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## Instructions for Importing System/Competency Task Analysis Excel File to ADVISOR Enterprise

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### Introduction

To capture the attributes and the relationships between Tasks, Sub Tasks and Steps, as well as corresponding Knowledge, Skills, Attitudes (KSAs) and Objectives; an Excel based System Task Analysis Data Collection Form is provided. Once completed, the data can be uploaded to ADVISOR Enterprise in a single click.

### Spreadsheet Structure

To minimize problems, verify that:

- The Excel spreadsheet is saved in “**xlsx**” or “**xls**” file format.
- The 1<sup>st</sup> 4 rows are reserved for Headers.
- Data starts on row 5.
- The data structure and format of the System/Competency Task Analysis Excel file are as follows:

- ❑ To facilitate recognition, Tasks are highlighted in blue, Sub Tasks in green, Steps in orange and KSAs in white. Note the Task titles should only be included in Column B (Task Title); Sub Tasks in Column C (Sub Task Title); Steps in Column D (Step Title) and KSAs in Column AJ (Knowledge/Skill Title).

**Note:** To add new Tasks, Sub Tasks, Steps or KSAs, it is best to copy an existing Task, Sub Task, Step or KSA, and copy to new location. For example, to copy a Task, click on blue row (#5, for example) to highlight; right click and select Copy; next, click on row where new Task should be added; right click and select Insert Copied Cells.

- ❑ **Column A (Reference Code).** Unique identifier for each Task, Sub Task, Step and KSA. May also be used to outline how the data is structured. The following format aaa-bb-cc-dd-ee is recommended:

aaa = System Code (3 digits)

bb = Task # (2 digits)

cc = Sub Task # (2 digits)

dd = Step # (2 digits)

ee = Knowledge/Skill/Attitude (KSA) # (2 digits)

**Note:** If Task, Sub Task, Step or KSA Reference Code already exists under Project, ADVISOR will display the following message: “Duplicate Tasks, Sub Tasks, Steps and/or Knowledge/Skills already exist. Overwrite attributes. Yes or No.” If yes is selected, ADVISOR will:

- ❖ Overwrite the attributes of the Task, Sub Task, Step or KSA with the data from the Excel file – including the assignment of new KSAs to a Task, Sub Task or Step.
- ❖ Tasks, Sub Tasks, Steps and KSAs with unique or no Reference Code will be imported as new.

- ❖ If the hierarchy of existing Tasks, Sub Tasks or Steps is changed in the Excel file, the Tasks, Sub Tasks and Steps hierarchy in ADVISOR will be updated in line with the Excel file.
- ❖ If the same Reference Code is used for multiple Tasks, Sub Tasks, Steps or KSAs in the Excel spreadsheet, import will be aborted and the following message will be displayed “Cell xx & Cell yy have Similar Reference Code”.

- Column B (Task Title).** Limited to 500 characters
- Column C (Sub Task Title).** Limited to 500 characters
- Column D (Step Title).** Step Title. Limited to 500 characters
- Column E (Standards - Desired Performance).** The standard to which the Task, Sub Task or Step should be performed. Limited to 4,000 characters.
- Column F (Task Classification).** Limited to one of the following values:
  - 1 – Crew
  - 2 – Team
  - 3 – Individual
  - 4 – Instructor
  - 5 – Sub Task
  - 6 – Step
- Column G (Task Difficulty).** Limited to one of the following values:
  - 1 – High
  - 2 – Medium
  - 3 – Low
- Column H (Task Importance/Criticality).** Limited to one of the following values:
  - 1 – High
  - 2 – Medium
  - 3 – Low
- Column I (Task Frequency).** Limited to one of the following values:
  - 1 – High
  - 2 – Medium
  - 3 – Low
- Column J (Task Level of Proficiency).** Limited to one of the following values:
  - 1 – Basic
  - 2 – Semi Skilled
  - 3 – Skilled
  - 4 – Highly Skilled
  - 5 – Expert
- Column K (Task Requires Immediate Action).** Limited to one of the following values:
  - 1 – Yes
  - 2 – Somewhat
  - 3 – No
  - 4 – Not Applicable

- Column L (Task Includes Sequential Steps).** Limited to one of the following values:
  - 1 – Yes
  - 2 – Somewhat
  - 3 – No
  - 4 – Not Applicable
  
- Column M (Task Requires Reference Guide).** Limited to one of the following values:
  - 1 – Yes
  - 2 – Somewhat
  - 3 – No
  - 4 – Not Applicable
  
- Column N (Entry Level Can Perform Task).** Limited to one of the following values:
  - 1 – Yes
  - 2 – No

**Note:** If yes is selected, training will not be recommended for Task, Sub Task or Step
  
- Column O (% of Individuals Performing Task).** Limited to one of the following values:
  - 1 – High
  - 2 – Medium
  - 3 – Low
  
- Column P (Time Spent Performing Task).** Limited to one of the following values:
  - 1 – High
  - 2 – Medium
  - 3 – Low
  
- Column Q (Point of Contact).** Name of individual to be contacted for further clarifications. Limited to 200 characters.
  
- Column R (Analysts Notes).** Supplementary notes for the Task. Limited to 2,000 characters.
  
- Column S (Supporting Info).** Additional information to support the requirements for the Task. Limited to 2,000 characters.
  
- Column T (Sequence).** The sequence in which the Task, Sub Task or Step should be presented. Only integer values can be used (100, 200, 300, etc., for example).
  
- Column U (Assistance Available).** The assistance that individuals will have when performing the Task, Sub Task or Step. For example, under close supervision or as a member of a team. For the Canadian Armed Forces this can be used to define the condition “Given”, and for the UK MoD it can be used to define the condition “With What”. Limited to 4,000 characters.
  
- Column V (Physical Demands).** The physical demands for performing the Task, Sub Task or Step. For example, crowded working conditions, unusual or prolonged physical exertion, kneeling, squatting or unusually cramped position. For the Canadian Armed Forces this can be used to define the condition “Denied”, and for the UK MoD it can be used to define the condition “With Whom”. Limited to 4,000 characters.

- Column W (Environmental Conditions).** The environment under which the Task, Sub Task or Step is normally performed. For example, tropical, arctic, desert. For the UK MoD it can be used to define the condition “When”. Limited to 4,000 characters.
- Column X (Characteristics of Location).** The conditions under which the Task, Sub Task or Step is normally performed. For example, outdoor, night, etc. Limited to 4,000 characters.
- Column Y (Operations Tempo).** The tempo under which the Task, Sub Task or Step is normally performed. For example, normal, combat, etc. For the UK MoD it can be used to define the condition “Source”. Limited to 4,000 characters.
- Column Z (Triggering Action).** The cues for performing the Task, Sub Task or Step. Limited to 4,000 characters.
- Column AA (Personnel Safety).** Is it dangerous for personnel to perform the Task? Limited to one of the following values:
  - 1 – Yes
  - 2 – No
  - 3 – Not Applicable
- Column AB (Safety of Others).** Can Task, Sub Task or Step harm others if performed incorrectly? Limited to one of the following values:
  - 1 – Yes
  - 2 – No
  - 3 – Not Applicable
- Column AC (Environmental Safety).** Can Task, Sub Task or Step harm the environment if performed incorrectly? Limited to one of the following values:
  - 1 – Yes
  - 2 – No
  - 3 – Not Applicable
- Column AD (Equipment/Data Integrity).** Can Task, Sub Task or Step cause damage to equipment or data if performed incorrectly? Limited to one of the following values:
  - 1 – Yes
  - 2 – No
  - 3 – Not Applicable
- Column AE (Performance/Enabling Objective Title).** The title of performance or enabling objective that supports Task, Sub Task or Step. Limited to 500 characters.

**Note:** Performance and Enabling Objectives are created even though the DIF Analysis for Tasks, Sub Tasks and Steps may indicate that training is not required.

- ❑ **Column AF (Task Proficiency Code).** A 2 digit code, used primarily by the US Air Force, to indicate the required level of proficiency. The following definition is used by US Air Force:

1 <sup>st</sup> Indicates the required Task Performance Level	1 = Extremely Limited 2 = Partially Proficient 3 = Competent 4 = Highly Competent.
2 <sup>nd</sup> Indicates the required Task Knowledge Level	a = Nomenclature. Can name parts, tools and simple facts about the task. b = Procedures. Can determine step by step procedures for doing the task. c = Operating Principles. Can explain why and when the task must be done and why each step is needed. d = Complete Theory. Can predict, identify, and resolve problems about the task.
or	
Subject Knowledge Level	A = Facts. Can identify basic facts and terms about the subject. B = Principles. Can explain relationship of basic facts and state general principles about the subject. C = Analysis. Can analyze facts and principles and draw conclusions about the subject. D = Evaluation. Can evaluate conditions and make proper decisions about the subject.

- ❑ **Column AG (Task Hazardous).** Refers to severity of injuries that may result from inadequately performing Task. Limited to one of the following values:
  - 1 – Yes
  - 2 – Somewhat
  - 3 – No
  - 4 – Not Applicable
- ❑ **Column AH (Personnel Certification Required).** To indicate whether individuals require certification to perform the Task, Sub Task or Step. Limited to one of the following values:
  - 1 – Yes
  - 2 – No
  - 3 – Not Applicable
- ❑ **Column AI (Certifying Agency Name).** The name of the agency that issues the certification. Limited to 200 characters.
- ❑ **Column AJ (Knowledge/Skill Title).** Knowledge, Skills or Attitudes needed to perform the Task, Sub Task or Step. Limited to 500 characters.
- ❑ **Column AK (Learning Objectives).** The learning objective (instructional goal or teaching point) needed to close the Knowledge/Skill gap. Limited to 500 characters.

- ❑ **Column AL (Learning Outcome).** Limited to one of the following values:
  - 1 – Software
  - 2 – Knowledge
  - 3 – Problem Solving
  - 4 – Skill
  - 5 – Attitude
  
- ❑ **Column AM (Desired Knowledge/Skill Level).** Knowledge/Skill level needed to perform the Task, Sub Task or Step. Limited to one of the following values:
  - 1 – Basic
  - 2 – Semi Skilled
  - 3 – Skilled
  - 4 – Highly Skilled
  - 5 – Expert
  
- ❑ **Column AN (Current Knowledge/Skill Level).** Current Knowledge/Skill level. Limited to one of the following values:
  - 1 – Basic
  - 2 – Semi Skilled
  - 3 – Skilled
  - 4 – Highly Skilled
  - 5 – Expert

**Note:** If Desired Knowledge/Skill Level is greater than Current Knowledge/Skill Level, than Knowledge/Skill Gap exists, and a Learning Objective is created to address this gap. Otherwise, individuals current Knowledge/Skill is adequate, and there is no need for Learning Objectives.

- ❑ **Column AO (Length [hours]).** Time needed to acquire the Knowledge or Skill if training is delivered in an instructor-led format. Limited to numbers with 2 decimals (1.00, 2.50, 3.25, etc., for example).
  
- ❑ **Column AP (Classification).** Knowledge, Skills and Attitudes can be further classified as follows:

<b>Knowledge</b>	<ol style="list-style-type: none"> <li>1. <b>Fact.</b> Deals with unique, specific concrete item, specific data, or a one of a kind association among concepts. Facts are processed at the recall level only. For example: what is the model of the auxiliary power unit used in the aircraft? Where is it located on the aircraft? etc.</li> <li>2. <b>Rule.</b> Deals with group of items that share common features and common name. For example: teaching points can be classified as fact, concept, process, procedure or principle.</li> <li>3. <b>Procedure.</b> Clearly defined steps that result in the achievement of a task. Procedures are done more or less the same way each time. For example, removal and installation of the auxiliary power unit in an aircraft.</li> <li>4. <b>Discrimination.</b> Grouping of similar or dissimilar items according to their distinct characteristics. For example: allocate, arrange, assign, categorize, classify or compare items.</li> <li>5. <b>Problem Solving.</b> Ability of individuals to compare, contrast and break down a problem in order to arrive at a solution. In other words, issues that involve thinking, reasoning, analyzing, judging and inferring.</li> </ol>
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<b>Skills</b>	<p>6. <b>Perception.</b> Sensory stimuli that translates into physical performance. For example, detect, hear, see, taste or feel.</p> <p>7. <b>Gross Motor Skills.</b> Manual dexterity in the performance of physical skills. For example, carry, hold, jump, lift or pull.</p> <p>8. <b>Continuous Movement.</b> Tracking or making compensatory movement based on feedback. For example, advance, control, follow, guide, maneuver or steer.</p> <p>9. <b>Readiness.</b> Be ready to take a particular action. For example, assist, challenge, guard or prepare.</p> <p>10. <b>Mechanism.</b> Perform a complex physical skill. For example, activate, adjust, assemble, calibrate, clean, destroy, diagnose, install, maintain, operate, remove or repair.</p> <p>11. <b>Adaptation.</b> Modify a complex item to accommodate a new situation. For example, accommodate, attack, bypass, evade, patrol, protect, recover or tailor.</p>
<b>Attitudes</b>	<p>12. <b>Receiving.</b> Demonstrate mental preparedness to perceive the normal, abnormal and emergency cues associated with the performance of an operational procedure. For example, listen, monitor, observe or recognize.</p> <p>13. <b>Responding.</b> Demonstrate mental preparedness to encode operational cues as indicators of normal, abnormal and emergency conditions. For example, accomplish, acknowledge, communicate, describe, execute, interpret, request or respond.</p> <p>14. <b>Valuing.</b> Demonstrate the ability to judge the quality of normal, abnormal and emergency cues associated with the performance of an operational procedure. For example, approve, assess, cancel, choose, judge, justify, prioritize, validate or verify.</p> <p>15. <b>Competence.</b> Demonstrate mental preparedness to make decisions using prioritized strategies and tactics in response to normal, abnormal and emergency cues associated with the performance of an operational procedure. For example, allow, assume, command, coordinate, enforce or prescribe.</p> <p>16. <b>Innovation.</b> Demonstrate mental preparedness to generate new resource management strategies in response to normal, abnormal and emergency cues associated with the performance of an operational procedure. For example, conceive, develop, devise, formulate or innovate.</p>

**Column AQ (References).** References used to develop the Learning Objectives.

**Column AR (Tools).** Tools or equipment needed to perform the Task, Sub Task or Step. Limited to 500 characters.

## How to Import

- To import Tasks, Sub Tasks, Steps, Performance/Enabling Objectives, Knowledge/Skills/Attitudes and Learning Objectives under a specific system or competency, click on Import System/Competency Tasks node under the desired System/Competency. The data in the screen below will be imported under the Communication System, for example.



- Click Browse and select the desired System/Competency Task Analysis spreadsheet.
- Click the **Save** button to import.

### Notes:

- ❖ The **Reference Code** field is used by ADVISOR Enterprise to detect duplicate records. For example, when a Task is imported, ADVISOR will 1<sup>st</sup> verify whether the Project already has a Task with the same Reference Code. If it does, the following message will appear “Duplicate Records already exist. Overwrite attributes?” If Ok is selected, the attributes of the Task in ADVISOR will be updated – i.e., duplicate Project Tasks will not be created. If Cancel is selected, the import will be aborted.

If the Reference Code for a record is not specified, ADVISOR Enterprise will assume that the record is new and will create accordingly. This, in-turn, may lead to the creation of duplicate records.

- ❖ You are not required to import Sub Tasks, Steps or Knowledge/Skills/Attitudes (KSA). If the Tasks are only divided into Sub Tasks, for example, then simply delete the orange rows that correspond to Steps. In other words, no data will be included in Column D. Please note that Column D should not be deleted, only the data in Column D should be deleted.
- ❖ You cannot specify Performance/Enabling Objectives without a corresponding Task, Sub Task or Step nor can you specify Learning Objectives without a corresponding KSA.
- ❖ You are not required to import all attributes. If the Task, Sub Task and Step attributes in Columns K, L, M, N, O and P are not relevant, for example, then no data should be provided in these columns. Moreover, these attributes may be defined for only some of the Tasks. In other words, you are not required to define for all Tasks.

## How to Further Simplify Data Collection Form

- ❖ Review the Data Collection Worksheet to determine which fields are needed. If the Tasks, Sub Tasks and Steps attributes in Columns K, L, M, N, O and P are not required, for example, then delete all data from these columns and hide by right clicking on K, L, M, N, O and P on top of the column and selecting the Hide option.