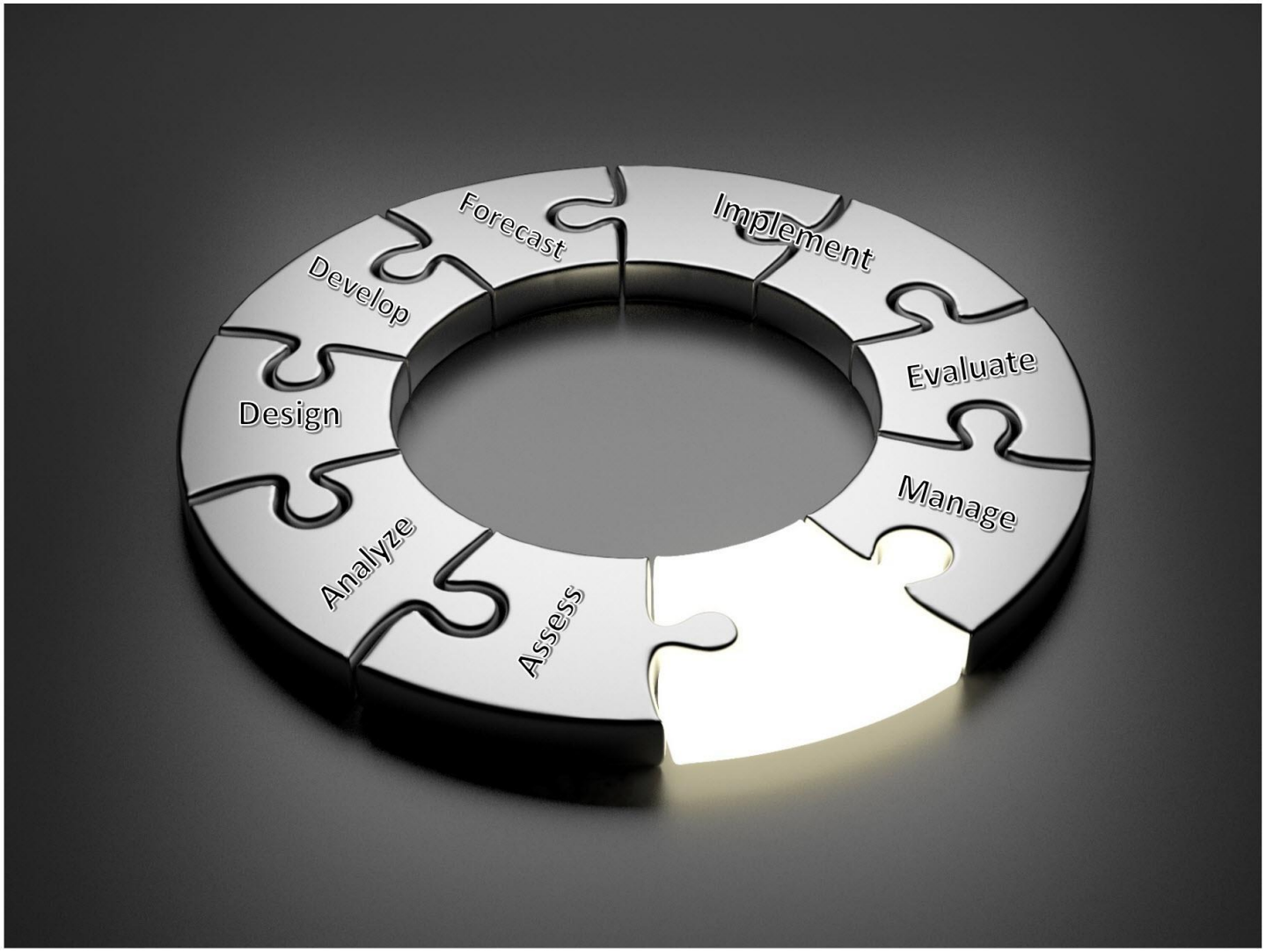
ADVISOR ENTERPRISE

Plan better… Achieve more!

Task Based Fidelity Analysis
Step by Step Guide



ADVISOR Enterprise User's Guide

Latest Update: September 16, 2020

Printed in Canada

Foreword

ADVISOR Enterprise is a Training Management System that drives training efficiency by (a) aligning current and future training activities to operational requirements to identify gaps, duplications and training with minimal value; (b) forecasting and comparing the costs of viable delivery options; (c) uncovering cost drivers; and (d) improving resource allocation. ADVISOR is built around the ADDIE model with the added flexibility of starting the analysis at any level. ADVISOR is made up of the following modules that can be used separately or in any combination.

Needs Assessment

Assess: To find out "*the cause of the problem and potential solutions*". Provides a step by step approach for understanding a problem before selecting the solution – in other words, before assuming that training is needed. Needs Assessment provides an audit trail and serves as the foundation for decisions by zeroing in on the source of the problem, identifying solutions that can produce the desired level of productivity, and highlighting actions that will generate the greatest impact. [Scope and Needs Assessment].

Training Analysis

Analysis: To find out "*who needs to be trained, on what and why*". Provides a step by step approach for conducting Training Needs Analysis (TNA) or Training Systems Requirements Analysis (TSRA) to identify training needed by each job, position and employee to perform duties to the desired standard under the prescribed conditions. Four approaches may be used to conduct training analysis, namely Mission, System, Competency or Job. [Mission Analysis, Competency Analysis, System Analysis, Job Task Analysis, Knowledge/Skill Gap Analysis and Training Requirements Analysis].

Training Design

Design: To find out "*what is the most effective and economical way to deliver training*". Provides a step by step approach for conducting Training Media Analysis (TMA) or Option Analysis to identify the most cost effective strategy for the delivery of training and generates Training Plans. The analysis takes into account limitations, instructional design requirements, upfront and recurring costs over training program life as well as risks associated with the introduction of new technology. [Media Analysis, Cost Analysis and Training Plans].

Fidelity Analysis

Develop: To find out the "*fidelity requirements of training devices*". Provides a step by step approach for assessing the functional requirements of trainers and simulators based on training needs and performance objectives. It identifies visual, tactile, olfactory, affective and auditory sensory cues needed to practice tasks, within realistic environments, under preset conditions to attain the desired level of competency. In addition, ADVISOR takes into account elements within the virtual world and how users interact with each.

Resource Management

Implementation: To find out "*how much money and resources are needed*". Compiles and analyzes missions/goals, competencies, systems, jobs, tasks, training requirements, courses, activities, costs, personnel and resources to generate concise, up to date and actionable reports. The reports provide insight on planned training activities for any time period; training requirements for each job/employee; budget, personnel and resource requirements, training impact as well as how to drive training effectiveness and efficiency by leveraging technology, improving resource allocation and identifying gaps, duplications and unwarranted training. [Forecast and Optimize Training Budgets, Personnel and Resources].

Project Management

Implementation: To find out "*how training should be implemented*". Provides a step by step approach for planning a project and tracking progress in real time. This includes the setup of phases and tasks, dependencies and constraints, timelines as well as the assignment of personnel and resources needed to complete. Moreover, ADVISOR tracks progress by comparing hours worked and money spent on each task to project plan, to anticipate delays, facilitate the implementation of corrective measures, and keep projects on-time and within budget. [Develop Project Plans and Track Progress].

Performance Analysis

Evaluation: To find out "*how training impacts performance and organizational goals*". Provides a step by step approach for improving performance by zeroing in on the source of the problem and identifying solutions that can produce the desired level of productivity. Moreover, ADVISOR highlights actions that will generate the greatest impact by assessing the feasibility of implementing plausible solutions as well as forecasting the costs, benefits and Return on Investment (ROI) of each intervention. [Performance Gap Analysis, Root Cause Analysis and Cost Benefit Analysis].

Training Life Cycle Management

Manage: To "*continually uncover venues to drive training effectiveness & efficiency*". Maintains training effectiveness and efficiency over time by continually assessing the impact of changes to missions, jobs, tasks, systems, policies, technologies, throughput, and so forth on training content and activities; as well as budget, personnel and resource requirements. This is attained through a digital-twin model that continually aligns training activities to operational requirements to identify gaps, duplications and training with minimal value. Results (personnel/resource requirements for any time period; cost drivers; bottlenecks and deficiencies) are quickly and concisely communicated through dashboards. Actions that drive training effectiveness and efficiency are also highlighted.

TABLE OF CONTENTS

Chapter 1: Setup Projects and Training Devices

1.1 Introduction

In general, Trainers and Simulators offer several advantages including the simulation of dangerous, life threatening situations; safe training environment; learning from doing; opportunity to make mistakes, as well as a more efficient learning environment. To achieve these benefits, Trainers and Simulators should allow students to practice all relevant tasks, within realistic environments, under preset conditions, with sufficient level of fidelity to attain the desired level of competency. In other words, the requirements for Trainers and Simulators should be driven by learning needs and performance objectives.

Whether you are investigating the viability of off-the-shelf trainers/simulators or procuring a custom-built trainer/simulator, the types and fidelity of visual, tactile, olfactory, affective and auditory sensory cues; as well as the synthetic environment requirements and elements should be clearly articulated.

Two approaches can be used to Perform Fidelity Analysis within ADVISOR: Task Based Fidelity Analysis or Activity Based Fidelity Analysis.

Task Based Fidelity Analysis relies on the Tasks that individuals perform on-the-job to identify the functional requirements for the trainers/simulators as well as the synthetic environment requirements, synthetic environment elements and activities, and sensory cues. This approach is best suited in the early stages of the analysis when training requirements/activities have not been defined.

Activity Based Fidelity Analysis relies on the Activities (i.e., Learning Objectives) that individuals are expected to master to identify the functional requirements for the trainers/simulators, as well as the synthetic environment requirements, synthetic environment elements and activities, and sensory cues. This approach can only be used once training requirements/activities have been defined and trainers/ simulators have been identified as a viable delivery option (refer to Media Analysis Step by Step Guide).

The current guide presents a step by step process for conducting Task Based Fidelity Analysis to identify trainers/simulators requirements. For details on all fidelity analysis covered by ADVISOR Enterprise, please refer to the Fidelity Analysis User Guide. Separate Step-by-Step Guide is available for conducting Activity Based Fidelity Analysis, and therefore will not be covered in this Step-by-Step Guide. For info on basic functionality and how to configure ADVISOR in line with needs, please refer to the Configure ADVISOR Step by Step or User Guide. Remember that context sensitive help for each screen is also available by clicking on [**Help**].

1.2 Setup New Projects

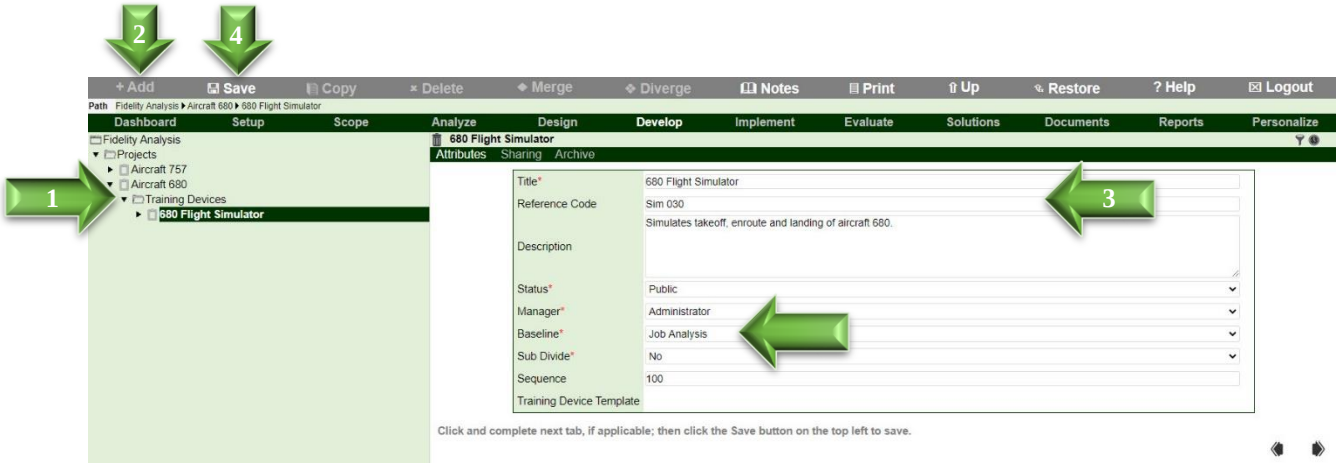
Step 1: To create a new Project, click on the **Projects** folder.
Step 2: Click [**Add**].
Step 3: Input the Project Title, Contact Name, Client and other info. Data required by ADVISOR is identified by a red asterisk (*). Of course, the more data you provide, the better the results.
Step 4: Click [**Save**] to create the Project.

Notes:

- To divide the Project into Segments, select "Yes" under the Sub Divide field.
- Once the project analysis is completed or a milestone is reached, you can Archive the Project. This will create a duplicate copy of the analysis that can only be viewed in read only mode to preserve integrity. Changes to the current analysis will not impact archived data. To archive an analysis, click on the (**project**) node, then click on the [**Archive**] tab, input the Version Title and click [**Save**]. The date on which the archive was created is automatically saved.
- You may view an archived version in read only mode, delete as well as recover (i.e., overwrite existing version) by clicking on the corresponding tabs. Of course, if a Project is deleted, all archived versions of the Project will be automatically deleted as well.
- You may also share the analysis with colleagues (i.e., Users assigned to same Client) by clicking on [**Sharing**] tab, placing checkmarks next to their names and clicking [**Save**].

1.3 Setup Training Devices and Select Approach

Step 1: To assess the requirements for a Training Device, click on the **Training Devices** folder.
Step 2: Click [**Add**].
Step 3: Input the Training Device Title, Description, Manager, **Baseline** and other info. Data required by ADVISOR is identified by a red asterisk (*). Of course, the more data you provide, the better the results.
Step 4: Click [**Save**] to create the Training Device.



Implication: Baseline specifies the approach for conducting Fidelity Analysis. Job Analysis indicates a Task Based approach and Course Analysis indicates an Activity Based approach. Once the baseline is selected the ADVISOR interface will be streamlined accordingly:

- Job Analysis should be selected if training requirements have not been defined and media analysis has not been conducted. In other words, the Performance Objectives (Tasks that require training) will be used to identify Sensory Cues requirements.
- Course Analysis should be selected if media analysis has been conducted. In other words, Learning Objectives (Activities) will be used to identify Sensory Cues requirements.

Notes:

- To divide the Training Device into Components, select "Yes" under the Sub Divide field.
- To minimize the effort required to conduct Fidelity Analysis, if training requirements/activities have been defined and trainers/simulators have been identified as a viable delivery option (refer to Media Analysis Step by Step Guide), then Training Devices along with Courses and relevant Learning Objectives (Activities) can be imported by clicking on the [**Search**] tab under the **Training Device** folder, selecting Course, for example, under the **Search by** field, as well as Currently Used or User Recommended under the **Delivery Option** field and clicking [**Save**] to display the list of available courses. Place checkmarks next to desired Courses and click [**Save**] to automatically identify and copy Training Devices from the Currently Used or User Recommended delivery options along with relevant Learning Objectives (Activities).

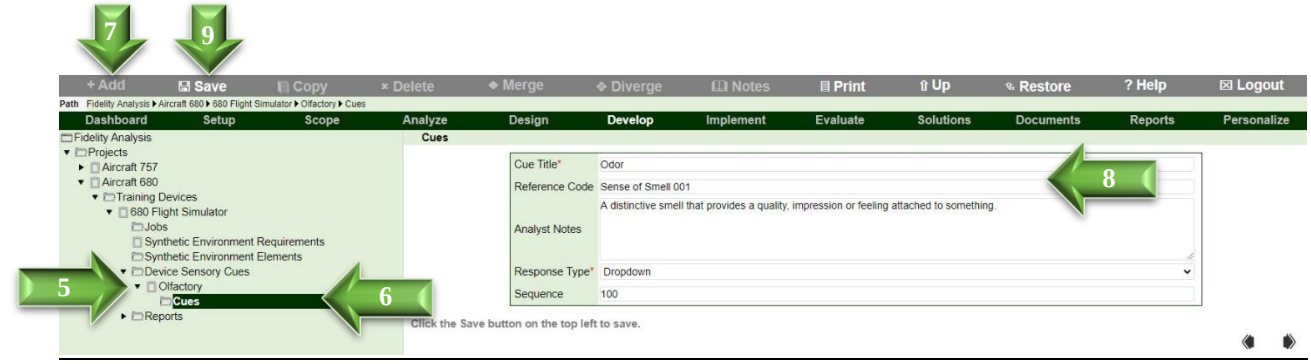
Chapter 2: Define Sensory Cues Repository

To identify the Sensory Cues Requirements for each Performance Objective (Task) and in-turn the trainer/ simulator, a repository of sensory cues to be considered should 1st be created under the **Device Sensory Cues** folder. To facilitate the selection process, the Cues can be organized under various Categories such as "Visual", "Tactile", "Olfactory", "Affective", "Auditory", etc. To create a sensory cue Category for the Training Device:

Step 1: Click on the **Device Sensory Cues** folder.
Step 2: Click [**Add**].
Step 3: Input the Category Title, Analyst Notes and other information.
Step 4: Click [**Save**] to create the Sensory Cue Category.

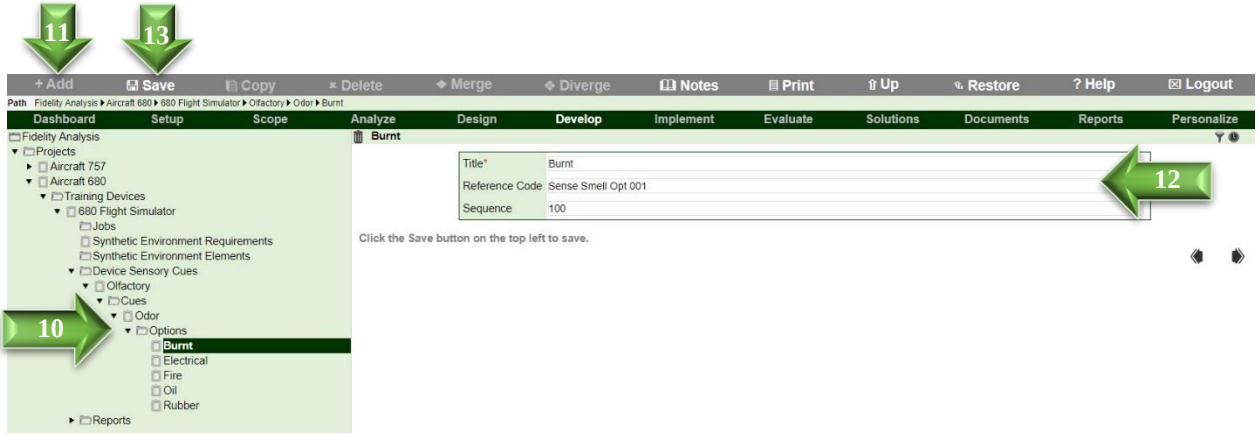
For each Category, "Visual", for example, various Cues can be created such as "Brightness", "Color", "Field of View", and so forth. To add a Cue under a category:

Step 5: Click ▶ next to the (**Category**) node (**Olfactory** for example) to expand.
Step 6: Click on the **Cues** folder.
Step 7: Click [**Add**].
Step 8: Input the Cue Title, Analyst Notes, Response Type and other information.
Step 9: Click [**Save**] to create the Cue.



Implications: Two options can be selected under Response Type: "Alphanumeric" or "Dropdown". Alphanumeric Response will allow users to input an alphanumeric value for the Cue; while the Dropdown Response will limit users' response to the predefined Options. "Low", "Medium", and "High", for example. If "Dropdown" is selected for Response Type, Dropdown Options for the Cue can be defined as follows:

Step 10: Click on the **Options** folder.
Step 11: Click [**Add**].
Step 12: Input the Option Title and Sequence.
Step 13: Click [**Save**] to create Option for the Cue.



Note:

- Once Cues have been defined under one Training Device, they can be easily copied under other Training Devices by clicking on the [**Search**] tab on the **Device Sensory Cues** folder.

Chapter 3: Define Training Device Sensory Cues Requirements

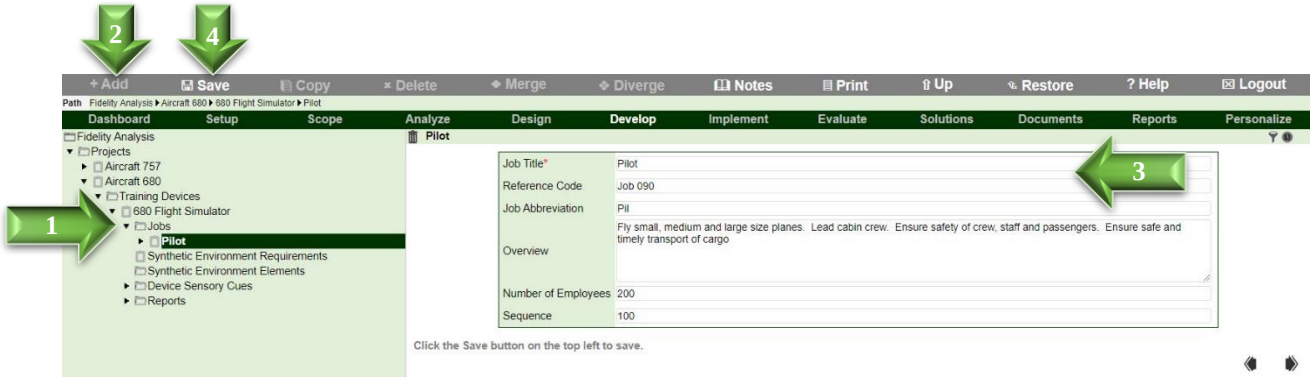
3.1 Overview

The Task Based approach is presented in this chapter – i.e., when Job Analysis is selected as Baseline under (**training device**).

3.2 Identify Jobs

Identifies the target audience for the Training Device. In other words, all Jobs (Occupations) that will be trained on this Device. To add a new Job:

Step 1: Click on the **Jobs** folder under the (**training device**) node.
Step 2: Click [**Add**].
Step 3: Input the Job/Role Title, a brief overview, the number of employees that work in this capacity and other require information.
Step 4: Click [**Save**] to create the Job.

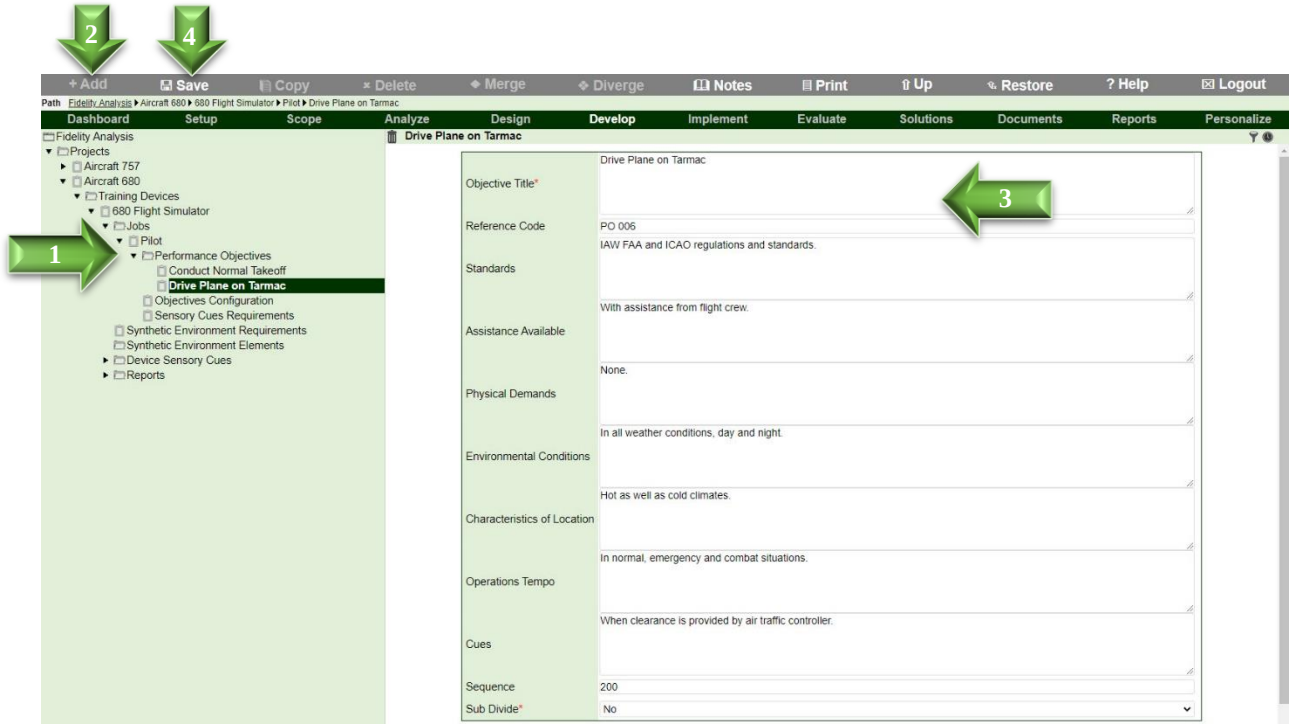


3.3 Define Performance Objectives

Create Performance Objectives

Tasks refer to activities that individuals are expected to perform on the job. Although individuals may require training on some Tasks in order to master them, simpler Tasks with minimal impact may not require any training. In general, Performance Objectives can be viewed as Tasks that require training. To determine the Fidelity Requirements of the Training Device all Performance Objectives that will be trained on this Device must be analyzed. To add a Performance Objective:

Step 1: Click on the **Performance Objectives** folder under the **(job)** node.
Step 2: Click [**Add**].
Step 3: Input the Objective Title, Standards, Conditions and other attributes.
Step 4: Click [**Save**] to create the Performance Objective.



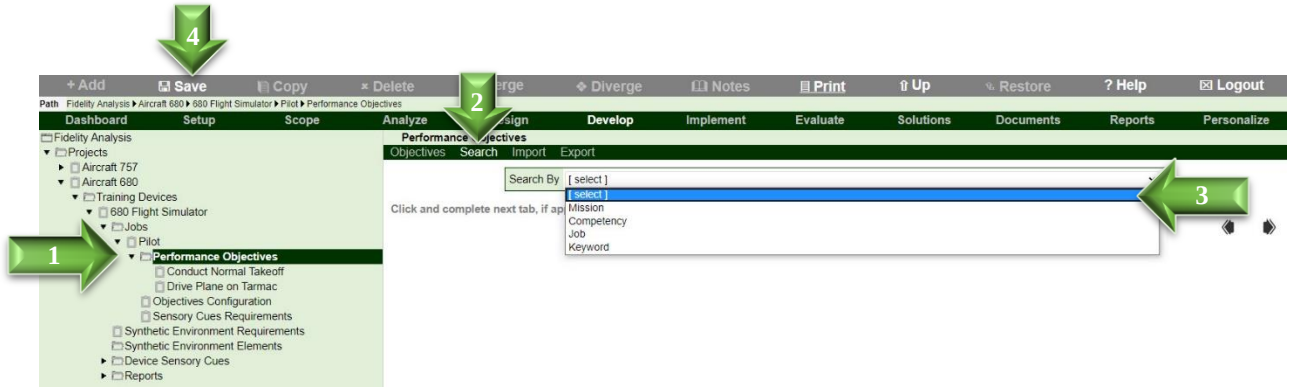
Note:

- Performance Objectives can be subdivided into Enabling Objectives, if required, by selecting "Yes" for the Sub Divide field.

Search for Performance Objectives

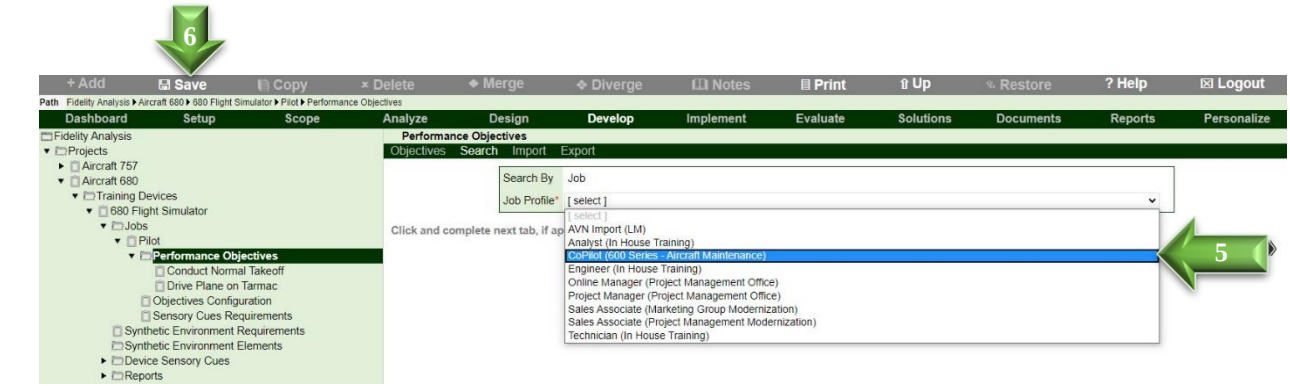
To minimize the effort required to identify relevant Performance and Enabling Objectives, a search function is provided to assist analysts in finding and copying existing Performance and Enabling Objectives. Multiple venues may be used to search for Performance Objectives: Missions, Competency, System, Job or Keyword. To search for Performance Objectives:

Step 1: Click on the **Performance Objectives** folder.
Step 2: Click on the [**Search**] tab.
Step 3: Select search criterion i.e., Mission, Competency/System, Job or Keyword.
Step 4: Click [**Save**].

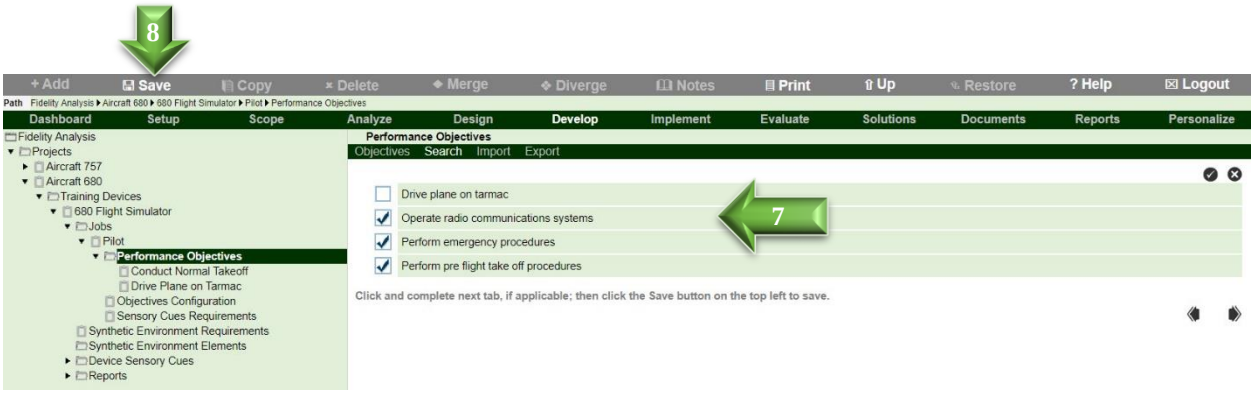


Step 5: Based on the selected Search By criterion relevant Missions, Competencies, Systems or Jobs are presented in a dropdown menu. Select the desired Mission, Competency, System or Job. In the example below, Job was selected in the Search by field.

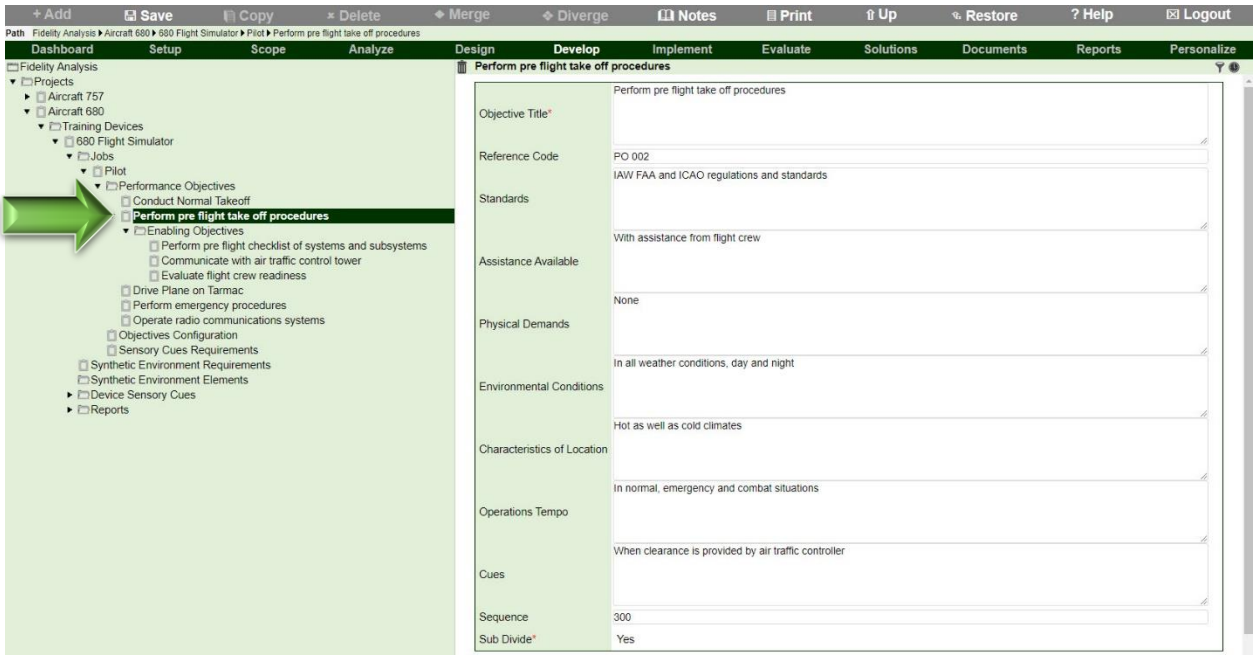
Step 6: Click [**Save**] to display the Performance Objectives for the selected option.



Step 7: To copy, place checkmarks next to the desired Performance Objectives.
Step 8: Click [**Save**].



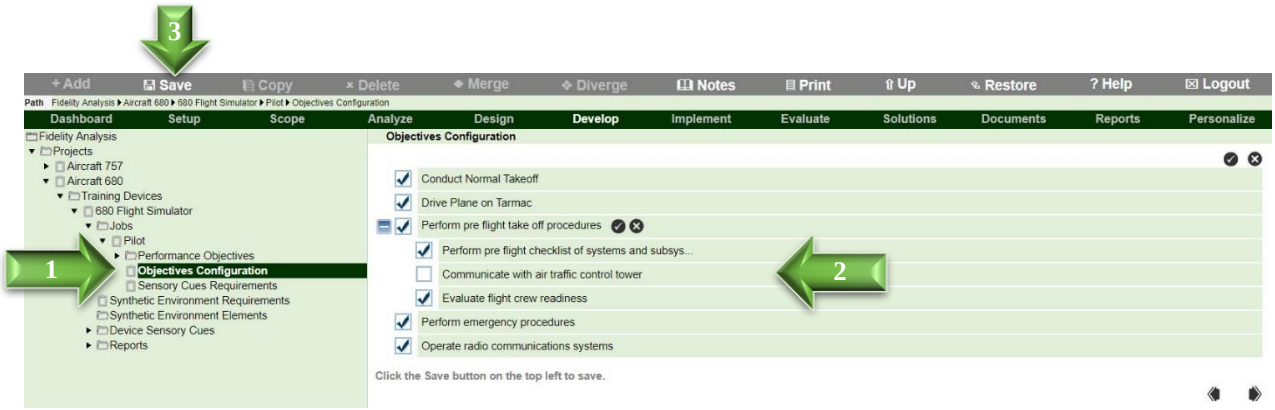
All Enabling Objectives, Steps and Sub Steps including attributes for selected Performance Objectives are copied.



3.4 Select Relevant Objectives

Although multiple Tasks may be performed by a Job/Occupation, only a few of those Tasks may be trained on this Device. To select relevant Performance and Enabling Objectives (by default all Objectives are selected):

Step 1: Click on the **Objectives Configuration** Node.
Step 2: Place checkmarks next to relevant Performance and Enabling Objectives, in other words, deselect Performance and Enabling Objectives that are not relevant.
Step 3: Click [**Save**].



Note:

- Only selected Performance and Enabling Objectives will be presented under the **Sensory Cues Requirements** node.

3.5 Identify Sensory Cues Requirements

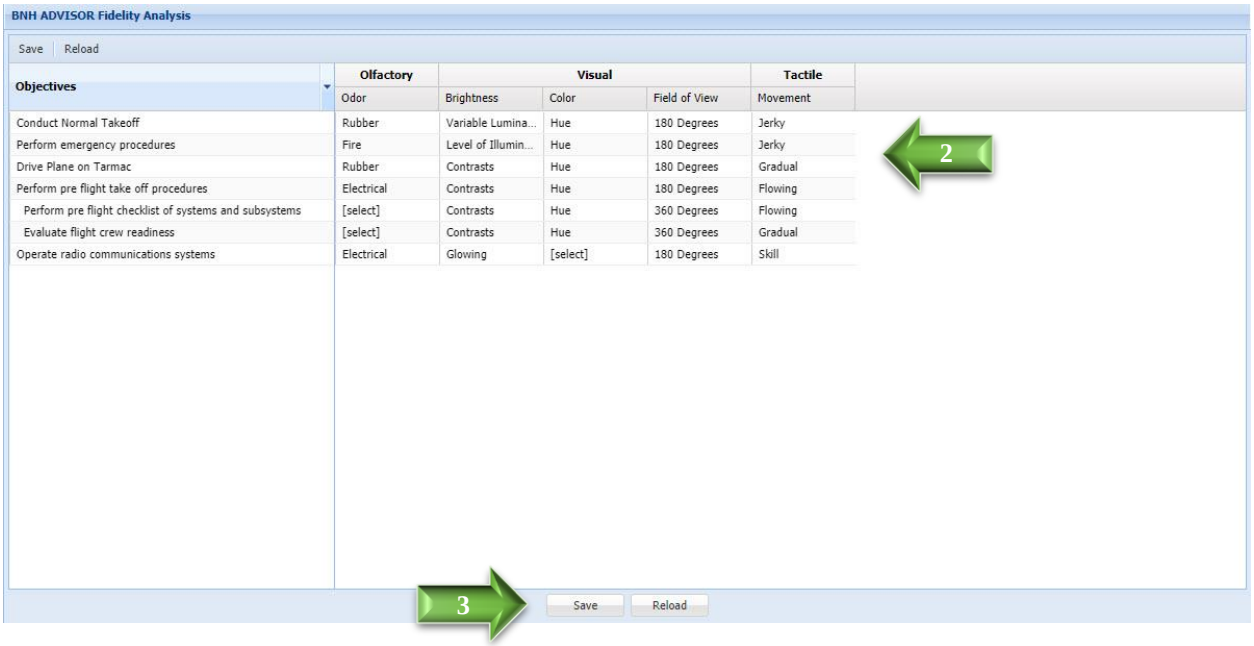
To simplify and speed Fidelity Analysis, only relevant/selected Performance and Enabling Objectives (Section 3.4) will be assessed. To identify the Sensory Cues Requirements for each Objective:

Step 1: Click on the **Sensory Cues Requirements** node.

A table with relevant Performance and Enabling Objectives in the 1st Column is presented. Sensory Cues (defined in Chapter 2) are presented on the top Row.

Step 2: For each Performance and Enabling Objective, select or input the appropriate response for each Cue.

Step 3: Once all Cues have been selected, click [**Save**].



Note:

- If you click the [**Reload**] button, the responses for each Cue will revert to the last saved value.

Chapter 4: Define Synthetic Environment

4.1 Overview

Training Devices typically operate within a synthetic (virtual) environment and trainees may be required to interact with virtual elements/objects within this synthetic/virtual environment. The process used to define both items is presented in this chapter

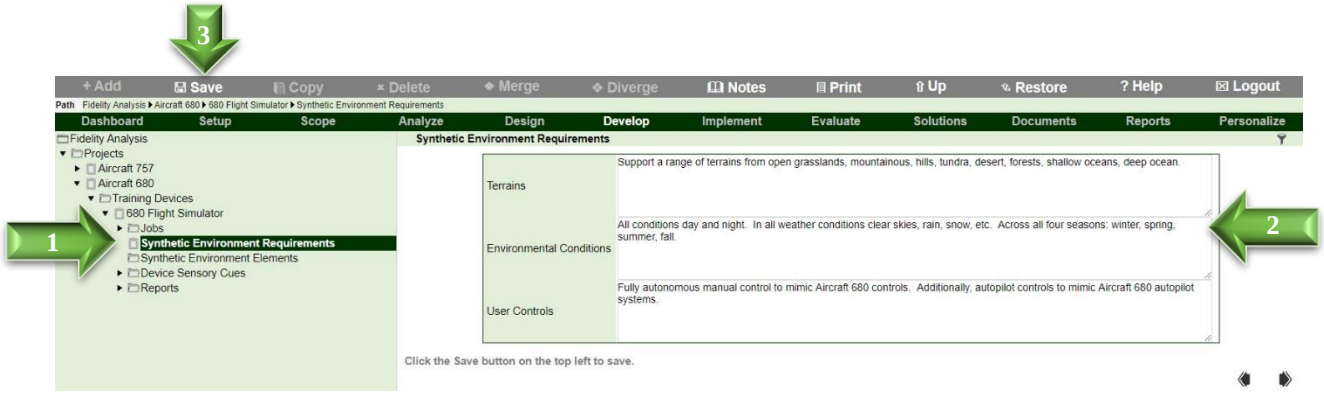
4.2 Define Synthetic Environment

To define the synthetic environment requirements:

Step 1: Click on the **Synthetic Environment Requirements** node, under the (**training device**) node, (**680 Flight Simulator**, for example).

Step 2: Define the required Terrains, Environmental Conditions and User Controls for Training Device. For example, Terrain may be defined as entire planet, specific locations, or specific characteristics such as flora, fauna and manmade. Environmental Conditions may include Day and Night, Seasonal Changes (Winter, Summer, Spring and Fall), and so forth.

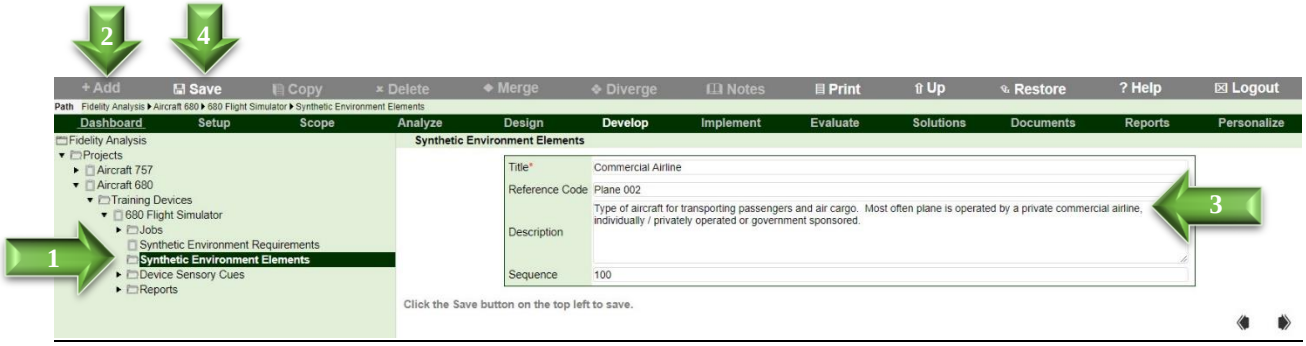
Step 3: Click [**Save**].



4.3 Define Elements and Activities

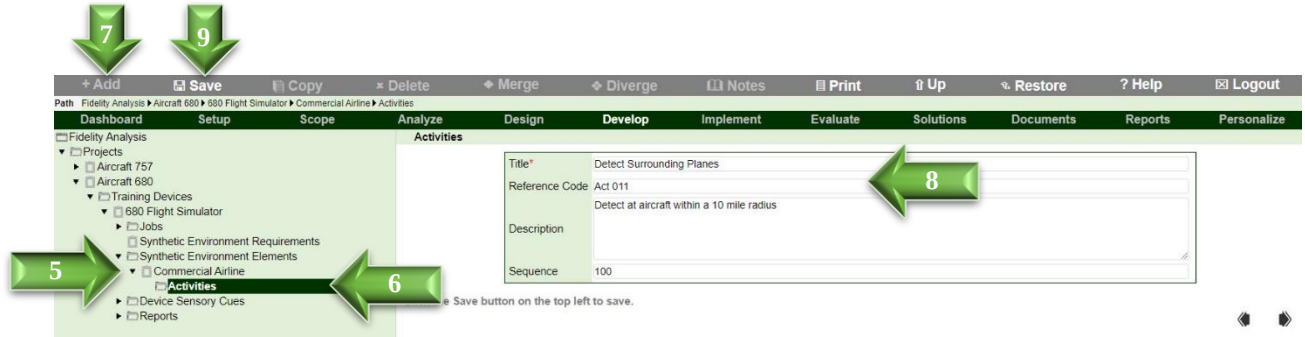
To define Elements/Objects within the Synthetic Environment including Activities – i.e., how users will interact with those elements:

Step 1: Click on the **Synthetic Environment Elements** folder.
Step 2: Click [**Add**].
Step 3: Input the Element Title, Description and other information. These may include, as an example, enemy, friendly or neutral vehicles, aircrafts, ships and UAVs.
Step 4: Click [**Save**] to create the Element/Object.



To define how users will interact with these Elements/Objects:

Step 5: Click ▶ next to the (**element title**) node, (**Commercial Airliner**, for example) to expand.
Step 6: Click on the **Activities** folder.
Step 7: Click [**Add**].
Step 8: Input the Activity Title, Description and other information. This may include, as an example, users should be able to detect, observe, recognize, identify, communicate or engage with the Element/ Object within a specific distance.
Step 9: Click [**Save**] to create the Activity.

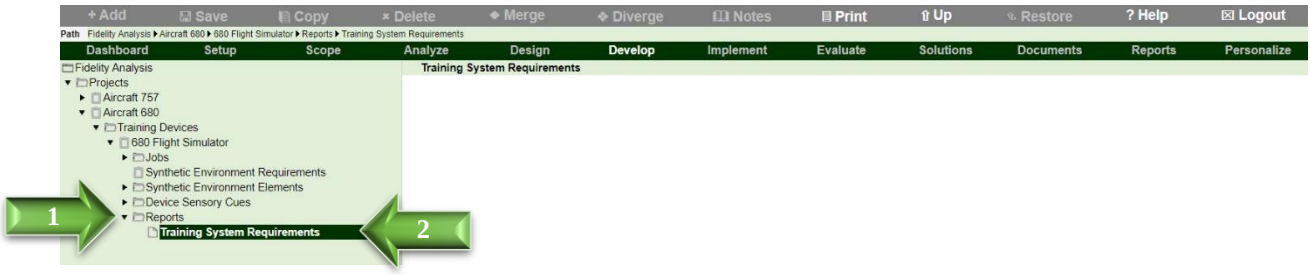


Chapter 5: Generate Reports

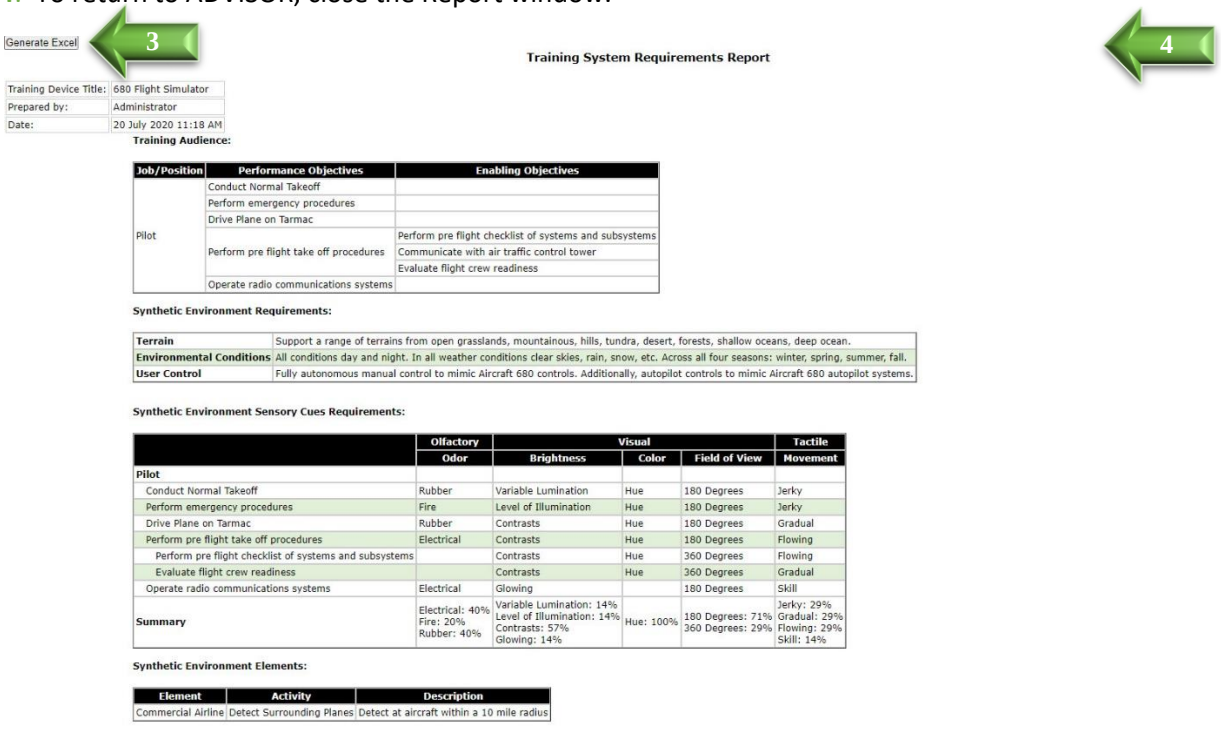
5.1 Training System Requirements Report

One of ADVISOR's key benefits is the ease and speed in which various types of reports can be generated. The Training System Requirements Report generates a concise summary of Training Device requirements based on defined parameters including: Functional Requirements – i.e., Tasks (Performance and Enabling Objectives) or Activities (Learning Objectives) that each Job/Occupation is expected to perform on the Training Device; Sensory Cues Requirements for Training Device and Components; Synthetic Environment Requirements; as well as Synthetic Environment Elements/Objectives and Activities. To generate:

Step 1: Click ▶ next to the **Reports** folder to expand.
Step 1: Click on the **Training System Requirements** node to generate the report in a new window.



Step 3: You can export the report to MS Excel by clicking the [**Generate Excel**] button.
Step 4: To return to ADVISOR, close the Report window.



Remember that context sensitive help is also available for each screen by clicking on [**Help]** and video clips on how to perform specific functions by clicking on the video icon. **Enjoy!**

Annex A: Sensory Stimulus Cues

Sensory Stimulus Cues from MIL-HDBK-29612-2A are presented below as a reference of the types of stimulus cues that are typically considered for Training Devices.

MIL-HDBK-29612-2A

TABLE 29. **Sensory stimulus cues.**

VISUAL CUES	
Domain	**Type**
Brightness	Candle Power
Brightness	Contrasts
Brightness	Contrast in Illumination
Brightness	Dim Contrasts
Brightness	Glitter
Brightness	Gloss
Brightness	Glowing
Brightness	Gradual Contrasts
Brightness	Instantaneous Contrasts
Brightness	Level of Illumination
Brightness	Lack of Contrast
Brightness	Lack of Resolution
Brightness	Variable Luminance
Color	Brightness
Color	Black and White
Color	Contrasting
Color	Contrasting Brightness
Color	Dull
Color	Full Spectrum of Color Chart
Color	Gray
Color	Hue
Color	Shading
Color	Tint
Composition	Bold
Composition	Captions
Composition	Contrasting style of Type
Composition	Font Size
Composition	Font Style
Composition	Grouping
Composition	Highlight Color (use of)
Composition	Italics
Composition	Icons
Composition	Line Length
Composition	Lower Case Letters
Composition	Paragraph Indentations
Composition	Size Text
Composition	Space Between Lines
Composition	Style

VISUAL CUES	
Domain	**Type**
Composition	Titles and Headings
Composition	Underlining
Composition	Upper Case Letters
Composition	Upper and Lower Case Letters
Chart	Organization
Chart	Classification
Chart	Time Lines
Chart	Flowchart
Chart	Tabular (or table)
Field of View	30 degree
Field of View	90 degree
Field of View	180 degree
Field of View	360 degree
Field of View	30 degree - Azimuth
Field of View	90 degree - Azimuth
Field of View	180 degree - Azimuth
Field of View	360 degree - Azimuth
Field of View	30 degree - Elevation
Field of View	90 degree - Elevation
Field of View	180 degree - Elevation
Field of View	360 degree - Elevation
Form	3D
Form	Alphanumeric
Form	Angle
Form	Boundaries Clear and Complete
Form	Boxes
Form	Bubbles
Form	Contrasting
Form	Density
Form	Environment
Form	Liquid
Form	Map
Form	Non-translucent

MIL-HDBK-29612-2A

TABLE 29. **Sensory stimulus cues - Continued.**

VISUAL CUES	
Domain	**Type**
Form	Numerals
Form	Rules
Form	Solid Object
Form	Split Image
Form	Static Display
Form	Symbols
Form	Symmetry
Form	Table
Form	Timelines
Form	Translucent
Graph	Bar
Graph	Line
Graph	Pictorial
Graph	Pie
Light	Black Light

VISUAL CUES	
Domain	**Type**
Light	Fluorescent
Light	Incandescent
Light	Infra Red
Light	Natural
Movement	Contrasting
Movement	Cyclic
Movement	Eye
Movement	Flowing
Movement	Full
Movement	Gradual
Movement	Hand Signals
Movement	Head

VISUAL CUES	
Domain	**Type**
Movement	Instantaneous
Movement	Jerky
Movement	Limited
Movement	Still
Perception	Acuity (sharpness)
Perception	Altered Depth
Perception	Angle
Perception	Area
Perception	Curvature
Perception	Capacity Levels
Perception	Depth
Perception	Diameter
Perception	Direction
Perception	Fidelity (exactness)
Perception	Fumes
Perception	Gradual Changes
Perception	Intensity of Shading and Color Saturation
Perception	Instantaneous Changes
Perception	Mirage
Perception	Length

VISUAL CUES	
Domain	**Type**
Perception	Position Along a Common Scale
Perception	Position Along Nonaligned Scale
Perception	Volume
Pictorial	Aerial
Pictorial	Animation
Pictorial	Cartoon-like Image
Pictorial	Diagram
Pictorial	Line Drawing
Pictorial	Moving
Pictorial	Representational Picture
Pictorial	Sketch
Pictorial	Still
Pictorial	Transformational Picture
Print	Checklists
Print	Instructions
Print	Procedures
Print	Reference Materials
Rate	Constant
Rate	Contrasting

MIL-HDBK-29612-2A

TABLE 29. **Sensory stimulus cues - Continued.**

VISUAL CUES	
Domain	**Type**
Rate	Fast
Rate	Gradual Changes
Rate	Instantaneous Changes
Rate	Slow
Rate	Variable
Scale	Exact
Scale	Magnified
Scale	Proportional
Scale	Reduced
Sequence	Cartoon Strip Fashion
Sequence	Each Panel (one at a time)
Sequence	Indicated by Arrows, Numbers, Labels
Shape	Concave
Shape	Convex
Shape	Corrugated
Shape	Crooked
Shape	Fluted
Shape	Recessed
Shape	Spiral
Shape	Straight
Shape	Twisted
Size	Bony
Size	Chunky
Size	Compact
Size	Contracting
Size	Contrasting
Size	Dilated
Size	Elongated
Size	Gangling
Size	Height
Size	Large
Size	Lean
Size	Pudgy
Size	Slim
Size	Small
Size	Spindly
Size	Stature

VISUAL CUES	
Domain	**Type**
Size	Stocky
Size	Thin
Size	Width
Size	Willowy
Source	Smoke
Source	Fire
Structure	Background
Structure	Lines of Text Broken According to Sense (not space)
Structure	Page Design
Structure	Spatial Arrangements
Structure	Use of White Space
Temperature	Frost
Temperature	Ice
Temperature	Red Hot
Temperature	Simmer
Texture	Blunt
Texture	Braided
Texture	Braille
Texture	Bumpy
Texture	Clammy
Texture	Coarse Grained
Texture	Delicate
Texture	Fine Grained
Texture	Filmy
Texture	Furrowed
Texture	Gouge
Texture	Groove
Texture	Holey
Texture	Limp
Texture	Interlaced
Texture	Indentions
Texture	Jagged
Texture	Meshed
Texture	Notched
Texture	Prickly
Texture	Relief

MIL-HDBK-29612-2A

TABLE 29. **Sensory stimulus cues - Continued.**

VISUAL CUES	
Domain	**Type**
Texture	Ribbed
Texture	Ridges
Texture	Rough
Texture	Rut
Texture	Scaly
Texture	Sharp
Texture	Sheer
Texture	Smooth
Texture	Soft
Texture	Spongy
Texture	Stubby
Texture	Velvety
Texture	Warped
Thermal Signature	Variable
Thermal Signature	Enumerable
Topography	Apex
Topography	Bank

VISUAL CUES	
Domain	**Type**
Topography	Crest
Topography	Crown
Topography	Elevation
Topography	Embankment
Topography	Peak
Topography	Zenith
Vibration	Constant
Vibration	Flutter
Vibration	Random
Vibration	Shake
Vibration	Shimmy
Vibration	Variable
Vibration Frequency	High
Vibration Frequency	Low
Wind	Ripples on Water
Wind	Flags
Wind	Sock

TACTILE CUES	
Domain	**Type**
Manipulate Foot/Leg	Foot Operated Pedal
Manipulate Foot/Leg	Foot Operated Switch
Manipulate Hand/Finger	Crank
Manipulate Hand/Finger	Grip
Manipulate Hand/Finger	Handle
Manipulate Hand/Finger	Hand Wheel
Manipulate Hand/Finger	Isotonic Joystick
Manipulate Hand/Finger	Keyboard

TACTILE CUES	
Domain	**Type**
Manipulate Hand/Finger	Knob
Manipulate Hand/Finger	Lever
Manipulate Hand/Finger	Mouse
Manipulate Hand/Finger	Thumb Wheel
Manipulate Hand/Finger	Touch Screen
Manipulate Hand/Finger	Switch, Continuous Rotary
Manipulate Hand/Finger	Switch, Discrete Rotary
Manipulate Hand/Finger	Switch, Key Operated

MIL-HDBK-29612-2A

TABLE 29. **Sensory stimulus cues - Continued.**

TACTILE CUES	
Domain	**Type**
Manipulate Hand/Finger	Switch
Manipulate Hand/Finger	Switch, Push Button
Manipulate Hand/Finger	Switch, Rocker
Manipulate Hand/Finger	Switch, Slide
Manipulate Hand/Finger	Switch, Toggle
Resistance	Dense
Resistance	Hard
Resistance	Firm
Resistance	Hollow
Resistance	Impenetrable
Shape	Concave
Shape	Convex
Shape	Corrugated
Shape	Crooked
Shape	Fluted
Shape	Recessed
Shape	Straight
Shape	Twisted
Size	Chunky
Size	Compact
Size	Height
Size	Large
Size	Lean
Size	Length
Size	Pudgy
Size	Small
Size	Stocky
Size	Width
Temperature	Cold
Temperature	Cool
Temperature	Frigid
Temperature	Frosty
Temperature	Hot

TACTILE CUES	
Domain	**Type**
Temperature	Icy
Temperature	Languid
Temperature	Lukewarm
Temperature	Seethe
Temperature	Simmer
Temperature	Sizzle
Temperature	Swelter
Temperature	Tepid
Temperature	Torrid
Temperature	Warm
Texture	Blunt
Texture	Braided
Texture	Braille
Texture	Bumpy
Texture	Coarse Grained
Texture	Delicate
Texture	Fine Grained
Texture	Filmy
Texture	Furrowed
Texture	Gooey
Texture	Gouge
Texture	Greasy
Texture	Groove
Texture	Holey
Texture	Interlaced
Texture	Indentions
Texture	Jagged
Texture	Meshed
Texture	Notched
Texture	Prickly
Texture	Relief
Texture	Ribbed
Texture	Ridges
Texture	Rough
Texture	Rut
Texture	Scaly
Texture	Sharp
Texture	Sheer

MIL-HDBK-29612-2A

TABLE 29. **Sensory stimulus cues - Continued.**

TACTILE CUES	
Domain	**Type**
Texture	Slick
Texture	Slimy
Texture	Smooth
Texture	Soft
Texture	Spongy
Texture	Sticky
Texture	Stiff
Texture	Stubby
Texture	Tightness
Texture	Velvety
Texture	Warped
Whole Body Movement	Body Orientation
Whole Body Movement	Incline
Whole Body Movement	Lurch
Whole Body Movement	Pitch

TACTILE CUES	
Domain	**Type**
Whole Body Movement	Pivot
Whole Body Movement	Roll
Whole Body Movement	Spin
Whole Body Movement	Sway
Whole Body Movement	Swing
Whole Body Movement	Tester
Whole Body Movement	Thrash
Whole Body Movement	Wobble

OLFACTORY CUES	
Domain	**Type**
Chemical	Almond
Chemical	Fruit
Chemical	Peach
Engine Exhaust	Gas
Engine Exhaust	Turbine
Fragrance	Sweet
Fragrance	Fresh
Fuel	Diesel
Fuel	Gas
Fuel	JP4
Gun Powder	Cordite
Odor	Antiseptic
Odor	Burnt
Odor	Electrical
Odor	Fire
Odor	Foul
Odor	Gaseous

OLFACTORY CUES	
Domain	**Type**
Odor	Hot
Odor	Hydraulic Fluid
Odor	Moldy
Odor	Musty
Odor	Oil
Odor	Ozone
Odor	Pungent
Odor	Rancid
Odor	Reeking
Odor	Rotten
Odor	Rubber
Odor	Smoke
Odor	Sour
Odor	Sulfuric
Odor	Stagnant
Odor	Stench
Odor	Sulfur

MIL-HDBK-29612-2A

TABLE 29. **Sensory stimulus cues - Continued.**

OLFACTORY CUES	
Domain	**Type**
Odor	Tobacco
Taste	Acidic
Taste	Bitter
Taste	Salty

OLFACTORY CUES	
Domain	**Type**
Taste	Sweet
Taste	Tart

AFFECTIVE CUES	
Domain	**Type**
Attitude	Appreciative
Attitude	Assertive
Attitude	Authoritative
Attitude	Caring
Attitude	Confident
Attitude	Demeanor
Attitude	Diplomatic
Attitude	Emotional
Attitude	Hostile
Attitude	Impassive
Attitude	Nervous
Attitude	Self Control
Attitude	Sharpness
Attitude	Shifty
Attitude	Smug
Attitude	Superior
Attitude	Stoicism
Attitude	Timid
Attitude	Trustworthy
Attitude	Unfeeling
Physiological Condition	Blacked Out
Physiological Condition	Comatose
Physiological	Dazed

AFFECTIVE CUES	
Domain	**Type**
Condition	
Physiological Condition	Dizzy
Physiological Condition	Fatigue
Physiological Condition	Nauseous
Physiological Condition	Lethargic
Physiological Condition	Unaware
Physiological Condition	Numb
Physiological Condition	Painful
Physiological Condition	Shocked
Physiological Condition	Stress
Physiological Condition	Stunned
Physiological Condition	Unconscious
Physiological Condition	Vertigo

MIL-HDBK-29612-2A

TABLE 29. **Sensory stimulus cues - Continued.**

AUDITORY CUES	
Domain	**Type**
Duration	Long
Duration	Medium
Duration	Short
Duration	Constant
Duration	Variable
Music	Background
Music	Constant
Music	Variable
Pitch	Constant
Pitch	High
Pitch	Low
Pitch	Medium
Pitch	Penetrating
Pitch	Piercing
Pitch	Variable
Quality	Constant
Quality	Mellow
Quality	Soothing
Quality	Strident (harsh)
Quality	Variable
Rate	Constant
Rate	Fast
Rate	Gradual
Rate	Instantaneous
Rate	Slow
Rate	Variable
Rhythm	Constant
Rhythm	Variable
Sound	Boom
Sound	Buzz
Sound	Chatter
Sound	Chirp
Sound	Chuckle
Sound	Clang
Sound	Click
Sound	Cry
Sound	Ding
Sound	Dong

AUDITORY CUES	
Domain	**Type**
Sound	Grind
Sound	Groan
Sound	Growl
Sound	Hiss
Sound	Hum
Sound	Knock
Sound	Peep
Sound	Ping
Sound	Pop
Sound	Rattle
Sound	Reedy
Sound	Roar
Sound	Rumble
Sound	Scream
Sound	Screech
Sound	Shrill
Sound	Shriek
Sound	Squawk
Sound	Squeak
Sound	Squeal
Sound	Tap
Sound	Ticking
Sound	Ting
Sound	Treble
Sound	Whine
Sound	Whir
Sound	Whistle
Sound	Yap
Sound	Yelp
Sound	Yip
Sound	Zing
Source	Buzzer
Source	Bell
Source	Klaxon
Source	Whistle
Tempo	Constant
Tempo	Fast
Tempo	Medium

MIL-HDBK-29612-2A

TABLE 29. **Sensory stimulus cues - Continued.**

AUDITORY CUES	
Domain	**Type**
Tempo	Slow
Tempo	Variable
Timbre	Constant
Timbre	Tonal Sound
Timbre	Full Sound
Timbre	Ambient Sound
Timbre	Variable
Verbal	Abrupt Changes
Verbal	Babble
Verbal	Blab
Verbal	Change of Narration
Verbal	Chatter
Verbal	Constant
Verbal	Dialect
Verbal	Jabber
Verbal	Jargon
Verbal	Mumble
Verbal	Mutter
Verbal	Synthesized Speech
Verbal	Variable
Verbal	Whisper
Voice	Accents
Voice	Animated
Voice	Constant
Voice	Female
Voice	Inflections
Voice	Male
Voice	Human (real)
Volume	Constant
Volume	Strong
Volume	Variable
Volume	Weak