and abbreviations used in the report in alphabetical order. |
| **1** | **Introduction**  Provide an introduction to the report which, without restating the SoR or JSP 822, includes the purpose of the report, the scope of the analysis, the method used for the analysis and a summary of the outcomes including any issues raised. Reference back to the applicable Role Group Scoping Report Duty (Team) Annex (Duty (Team) Scoping Report), and TCTA Report. |
| **2** | **Teamwork Description**  *“Approximately analogous to the KSA for individual training. To include coordination (of Tasks, information and resources); communication; management (of workload, conflicts and errors); monitoring; planning and synchronisation.”* Linked to critical errors, the analyst should capture what ‘good’ looks like for each task such that performance can be measured not just in terms of output but also in terms of attitudes and behaviours. Good teamwork should typically include coordination of tasks, information and resources; communication; management of workload, conflicts and errors; monitoring; planning and synchronisation. Provide a table for each task, identifying against each teamwork attribute the behaviours and attitudes that are required for satisfactory performance. |
| **3** | **Teamwork Error Analysis (Gaps)**  *“Instead of an individual TGA, this includes comparison of the completed Task Descriptions with existing training provision to determine whether the existing training achieves the necessary Tasks. This analysis will determine what extra collective training is required.”* Teamwork Error Analysis is a risk-based assessment of tasks which identifies which tasks require training to mitigate the risk of errors. It is assumed that trainees have completed all necessary individual and pre-employment training, SMQ and BSQ and have achieved TPS in their individual Successor training. Complete the Teamwork Error Analysis table as follows:   * **Task** – List the tasks identified in the TCTA * **Critical Error** – List the critical errors for each tasks as identified in the TCTA * **Likelihood** – State the likelihood of the error occurring in terms of High, Medium or Low (criteria for H, M and L tbd) * **Consequences** – Identify the consequences of the error occurring * **Severity** – State the severity of the error in terms of High, Medium or Low (criteria for H, M and low tbd) * **Risk** – Based on the likelihood, consequences and severity of the error, estimate a risk factor in terms of High, Medium and Low (methodology for estimation and criteria for H, M and L tbd) * **Training Required** – Based on the risk factor, indicate whether training of the task is required to mitigate the risk |
| **4** | **Collective Training Components**  *“Determination of the components of collective training most appropriate for the Tasks. To include: Supportive Information, Just-in-time information, Part-Task practice, Whole training Tasks.”* Use the Teamwork Error Analysis associated with each task to determine Collective Training Components appropriate for the Training Objective. For each task where training is identified as required in the Teamwork Error Analysis table complete the Collective Training Components table as follows:   * **Task** – List the tasks identified in the TCTA * **Critical Error** – List the critical errors for each task identified in the TCTA   Identify one or more of the collective training components which may be used to deliver the required training, indicating the training method(s) that may be appropriate for each:   * **Supportive Information** – delivered through classroom training, e-learning or other methods of formalised or self-paced learning. This should be captured in the individual TNA. * **Just-in-Time Information** – delivered through information displays, demonstration, EPSS and e-learning. This category also includes corrective feedback by instructional staff, as well as longer term coaching and mentoring. * **Part-Task Practice** – the practice of sub-tasks or task elements through methods such as drills, touch drills or repetition to achieve automaticity or habitual performance. * **Whole Task Practice** – practice of the whole task which may involve the whole team or may need to be performed collectively between a number of teams or the whole boat. |
| **5** | **Training Scenarios**  Training Scenarios have not been explicitly stated as a requirement in the SOR but are required as part of the process of identifying CTOs and CEOs described in JSP 822 Part 2 section 1.2 paragraph 95. The Operating Philosophy & Successor (Whole Boat) Scenarios document [Ref TC: 0000100770) provides key whole boat and supporting whole boat scenarios. In total there are 11 key and 37 supporting scenarios. Examples applied to the DCHQ Team Task Analysis can be found in TC: 0000220461, Annex D, page 83]. Training Scenarios should reflect the Key and Supporting Whole Boat Scenarios. Training Scenarios for current classes should provide a guide to range and scope. Complete the table as follows:   * **Serial** – unique identifier for each Training Scenario. * **Training Scenario Description** – provide an outline of the Training Scenario including starting conditions, key events and end state. * **Tasks Included** – from the Teamwork Error Analysis list the tasks to be included in the scenario (from those identified as tasks to be trained in the Teamwork Error Analysis). * **Collective Training Components Included** – from the Collective Training Components identify those included in the training scenario for each task. * **Related Whole Boat Scenarios** – list the Key and Supporting Whole Boat Scenarios (KWBS 1 – 11; SWBS 1 – 37) covered by this Training Scenario (indicate whether in whole or in part). |
| **6** | **Draft Collective Training and Enabling Objectives**  *“The draft list of CTOs and CEOs (with Training Conditions and Standards) that would need to be trained to achieve the performance of the Duty.”* Provide a draft list of Collective Training Objectives (CTO) (including training conditions and standards) that will need to be trained as part of the Training Scenarios to achieve the required task performance standards. Develop a draft list of Collective Enabling Objectives (including conditions and standards) against each CTO as appropriate. Complete the table as follows:   * **Serial** – unique hierarchical identifier in the agreed format for each CTO and CEO. * **Collective Training Objective** – performance statement for the CTO. * **Collective Enabling Objective** – performance statement for the CEO. * **Conditions** – training conditions under which the CTO or CEO is to be performed * **Standards** – training standards to which the CTO or CEO is to be performed.   Note: Liaise with FSM at this stage to validate the Draft CTOs and CEOs before progressing further. |
| **7** | **Course List** - *“Validate Successor courses list”*. Review the draft course list for individual training for inclusion of CTOs and CEOs and, where necessary, identify additional training opportunities (e.g. Continuation Training) to deliver the CTOs and CEOs identified in Draft Collective Training and Enabling Objectives. This should include extant courses, modified courses and new Successor specific courses.  For each category provide the following:   * **Serial** – Sequential unique serial for each table entry * **Course Number** – the official number of the course (supplied by the RN) if known * **Course Name** – the formal name for the course (supplied by the RN) if known * **Provider** – the establishment which currently provides or is expected to provide the course * **CTOs/CEOs** - List the CTOs and CEOs from the Draft Collective Training and Enabling Objectives which will be delivered by each course |
| **7.1** | **Extant Courses**  Extant courses which can provide Successor training without change |
| **7.2** | **Modified Courses**  Extant courses which can provide Successor training following suitable modification |
| **7.3** | **New Successor Specific Courses**  New courses specific to Successor |
| **8** | **Voids**  *“Capture and record any voids in data”*. List all voids, the reason for each void and the likely resolution including a resolution date. All voids should be recorded in the TNA Voids Register. |
| **9** | **Updates to the TCTA Report**  Identify any updates to the applicable TCTA Report, particularly in relation to constraints, time constraints, dependencies, assumptions or risks. Update the estimate of the resources required to conduct further analysis if applicable. |
| **10** | **Internal Review and IP Concurrence**  *“Internal review process, including the concurrence procedure with any IPs involved with that line of analysis”.* Carry out internal review of the report in accordance with PI-Eng-199. Before submission of the report for Customer review, record the conduct and outcome of the internal review here, referring out to the applicable DRFs, F-Eng-150 and F-Eng-151. |
| **11** | **Audit Trail** – “*Audit trail where this is not captured at a different level.*” Provide an audit trial of all key meetings, discussions, decisions, interactions with SMEs and sources of information related to the duty. If extensive, this may be added as an annex. The audit trail should include the following:   * **Id** – Number audit trail entries sequentially for easy reference. * **Date** – Date of the interaction. * **Interaction Type** – Record the type of interaction e.g. meeting, telephone conversation, e-mail, supply of data, validation, review, etc. * **People Involved** – Identify who was involved including their name, rank (if military), position and organisation. * **Topic/Discussion/Decisions/Information Provided** – Provide a précis of the interaction in terms of the topic and what was covered, decisions made, information provided, etc. Reference any minutes or other relevant documents or records. |
| **12** | **STEG Endorsement**  *“Review Collective Training Components and draft CTOs & CEOs in accordance with [SOR] Annex C.”* The process for document review and approval is i.a.w. PI-Eng-199. Any other process for endorsement or acceptance conducted by the Customer can be supplemental to or concurrent with PI-Eng-199 but must not replace it. The process for document review and approval is i.a.w. PI-Eng-199. Following STEG endorsement, record STEG endorsement here, referring to the applicable STEG meeting minutes, and then submit the report for acceptance through PI-Eng-199. |

## TNA Process and Interfaces

The Overlay Analysis Report follows on from the applicable Team and Collective Task Analysis Report and leads into the Environmental Analysis Report for the team.

The Draft CTOs and CEOs will require validating by FSM before progressing further.

The following provides an overview of the process followed:

From the information in the Task Description Tables and Critical Errors identify the behaviours and attitudes necessary to complete each task to the required standard.

Analyse each task in terms of risk and identify which tasks require training to mitigate the associated risks.

Suggest appropriate ways of training the task in line with current practice, policy, constraints and future opportunities.

Define Training Scenarios based on the Successor Key and Supporting Whole Boat Scenarios.

Define CTOs and CEOs for delivering the required training through the Training Scenarios.

Identify where team training can be incorporated into the individual training courses and where separate or additional training needs to be provided.

# Environmental Analysis Report

## Overview



**Figure 12 Environmental Analysis Report Required Elements**

## Purpose

The Environment Analysis Report is the third deliverable of the Team and Collective Stage 2 TNA. It provides an analysis of the fidelity, location and environment requirements for the team’s training, examines methods and media for its delivery and defines a draft Collective Formal Training Statement.

## Features

An Environment Analysis Report will be provided for each of the ship’s major teams, following on from each team’s TCTA and Overlay Analysis and Draft CTO reports. The contents of the report are a tailored version of the Environmental Analysis Report described in JSP 822 (V2.0 Mar 16). The Customer has stated explicitly the information that must be included as a minimum in each report so in addition to the details required by the JSP, the report also includes the Draft Collective FTS brought forward from Element 2 (Design). The Fidelity Analysis requested by the Customer in the SoR is based on the model for Individual Fidelity Analysis rather than that for Team Fidelity Analysis described in JSP 822.

## Inputs and Dependencies

Successor TNA Environmental Analysis Report Template

General Template Teamcenter Ref tbd

ITAR Template Teamcenter Ref tbd

NNPPI Template Teamcenter Ref tbd

PSA Template Teamcenter Ref tbd

Basic Manning Requirement (BMR)

Successor Key and Whole Boat Scenarios [Teamcenter Ref 0000100770]

Job Descriptions

Role Group Summary

Role Group Scoping Report

Role Group Scoping Report Team Annex

Team/Collective Training Analysis Report

Overlay Analysis and Draft CTO Report

Course List for current classes

BAE Systems Operability SMEs

SMEs from all IPs

OPDOCS

PI-Eng-199 Technical Document Review Process (Successor)

## Outputs

|  |  |
| --- | --- |
|  | **Executive Summary**  The Executive Summary is a précis of the report for readers who need to know what it is about and its key outcomes but who do not need the detail. It should include the key information, findings and recommendations from the report. It is not the report’s introduction and it should not introduce any new information that is not contained elsewhere in the report. |
|  | **Table of Contents**  The Table of Contents should list the contents of the of the report (automatically based on Heading styles). Include a Table of Tables and Table of Figures as necessary based on the *Insert Caption* feature. |
|  | **References**  List all documents referenced from the report in the order they appear in the text. |
|  | **Definitions, Acronyms and Abbreviations**  Define key terms which may not be readily understood by the report’s target readership. Define all acronyms and abbreviations used in the report in alphabetical order. |
| **1** | **Introduction**  Provide an introduction to the report which, without restating the SoR or JSP 822, includes the purpose of the report, the scope of the analysis, the method used for the analysis and a summary of the outcomes including any issues raised. Reference back to the applicable Role Group Scoping Report Duty (Team) Annex (Duty (Team) Scoping Report), TCTA and Overlay Analysis and Draft CTO Reports. |
| **2** | **Fidelity Analysis**  *“Identification of the required fidelity for the training solution”.* Fidelity analysis is the necessary degree of replication between training and operational environments. It will focus on the team requirement for the training solution. It is expected that fidelity for an individual team member within a specific team will be covered in the corresponding individual TNA (where applicable) resulting in the team and individual elements being met. The fidelity categories defined in the SoR for Team and Collective Training differ from the 5 categories described in JSP 822 Part 2 Chapter 1 Section 1.2 Paragraphs 97 - 98. The SoR requires fidelity for teams to be stated in the same terms as for individuals (JSP 822 Part 2 Chapter 1 Section 1.2 Paragraphs 72 – 75). Physical fidelity is not listed as a requirement in the SoR but has been included for completeness. |
| **2.1** | **Physical Fidelity**   * **Layout** – special arrangement of equipment, consoles and controls in relation to each other * **Look** – visual appearance of equipment, consoles and controls in terms of size, shape, colour and luminescence * **Feel** – tactile characteristics of equipment, consoles and controls in terms of texture and kinaesthetic characteristics |
| **2.2** | **Functional Fidelity**   * **Format** – design and layout of displays; presentation of visual and audio information * **Content** – what data is displayed in terms of types of data, range, realism of data modelling * **Response** – response to user inputs in terms of both time and content; frequency of updates; interaction between displays and systems |
| **2.3** | **Environmental Fidelity**   * **Sound** – background noise; equipment noise volume; resonance; echo; direction; communications chatter * **Motion** – movement of the platform in terms of direction, range of movement, acceleration, deceleration, roll, yaw, g-cueing * **Ambience** - lighting (type, brightness, colour, direction, control of); structure (space envelop, access, restrictions, obstacles, structure materials; sensory stimulation (temperature, air flow, humidity, smoke, smell) * **Maritime Environment** – external environmental and geographical features and their effects on systems, sensors, infrastructure, performance of procedures |
| **2.4** | **Tactical/Cultural Fidelity**   * **Threats** – enemy characteristics in terms of number, location, tactics, weapons, sensors, etc. * **Allies/Neutrals** – allies and neutral characteristics in terms of number, location, culture, weapons, sensors, etc. * **Team Interactions** – command and control (C2) relationships, communications, situational awareness |
| **2.5** | **Fidelity Requirements**  *“Definition of the required fidelity factors”.* Definition of the required fidelity against each training task and sub-task using Table 1 which is in the format described in Annex E to JSP822 Part 2, Chapter 1, Section 1.2. This may be moved to an Annex if there are a number of tasks. |
| **2.6** | **Locations/Environment Implications**  *“The constraints imposed by the training location and the impact of resource limitations”.* Identify any implications of the location of the training or the environment in which it is conducted such as constraints on training resources (physical and personnel); availability of real equipment; operational constraints; location at SISOB or remote establishments. |
| **3** | **Methods & Media Analysis**  *“Training Effectiveness comparison of suitable training methods & media which fully or partially meet the training requirement”.* Identify the range of training methods and media that could be used to deliver the training gap for the duty. This should include modern and emerging training technologies.  JSP 822 Pt 1 Chapter 3 Section 3.1 Annex A, page A-11 provides detail and explains that the optimum training environment(s) for collective training are to be determined via a TNA. However, collective training should, where appropriate, maximise the use of simulation for both training and assurance. Therefore, to fully exploit the potential of simulation in Tiers 0, 1 and 2 training, analysis should commence from a presumption that simulation will be used for training (and stages of assurance) unless a safety case, certification requirement, operational realism or other constraint can justify otherwise. The method and media analysis must consider the individual training requirements (where practicable).  Formulate various combinations of methods and media to create candidate solutions. Carry out a Measure of Training Effectiveness (MOTE) analysis against each candidate solution as described in Annex F to the SOR. Consideration should be given to the candidate solution’s ability to   * Provide the level of fidelity identified by the Fidelity Analysis * Deliver the required collective training components * Provide opportunities for practice and consolidation * Provide a means of assessment and certification if required.   These candidate solutions and the MOTE analyses will be used in the Cost Benefit Analysis (CBA) to identify recommended training solutions. |
| **4** | **Cost Benefit Analysis**  “Cost benefit analysis of the options”. A Cost Benefit Analysis of each candidate solution should be conducted in accordance with Annex F to the SOR, and the principles provided in the HM Treasury ‘Green Book’ and JSP 507. The costs used for the analysis should be the best costs available (using the same basis of costing to aid comparison), indicating the relative cost of one solution against another. Whole life costs should be used which include acquisition, through life and disposal costs. They will not be accurate and should not be included in the report as absolute figures. An example calculation of cost benefit is shown below.  Cost benefit should not be taken as the absolute decider for the recommended solution. Other factors should be taken into account including the MOTE for each solution, ability to address any residual gap, MoD policy and regulatory requirements. |
| **5** | **Draft Collective Formal Training Statement**  “*The draft compilation of the Formal Training Statement for this duty*”. Develop a draft FTS for the team. The training objectives should be taken from the Overlay Analysis and Draft CTO report. The balance between training in a school and training in the workplace should be in line with the collective training components from the Overlay Analysis, and should reflect the most cost effective candidate training solution from the MOTE and CBA. |
| **5.1** | **Collective Training Performance Statement**   * **Team** – From the BMR and/or TNA Catalogue (as per the title of the report) * **Duty Number** – from the TNA Catalogue * **TRA(s)** – Branch and/or trade sponsor * **Issue Status** – the revision number of the report * **CTO Number** – from the Overlay Analysis and Draft CTO report * **Collective Training Objective (Performance)** – from the Overlay Analysis and Draft CTO report * **Conditions** – conditions under which the CTO is to be performed in the school * **Standards** – the minimum standard of performance of the CTO to be achieved in the school * **Requirement** – indicate whether a core, legal and/or accreditation requirement * **Notes** – add any additional information that may support training design |
| **5.2** | **Collective Workplace Training Statement**   * **Team** – From the BMR and/or TNA Catalogue (as per the title of the report) * **Duty Number** – from the TNA Catalogue * **TRA(s)** – Branch and/or trade sponsor * **Issue Status** – the revision number of the report * **CTO Number** – from the Overlay Analysis and Draft CTO report * **Collective Training Objective (Performance)** – from the Overlay Analysis and Draft CTO report * **Conditions** – conditions under which the CTO is to be performed in the workplace * **Standards** – the minimum standard of performance to be achieved in the workplace * **Requirement** – indicate whether a core, legal and/or accreditation requirement * **Notes** – add any additional information that may support training design |
| **5.3** | **Collective Residual Training Gap Statement**   * **Team** – From the BMR and/or TNA Catalogue (as per the title of the report) * **Duty Number** – from the TNA Catalogue * **TRA(s)** – Branch and/or trade sponsor * **Issue Status** – the revision number of the report * **CTO Number** – from the Overlay Analysis and Draft CTO report * **Collective Training Objective (Performance)** – from the Overlay Analysis and Draft CTO report * **Conditions** – from the Overlay Analysis and Draft CTO report * **Standards** – from the Overlay Analysis and Draft CTO report * **Reason(s)** – identify any performance, conditions or standards which cannot be achieved during school or workplace training and why * **Consequences** – identify any consequences of the gap on operational performance and how the gap can be resolved |
| **6** | **Voids**  *“Capture and record any voids in data”*. List all voids, the reason for each void and the likely resolution including a resolution date. All voids should be recorded in the TNA Voids Register. |
| **7** | **Updates to Previous Reports**  Identify any updates to the applicable TCTA and Overlay Analysis and Draft CTO Reports, particularly in relation to constraints, time constraints, dependencies, assumptions or risks. Update the estimate of the resources required to conduct further analysis if applicable. |
| **8** | **Internal Review and IP Concurrence**  “*Internal review process, including the concurrence procedure with any IPs involved with that line of analysis”.* Carry out internal review of the report in accordance with PI-Eng-199. Before submission of the report for Customer review, record the conduct and outcome of the internal review here, referring out to the applicable DRFs, F-Eng-150 and F-Eng-151. |
| **9** | **Audit Trail**  “*Audit trail where this is not captured at a different level.*” Provide an audit trial of all key meetings, discussions, decisions, interactions with SMEs and sources of information related to the duty. If extensive, this may be added as an annex. The audit trail should include the following:   * **Id** – Number audit trail entries sequentially for easy reference. * **Date** – Date of the interaction. * **Interaction Type** – Record the type of interaction e.g. meeting, telephone conversation, e-mail, supply of data, validation, review, etc. * **People Involved** – Identify who was involved including their name, rank (if military), position and organisation. * **Topic/Discussion/Decisions/Information Provided** – Provide a précis of the interaction in terms of the topic and what was covered, decisions made, information provided, etc. Reference any minutes or other relevant documents or records. |
| **10** | **STEG Endorsement**  *“Review Collective Training Options and early draft Collective FTS in accordance with [SOR} Annex C”*. The process for document review and approval is i.a.w. PI-Eng-199. Any other process for endorsement or acceptance conducted by the Customer can be supplemental to or concurrent with PI-Eng-199 but must not replace it. The process for document review and approval is i.a.w. PI-Eng-199. Following STEG endorsement, record STEG endorsement here, referring to the applicable STEG meeting minutes, and then submit the report for acceptance through PI-Eng-199. |

## TNA Process and Interfaces

The Environmental Analysis Report from the applicable Overlay Analysis and Draft CTO Report and leads into the Training Needs Report for the role group.

# Role Group Training Needs Report

## Overview



**Figure 13 Role Group Training Needs Report Required Elements**

## Purpose

The Role Group Training Needs Report is the final TNA deliverable for the role group Stage 2 TNA. The report combines the outcomes of the individual duty TNAs for the role group provides an evaluation of the candidate solutions, a cost benefit analysis for each and recommends a training solution for the role group.

## Features

A single Role Group Training Needs Report will be produced for each role group and will cover the individual duties and teams associated with that role group. The contents of the report are a tailored version of the Training Needs Report described in JSP 822 (V2.0 Mar 16). The customer has stated explicitly the information that must be included as a minimum in each report so in addition to the details required by the JSP, the report includes a Draft FTS brought forward from Element 2 (Design).

## Inputs and Dependencies

Successor TNA Training Needs Report Template

General Template Teamcenter Ref tbd

ITAR Template Teamcenter Ref tbd

NNPPI Template Teamcenter Ref tbd

PSA Template Teamcenter Ref tbd

Basic Manning Requirement (BMR)

Job Descriptions

Role Group Summary

Role Group Scoping Report

Role Group Scoping Report Duty Annex

Duty Analysis Report for each duty

Duty TGA and TO Report for each duty

Duty Training Options Analysis Report for each duty

Team/Collective Training Analysis Report for each team

Overlay Analysis and Draft CTO Report for each team

Environmental Analysis Report for each team

BAE Systems Operability SMEs

SMEs from all IPs

PI-Eng-199 Technical Document Review Process (Successor)

## Outputs

|  |  |
| --- | --- |
|  | **Executive Summary**  The Executive Summary is a précis of the report for readers who need to know what it is about and its key outcomes but who do not need the detail. It should include the key information, findings and recommendations from the report. It is not the report’s introduction and it should not introduce any new information that is not contained elsewhere in the report. |
|  | **Table of Contents**  The Table of Contents should list the contents of the report (automatically based on Heading styles). Include a Table of Tables and Table of Figures as necessary based on the *Insert Caption* feature. |
|  | **References**  List all documents referenced from the report in the order they appear in the text. |
|  | **Definitions, Acronyms and Abbreviations**  Define key terms which may not be readily understood by the report’s target readership. Define all acronyms and abbreviations used in the report in alphabetical order. |
| **1** | **Introduction**  Provide an introduction to the report which, without restating the SoR or JSP 822, includes the purpose of the report, the scope of the report, the method used for the analysis and a summary of the outcomes including any issues raised. Reference back to all previous reports for the role group. Highlight any major changes which have occurred since the previous reports which may impact the training solution going forward. |
| **2** | **Options Evaluation**  *“Evaluation of suitable training options which fully or partially meet the training requirement for both individual and collective Duties. [FSM liaison to validate Options]”*. Define one or more candidate training solutions, based on the solutions presented in the individual Duty TOA and Team EA Reports, combined where appropriate at the Job or Role Group level. The MOTE for the elements of each combination may be aggregated or a new MOTE analysis for the aggregate solution may need to be conducted. |
| **3** | **Cost Benefit Analysis**  “*Cost benefit analysis of the options which span multiple Duties within a Role Group*”. A Cost Benefit Analysis of each candidate solution should be conducted in accordance with the principles provided in the HM Treasury ‘Green Book’. The costs used for the analysis should be the best costs available (using the same basis of costing to aid comparison), indicating the relative cost of one solution against another. Whole life costs should be used which include acquisition, through life and disposal costs. They will not be accurate and should not be included in the report as absolute figures without Commercial approval. An example calculation of cost benefit is shown below.  Cost benefit should not be taken as the absolute decider for the recommended solution. Other factors should be taken into account including the MOTE for each solution, ability to address any residual gap, MoD policy and regulatory requirements. |
| **4** | **Recommended Training Solution(s)**  *“The recommended solution(s) that meet the training need in the most effective and efficient way after consideration of constraints.”* Identify and describe the training solution(s) recommended from the candidate solutions considered. Provide justification for its selection including training effectiveness, cost benefit, safety, constraints, opportunities, assumptions and risks showing why this solution was selected over the other candidate solutions. Consideration should also be given to first of class training and if this needs to be different to steady state training a solution should be proposed. |
| **5** | **TNA Assumptions**  *“Updated assumptions that are made to allow ongoing analysis to progress. To include any origin or scrutiny of the assumptions (audit trail).”* Review and update the assumptions from all the previous reports for this role group to provide a final definitive set of assumptions upon which the TNA is predicated. Update the TNA Assumptions Register. |
| **6** | **TNA Risks**  “*Updated Risks associated with the provision of the training solution for this Duty: Impact, Likelihood & Mitigation*”. Review and update the risks from all the previous reports for this role group to provide a final definitive set of risks associated with the provision of the training solution. Update the TNA Risks Register. |
| **7** | **Voids**  Capture all voids from previous reports for the role group and list all those that still cannot be resolved at this stage, the reason why and the likely resolution including a resolution date. An assessment will need to be made as to the impact of each void on the ability to continue to Element 2 Design and appropriate risks raised if necessary. All voids should be recorded in the TNA Voids Register. |
| **8** | **Updated Draft Formal Training Statement**  *“Updated FTS with the proposed training solution(s) and best estimate of training conditions and standards where known. The accepted version of the Draft FTS shall be in an format which can be edited”.* Capture and update the draft FTS from the Duty TOA reports for the role group, combining them at the job or role group level as necessary to reflect the recommended training solution(s). The balance between TPS, WTS and RTGS should be consistent with the recommended training solution, and in particular, the TPS should be in line with the capabilities of the recommended training methods and media. |
| **8.1** | **Training Performance Statement**   * **Role Group/Job/Duty Title** – As appropriate depending on the level at which the FTS have been combined * **Role Group/Job/Duty Number** – As appropriate depending on the level at which the FTS have been combined * **TRA(s)** – Branch and/or trade sponsor * **Issue Status** – the revision number of the report * **TO Number** – from the Draft FTS in the TOA report * **Training Objective (Performance)** – from the Draft FTS in the TOA report * **Conditions** – conditions under which the TO is to be performed in the school reflecting the recommended training solution * **Standards** – the minimum standard of performance of the TO to be achieved in the school reflecting the capability of the recommended training solution * **Requirement** – indicate whether a core, legal and/or accreditation requirement * **Notes** – add any additional information that may support training design |
| **8.2** | **Workplace Training Statement**   * **Role Group/Job/Duty Title** – As appropriate depending on the level at which the FTS have been combined * **Role Group/Job/Duty Number** – As appropriate depending on the level at which the FTS have been combined * **TRA(s)** – Branch and/or trade sponsor * **Issue Status** – the revision number of the report * **TO Number** – from the Draft FTS in the TOA report * **Training Objective (Performance)** – from the Draft FTS in the TOA report * **Conditions** – conditions under which the TO is to be performed in the workplace reflecting the recommended training solution * **Standards** – the minimum standard of performance of the TO to be achieved in the workplace reflecting the recommended training solution * **Requirement** – indicate whether a core, legal and/or accreditation requirement * **Notes** – add any additional information that may support training design |
| **8.3** | **Residual Training Gap Statement**   * **Role Group/Job/Duty Title** – As appropriate depending on the level at which the FTS have been combined * **Role Group/Job/Duty Number** – As appropriate depending on the level at which the FTS have been combined * **TRA(s)** – Branch and/or trade sponsor * **Issue Status** – the revision number of the report * **TO Number** – from the Draft FTS in the TOA report * **Training Objective (Performance)** – from the Draft FTS in the TOA report * **Conditions** – from the Draft FTS in the TOA report * **Standards** – from the Draft FTS in the TOA report * **Reason(s)** – identify any performance, conditions or standards which cannot be achieved during school or workplace training by the recommended training solution and why * **Consequences** – identify any consequences of the gap on operational performance and how the gap can be addressed |
| **9** | **Course List**  *“Course list updated in preparation for insertion to the SOTR and TrAD Update”*. Provide a list of courses for the recommended training solution in the table below which is formatted to be compatible with the SOTR i.a.w JSP 822 (V2.0 Mar 2016) Part 2 Chapter 1 Section 1.2 Annex G. The list of courses may include extant courses, extant courses which require modifying to meet Successor needs, and new courses. The number of iterations during the training year at steady state should be calculated from the required steady state throughput. The number of delegates on each course should be stated in the assumptions. Complete the table as follows:   * **Code/Number** – Enter the course code/number if known in accordance with JPA competences/TAFMIS/DLMC rules. If the code/number is not known leave the cell blank. * **Title** – Enter the title for the course. * **Type** – Enter the type of training e.g. phase 2 training, phase 3 training, tier 1 collective training, continuation training. * **Length** – Total length of the course in whole training days, including time for administrative procedures at joining and leaving and any other time spent at other sites or on exercise/general military training within the timeframe. This excludes any stand-downs or leave periods. * **Minimum Iterations** – Minimum number of required iterations of the course in the training year to meet the required throughput. * **Total Output SOTR in TY** – The number of trainees required to successfully complete training in the training year. * **Total Training Days for TY** – Derived from ‘Length’ multiplied by ‘Total Output SOTR in TY’. |
| **10** | **Role Group Audit Trail**  “*Audit trail, including Job to Duty, Task and PBS number.*” Provide a cross-reference of all jobs, duties, tasks and PBS numbers covered by the role group using the table. If extensive, this may be added as an annex. |
| **11** | **Internal Review and IP Concurrence**  *“Internal review process, including the concurrence procedure with any IPs involved with that line of analysis”.* Carry out internal review of the report in accordance with PI-Eng-199. Before submission of the report for Customer review, record the conduct and outcome of the internal review here, referring out to the applicable DRFs, F-Eng-150 and F-Eng-151. |
| **12** | **Report Audit Trail**  Provide an audit trial of all key meetings, discussions, decisions, interactions with SMEs and sources of information related to the report. If extensive, this may be added as an annex. The audit trail should include the following:   * **Id** – Number audit trail entries sequentially for easy reference. * **Date** – Date of the interaction. * **Interaction Type** – Record the type of interaction e.g. meeting, telephone conversation, e-mail, supply of data, validation, review, etc. * **People Involved** – Identify who was involved including their name, rank (if military), position and organisation. * **Topic/Discussion/Decisions/Information Provided** – Provide a précis of the interaction in terms of the topic and what was covered, decisions made, information provided, etc. Reference any minutes or other relevant documents or records. |
| **13** | **STEG Endorsement**  *“Record of STEG endorsement or caveats”.* The process for document review and approval is i.a.w. PI-Eng-199. Any other process for endorsement or acceptance conducted by the Customer can be supplemental to or concurrent with PI-Eng-199 but must not replace it. The process for document review and approval is i.a.w. PI-Eng-199. Following STEG endorsement, record STEG endorsement here, referring to the applicable STEG meeting minutes, and then submit the report for acceptance through PI-Eng-199. |

## TNA Process and Interfaces

The Role Group Training Needs Report captures all the outcomes of all the reports for the role group. It provides the training solution definition for agreement by the Customer and feeds into Stage 1 of Element 2 Design.

1. Items 3.1 and 3.2 may be combined into a single table with item 2 for clarity and simplification (e.g. role; duty, analysed; not analysed). [↑](#footnote-ref-1)