



# MIL-HDBK-29612 Series

## How to Meet TSRA Requirements 8 of 8

Training Situation  
Analysis

Training System  
Alternatives Report

Training Device  
Requirements Document

Training System  
Functional Description

Training Systems Requirement Analysis (TSRA), commonly known as Front End Analysis, is initiated by a user/sponsor once a training need is identified. The need may be in response to Terms of Reference, Trouble Observation Report (TOR), Operational Requirement (OR), new/modified equipment requirement, new mission or tactics requirement, doctrine change, engineer change proposal, job or student performance deficiency, advances in the instructional technology, or other impetus. TSRA describes the basic purpose of the training platform, equipment, system & subsystems; type of training provided (i.e., operator, maintenance, team, etc.), location & performance requirements (i.e., level of training). In addition to identifying learning objectives, TSRA provides the rationale for using training devices including viability, costs, availability & maintainability. TSRA may also be used to generate other training analysis documents including Training System Alternatives Report (TSAR), Training Device Requirements Document (TDRD), Navy Training System Plan (NTSP) & Training System Functional Description (TSFD).

The scope of the TSRA is highly dependent on the following points of initiation:

- HARDMAN Manpower, Personnel & Training Resources Requirements Document (MPTRRD)
- Operational Requirement (OR)
- Navy Training System Plan (NTSP)
- Other documentation

There are 4 major analysis activities within a TSRA, each concludes with the publication of a document or report.

### Step 1

Training Situation  
Analysis (TSA)

#### TSRA Requires

The primary objective of TSA is to identify training requirements & assess alternate solutions for meeting needs. TSA takes a broad look at all aspects, of an existing or emerging training situation or program, to identify & verify training need, as follows:

- Step 1: Perform Mission Task Analysis (MTA), to identify all Tasks needed to operate & maintain a system, as follows:
  - State assumptions
  - Identify Mission objectives, scenarios & profiles

#### ADVISOR Added Value

- ✓ Facilitates the identification of Mission Tasks by allowing users to decompose Missions into Segments, Sub Segments, Functions & Tasks
- ✓ Minimizes duplication by storing all Mission Tasks in a central repository to facilitate the allocation of any Task to multiple Missions
- ✓ Prompts users for the Standards & Conditions needed to generate Tasks in line with MIL-HDBK 29612-2A



- Identify Mission Tasks & attributes, including performance criteria, environmental conditions, threats, etc.
  - Generate Master Task List (MTL)
  - Identify Tasks that require training
  - Generate Master Training Task List (MTTL) including task number, performance measures, related job aids, instructional setting, etc.
  - Step 2: Derive Job Performance Requirements (JPRs) by assigning Mission Tasks to all jobs that operate or maintain the system. The standard of acceptable performance should also be stated along with the conditions under which Tasks are performed
  - Step 3: Perform Training Requirements Analysis (TRA) to derive the training requirements for each Job, as follows:
    - Derive Knowledge, Skills & Attitudes (KSAs) required by each Mission Task. For each KSA:
      - Classify the learning level - for example, Fact, Rule or Procedure
      - Identify Entry Level - i.e., Basic, Skilled, etc.
      - Identify Exit Level
    - Identify training gaps by comparing KSAs' Entry Level to Exit Level
    - Derive Learning Objectives needed to address training gaps
- ✓ Maximizes training impact & optimizes resources by automatically analysing Mission Tasks based on DIF & Criterion Models' attributes to assess training priority & identify Tasks that do not require training
  - ✓ Quickly assigns Mission Tasks to various Jobs & allow user to modify the standards & conditions accordingly
  - ✓ Quickly identifies the training requirements for each Job by comparing the KSA Levels needed for new/changed operational/business requirement to trainees' Current/Entry Levels
  - ✓ Generate Master Task List (MTL), Master Training Task List (MTTL), Job Task List & many more reports in a single click
  - ✓ Generates audit trail reports to support recommendations as well as training requirements & training gap reports with the click of a button
  - ✓ Speeds data collection. Key data elements such as Missions, Jobs, Task, & so forth can be imported from various documents in a single click

**Output:** *Training Situation Analysis (TSA) Document.* Recommends strategy to meet all identified needs with rough order of magnitude cost estimates, milestones & schedule. If the recommended strategy includes a training system, then concept exploration activities are initiated in order to define the desired training system.

## Step 2

Training System Alternatives Report (TSAR)

### TSRA Requires

- Once the need for a training system has been identified, alternate approaches to the design of the training system are assessed to identify the best approach, as follows:
- Step 1: Describe Training Requirements, i.e. Learning Objectives. Identify terminal & enabling learning objectives, required behaviour, conditions, & standards of acceptable performance

### ADVISOR Added Value

- ✓ Minimizes the analysis time while preserving integrity by leveraging taxonomy to automatically group Learning Objectives with similar characteristics
- ✓ Minimizes costly errors by assessing the viability of 40+ delivery options through a rigorous decision matrix that maps instructional requirements to the capabilities of each media



- Step 2: List constraints that apply to the training system
- Step 3: Perform Objectives & Media Analysis (OMA) to evaluate alternative solutions, as follows:
  - Perform Training Technology Assessment by evaluating Engineering Risk, Reliability & Maintainability
  - Perform Training Effectiveness Analysis by evaluating: Training Effectiveness & User Acceptance
  - Evaluate Cost & Resources requirements, specifically:
    - Cost vs. benefit
    - Manpower, Personnel & Training (MPT) requirements
    - Schedule implications
    - Return on investment when appropriate
- Step 4: Identify & describe alternative solutions to meet training requirements
- Step 5: Perform Training System Basis Analysis (TSBA) by analyzing existing training systems, assessing current capabilities, identifying deficiencies, & recommending a solution.
- Step 6: Recommend solution, i.e. media & training resources
- Step 7: Develop course syllabus & road map for each system mission

**Output:** *The TSAR Document*, includes complete description of alternatives & a recommended solution with supporting rationale. TSAR is submitted to sponsor for review & selection of the solution.

- ✓ Quickly forecasts & compares budget & resource requirements of viable delivery options while preserving quality control by storing common measures such as hourly rates of developers, instructors & support staff; per diem & travel costs; equipment start-up & operation cost, etc., in Templates
- ✓ Conduct multiple “what-if” scenarios in seconds. Assess the impact of an increase in throughput, changes to instructor/trainees ratios, use of alternate blends of delivery options, build versus buy, use of internal versus external personnel & so forth on budget, personnel & resources
- ✓ Assesses the risk of each delivery option based on organization experience & readiness
- ✓ Computes & compares the cost effectiveness ratio of viable delivery options to identify option that best meets training needs at lowest cost
- ✓ Generates training gap, audit trail & comprehensive business case report to support recommendations with the click of a button

## Step 3

Training Device Requirements Document (TDRD)

### TSRA Requires

Once a training solution is selected & approved for implementation, a brief summary is prepared for funding purposes. TDRD summarizes the proposed training system, training requirement, training situation in which the system will be employed & resources required to develop, utilize & maintain. Detailed specifications needed for acquiring the training systems are also provided. Moreover, TDRD justifies the sponsor's decision, can be leveraged to gain users'

### ADVISOR Added Value

- ✓ Quickly & accurately forecasts budget, personnel, facilities & equipment needed to develop, deliver, support & maintain the training system using various blends of delivery options based on the number of trainees, instructor/trainees' ratios & course length
- ✓ Provides top down & bottom up audit trail to ensure that all identified Learning Objectives have been addressed; & all LOs within the course



acceptance & serves as an input to Navy Training System Plan.

are aligned to specific Tasks, Jobs & Missions

**Output:** *TDRD Document*

## Step 4

Training System Functional Description (TSFD)

### TSRA Requires

TSFD defines the physical & functional baseline requirements of a training device as one component of a total instructional system designed to achieve specific Learning Objectives. Functional description is determined as follows:

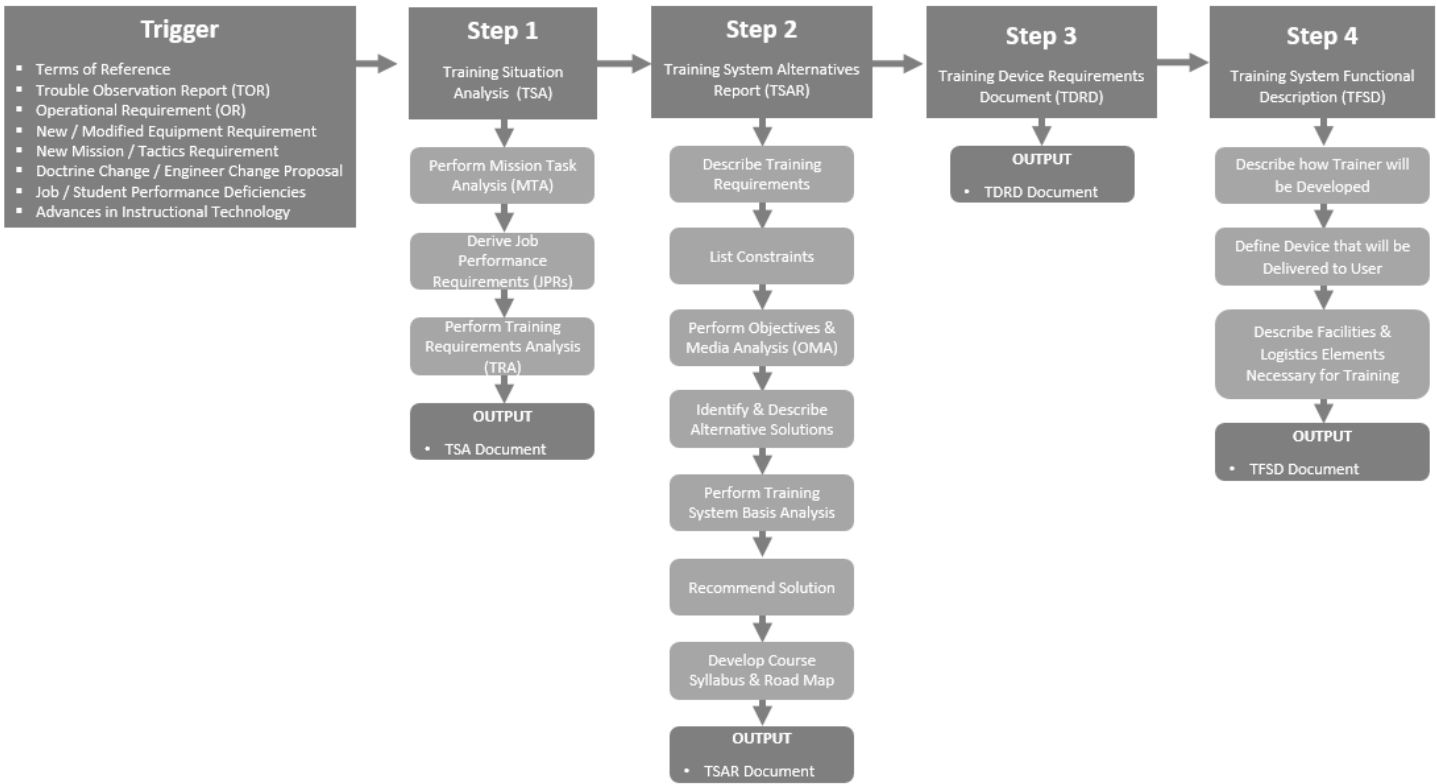
- Step 1: Describe how the trainer will be developed, consistently with any known constraints on cost, production, & support
- Step 2: Define the device that will be delivered to the user
- Step 3: Describe the facilities & logistics elements necessary to support the training

**Output:** *TFSD Document*, serves as an input for Engineering Specification.

In its final form, an approved TSFD is a signed agreement or contract between NAWCSTD, the Fleet Project Team (FPT) (or users if no FPT was established) & the sponsor. TSFD specifies the physical & functional operating characteristics that will be included in the training device when delivered to the user. It is a lifecycle document & is updated to match changes to the training system.

### ADVISOR Added Value

- ✓ Generates project plan for each of the recommended solutions. Assists project managers in locating the required personnel & resources; validating availability; producing project plans & Gantt charts; as well as tracking progress in real time
- ✓ Generates comprehensive business case report to support recommendations with a single click



**Contact us today to find out how we can assist you in meeting DSAT requirements and drive training efficiency.**