

# **Training Life Cycle Management User Guide**





#### **ADVISOR Enterprise User's Guide**

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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

**D**evelop: 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

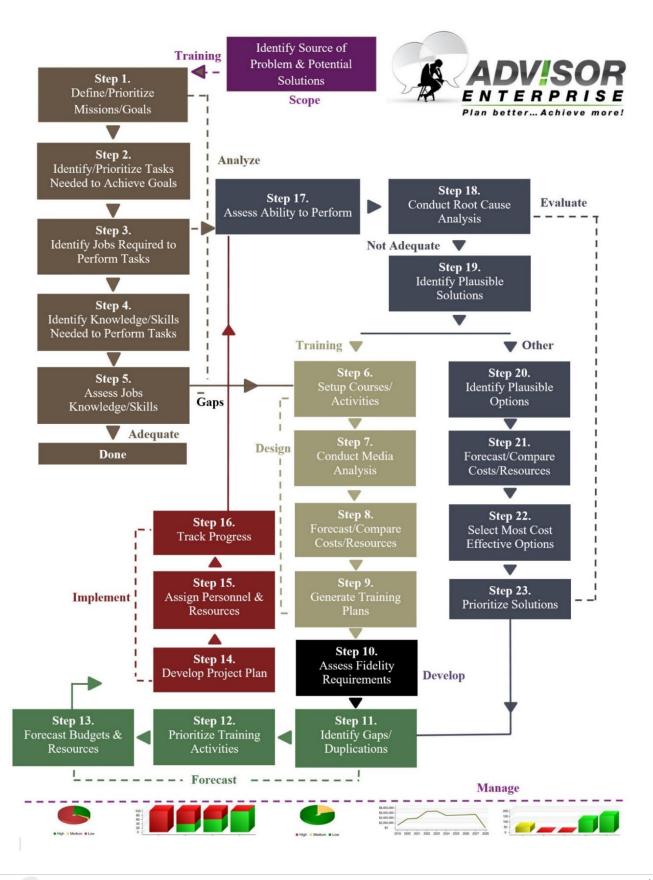
Evaluation: To find out "how training impacts performance and organizational goals". Provides a step by step approach for improving performance by zeroing in on the source of the problem and identifying solutions that can produce the desired level of productivity. Moreover, ADVISOR highlights actions 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.











# **Approach**

Why is ADVISOR Enterprise so effective? Because it focuses on operational requirements – i.e., identifies the knowledge, skills and competencies needed by each job, position and employee to attain organizational missions/goals, as well as the most efficient way to achieve. In addition, facts support the decision making process, helping you create consensus to stay the course.

Using our proprietary methodology, your efforts unfold in four phases, as follows:



- Define Missions/Goals.
- Identify Tasks needed by each Job/Position/Employee to attain missions/goals.
- Identify Training requirements.
- Outline current Training Courses/Activities.
- Find out where money and resources are allocated.



- Map Training Courses/Activities to Operational Requirements to identify gaps, duplications and unwarranted training.
- Assesss alternate venues for the delivery of training.
- Uncover resource allocation.
- Uncover cost drivers.



- Prioritize Training Courses/Activities from highest to lowest impact on missions/goals.
- Prioritize recommended changes to current delivery options.
- Identify personnel/resources excess capabilities and bottlenecks.
- Identify strategies for mitigating high cost items.



- Develop an implementation strategy starting with low risk, low cost, high impact options.
- Align personnel/resources with new strategy.
- Develop project plans and monitor progress.
- Assess and validate results.



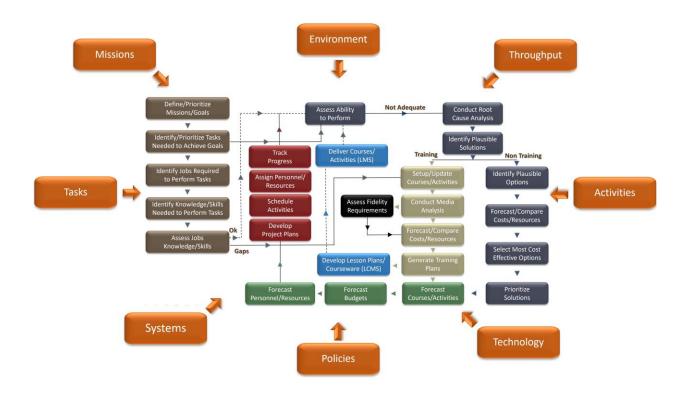


# **Training Life Cycle Management**

ADVISOR maintains training effectiveness and efficiency over time by continually assessing the impact of changes to missions, systems, jobs, tasks, 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 maps 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.

ADVISOR cuts time needed to conduct TSRAs from 18 months to 6 months.

Jeffrey Hogan Lead TSRA Analyst, USfalcon

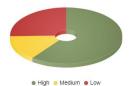






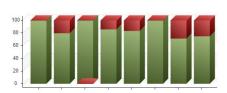
# Continual insights to drive training effectiveness and efficiency ...

#### **Training Alignment**



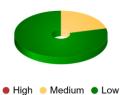
Reveal Training Creep: Map training activities to operational requirements to identify & highlight training that is no longer relevant.

#### **Training Gap**



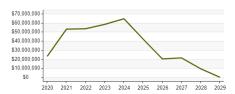
**Identify Training Gaps:** Identify training requirements that are not being addressed; including potential impact on missions/goals.

#### **Training Duplication**



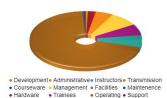
**Minimize Duplication:** Identify similar Knowledge/Skills delivered within multiple courses.

#### **Training Cost**



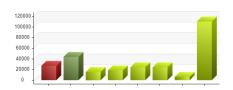
Facilitate Budget and Resource Management: Quickly forecast training activities', budget and personnel/resource requirements for any time period.

#### **Cost Drivers**



**Uncover Cost Drivers:** Forecast spending over training programs life cycle to uncover cost drivers – i.e., activities that consume the most budget, personnel and resources.

#### **Training Cost per Individual**



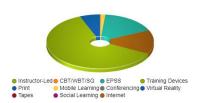
**Uncover Cost per Trainee:** Identify courses/activities needed to attain specific set of qualifications including cost breakdown.

#### **Resources Utilization/Bottlenecks**



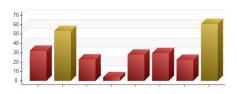
Facilitate Resource Management: Forecast personnel and resources needed to undertake current and upcoming projects, and map to existing capabilities to identify excess capabilities and bottlenecks.

#### **Recommended Media**



**Leverage Training Technology:** Identify viable technologies that could improve training effectiveness and efficiency.

#### Time to Competency (hours)



Uncover Time to Competency: Identify courses/activities needed to attain specific set of competencies, including time required.

Reduced credit training by 20% from 15 to 12 months

**US** Department of Treasury

Identified 275 hours of common training between 4 technicians

Canadian Air Force





# Acknowledgement

ADVISOR Enterprise is the result of over twenty years of research and development. Dozens of organizations and hundreds of individuals have contributed to the development and evolution of ADVISOR and for this we are very appreciative. Our primary objective is to develop a practical, reliable and robust tool that simplifies and speeds training analysis, forecasts and optimizes training resources, improves resource allocation, generates audit trail to support recommendations, facilitates collaboration and sharing of data among team members, minimizes duplication as well as facilitates the upkeep of analysis over time to keep training programs effective, efficient and relevant. We believe that with the assistance and contribution of the following organizations and individuals, we have been able to accomplish this goal.

- ◆ CAE
- ♦ Canadian National Defence
- ♦ Federal Deposit Insurance Agency
- ♦ Lockheed Martin
- ♦ National Security Agency
- ♦ Merck Company
- Nortel Networks
- ♦ Pearson TQ
- ♦ Raytheon Systems Company
- ♦ Southern Steel Company
- ♦ UK Ministry of Defence
- ♦ United States Air Force
- United States Army
- United States Coast Guard
- United States Marine Corps
- United States Navy
- Lisa Abramson Merck & Company
- Larry Alberter National Security Agency
- Cathi Billings Sheppard AFB
- Ferrell Briggs Naval Aviation Maintenance Training Group
- > Tim Bothell Franklin Covey Company
- Greg Campbell Canadian National Defence
- Bruce Castle Lockheed Martin
- > Bryan Chapman Brandon-Hall.com
- Rick Cheek Keesler AFB
- Dr. Ed Chenette Chief of Naval Education and Training
- Dr. Adelaide Cherry Maxwell AFB
- Alex Cohoon US Navy, Virginia Beach FCTCLANT
- ➤ Beverly Condon Goodfellow AFB
- Dr. Dennis Duke US Navy Naval Air Systems Command
- > Dr. Bruce Eddy Lockheed Martin
- Russell Edmonds UK MoD, Training and Simulation Systems Programme (TSSP)
- > Frederick Glover Naval Aviation Maintenance Training Group





- > Dr. Robert Guptill Dynamic Research Corporation
- ➤ Richard Grahlman Naval Postgraduate School
- Dr. Jo Ann Graves Expeditionary Warfare Training Group, Pacific
- Dr. Anthony Head UK MoD, HQ Land Forces
- Janet Heins Merck & Company
- Peter Hope Canadian National Defence
- Betty Sue Jones Maxwell AFB
- ➤ James Kalivoda Naval Education and Training Professional
- David M Lorage US Coast Guard
- > Dr. Fred Madsen Lockheed Martin
- Dr. Tim McLaughlin Raytheon Professional Services
- Dr. Bill Melton, US Army TRADOC
- Jesse Martinez US Marine Corps
- Dr. Arlen Michaels Nortel Networks
- Hector Moya Goodfellow AFB
- Vangie Nix Maxwell AFB
- Stephane Ouellet CAE
- Arlene Parker Keesler AFB
- > Dr. Albert Pruett Naval Aviation Maintenance Training Group
- Peter Sabiston Canadian National Defence
- Mike Sazma Great Lakes Naval Training Center
- Fred Roberts Federal Deposit Insurance Corporation
- Roger St. Pierre Canadian National Defence
- William Schafer Trident Training Facility Bangor
- Dr. Bill Shook Boeing Company
- Robert Simmon Naval Technical Training Center
- ➤ John Stacy Kraft Foods
- ➤ Karl Stradley Raytheon Professional Services
- ➤ Gary Troy Goodfellow AFB
- > Dr. Steve Ulosevich Southern Steel Company
- Chris Winters Raytheon Systems Company
- Pete Willey Pearson TQ
- > Dr. Kenneth Woolman Lockheed Martin

#### Thank you.

J. Bahlis, Ph.D., P.Eng.

President

BNH Expert Software Inc.





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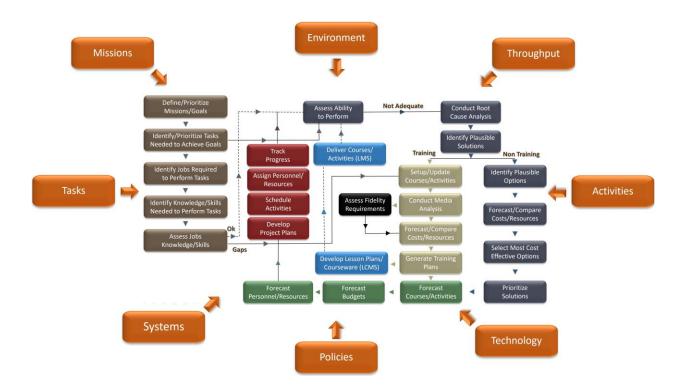




# **Chapter 1: Getting Started**

### 1.1 Introduction

ADVISOR maintains training effectiveness and efficiency over time by continually assessing the impact of changes to missions, systems, jobs, tasks, 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 maps 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.







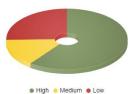
# 1.2 How Can ADVISOR Help You?

In addition to simplifying and speeding Training Needs Analysis (TNA) and Training Systems Requirements Analysis (TSRA), ADVISOR Enterprise drives training efficiency by aligning current and future training activities to operational requirements to identify gaps, duplications and training with minimal value; uncovering cost drivers; forecasting and comparing the costs of viable delivery options; improving resource allocation; identifying/mitigating bottlenecks; producing training plans that leverage existing training programs/resources and generating audit trail to support recommendations.

Moreover, ADVISOR preserves training integrity, effectiveness, efficiency and relevance by quickly identifying training activities that could be impacted by a change to a mission, system, job, policy or publication; facilitates reusability and collaboration by storing all data in a centralized database that can be accessed anytime and from anywhere by all team members with only a browser; simplifies data collection from Subject Matter Experts through custom build Excel spreadsheets; speeds data analysis; simplifies data manipulation; tracks changes made by each team member; and generates dozens of reports in a single click. ADVISOR is also web based, can be installed on a local Server or used off BNH Server (cloud option), consists of 8 modules that can be used separately or in combination to meet various needs, and can be customized in line with requirements.

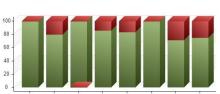
More specifically, ADVISOR Training Life Cycle Management module provides continual insights to drive training effectiveness and efficiency as follows.

**Training Alignment** 



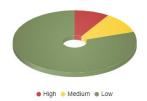
Reveal Training Creep: Map training activities to operational requirements to identify and highlight training that is no longer relevant.

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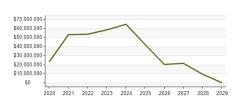
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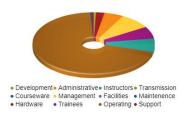
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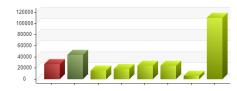
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**Uncover Cost Drivers:** Forecast spending over training programs life cycle to uncover cost drivers — i.e., activities that consume the most budget, personnel and resources.

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**Uncover Cost per Trainee:** Identify courses/activities needed to attain specific set of qualifications including cost breakdown.





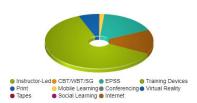


#### **Resources Utilization/Bottlenecks**



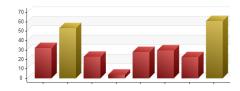
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### **Time to Competency (hours)**



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Reduced credit training by 20% from 15 to 12 months

**US** Department of Treasury

Identified 275 hours of common training between 4 technicians

Canadian Air Force

# 1.3 System Requirements

#### **Database/Server Minimum Requirements**

- 2 CPU Processor with 4GB of RAM
- > 5 GB of free Hard Disk Space
- Windows 2000, 2003, 2008, 2012 R2, 2016, 2019, 7, 8, 8.1, 10, NT, or Sun Solaris 9.0 or higher, or Linux Red Hat 6.0 or higher
- ➤ Web Server that supports Java Virtual Machine and can run Java Servlet. Supported products include: Tomcat 4.0 or higher, IBM WebSphere 4.0 or higher, Resin, Oracle Application Server, Jserv and others...
- Oracle version 9i, 10g, 11g, 12c, 18c or 19c

#### **Workstation/Desktop Minimum Requirements**

- Pentium IV with 512 MB RAM
- ➤ 200 MB of free Hard Disk Space
- Windows 98, ME, XP, VISTA, 7, 8, 10, NT, 2000, 2003, 2008, 2012 R2, 2016, 2019 or Oracle Solaris 9.0 or higher or Linux Red Hat 6.0 or higher
- Internet Explorer 6.0 or higher, Microsoft Edge, Mozilla Firefox 3.0 or higher, Google Chrome, or Safari

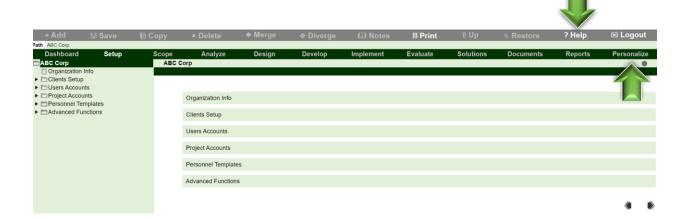






# 1.4 Getting Started

To log on to ADVISOR Enterprise, go to <a href="http://www.bnhexpertsoft.com">http://www.bnhexpertsoft.com</a>, click on "Log in", input your Username and Password, and click [Login]. A Popup Window with step by step instructions is presented to familiarize you with ADVISOR. You may change your username, password and preferences by clicking on the Preferences node under the Personalize tab, editing the required items and clicking [Save]. For example, you may hide or display the Popup Window under the [Options] tab under the Preferences node by placing or removing the checkmark next to the ADVISOR Tour field and clicking [Save]. Context sensitive online help is also available for each field by clicking on [Help].



To make the most out of ADVISOR Enterprise, Chapters 2 through 4 of the ADVISOR Configuration Guide should be thoroughly reviewed to gain clear understanding of the system's capabilities and how to configure ADVISOR to best meet your needs. For example:

- How to setup/configure Clients in line with project needs; i.e., data to be collected, analysis to be conducted and delivery options to be considered?
- How to setup User Accounts and assign privileges?
- ➤ How quality and consistency should be controlled?







# 1.5 How is ADVISOR Organized?

ADVISOR has five main components organized within 3 windows (top, left and right – the sizes of the windows can be adjusted by dragging the border). Once you become familiar with these components, the system operation and navigation will become fairly simple.

- a) Basic Functions (top window) Actions available to user are presented at the top of the screen. You can Add, Save, Copy, Delete, Merge, Diverge, add comments/assumptions to a screen (Notes), Print a screen, Return to previous level (Up), Restore previous values, display context sensitive Help or Logout. Information is only saved when you click [Save].
- b) Path (top window) Tracks your progress as you navigate through ADVISOR.
- c) Tree (left window) Lists options (nodes) available to user. To expand an option (node), click on the [▶] icon. To view the contents of an option (node), click on corresponding node.
- d) Tabs (top of right window) Data for some nodes are divided into several tabs. Click on tab to view its contents.
- e) Main Window (right window) Content of each screen is presented in this window.







#### 1.6 Basic ADVISOR Functions

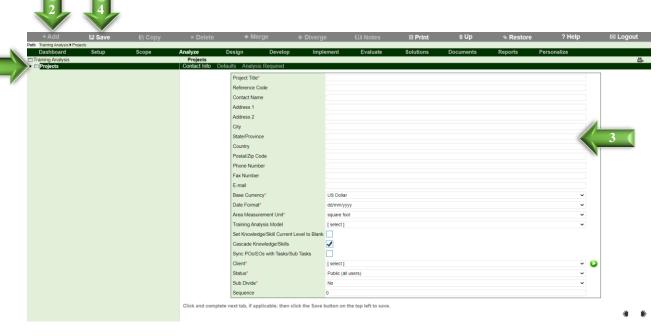
**Add:** To add a Project, Mission, Job, Task, Objective, Course or any other element:

**Step 1**: Click on corresponding folder (Projects, for example).

Step 2: Click [Add].

Step 3: Input the desired info.

Step 4: Click [Save].



**Edit:** To edit a Project, Mission, Job, Task, Objective, Course or any other element:

**Step 1**: Click on corresponding element (Project A, for example).

Step 2: Modify the desired info.

Step 3: Click [Save].









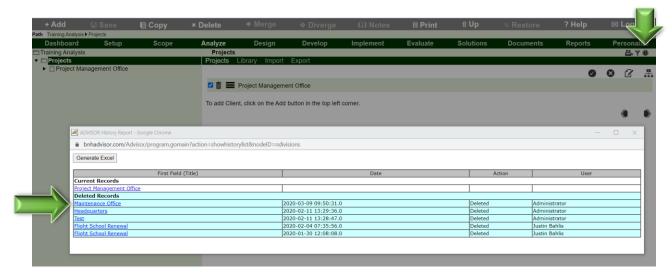
**Delete:** To delete a Project, Mission, Job, Task, Objective, Course or any other element:

**Step 1**: Place checkmarks next to the desired records (Project Management Office, for example).

Step 2: Click [Delete].



**Track Changes:** To find out when an element was created, modified or deleted and by whom, click on the View History oicon to display relevant data.



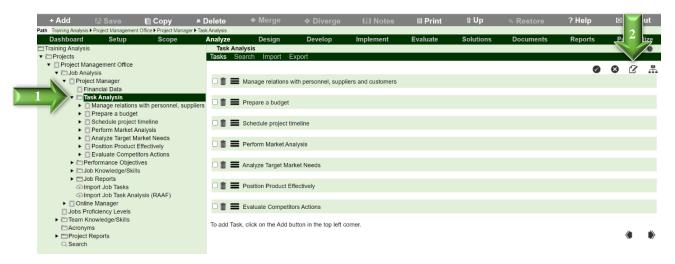




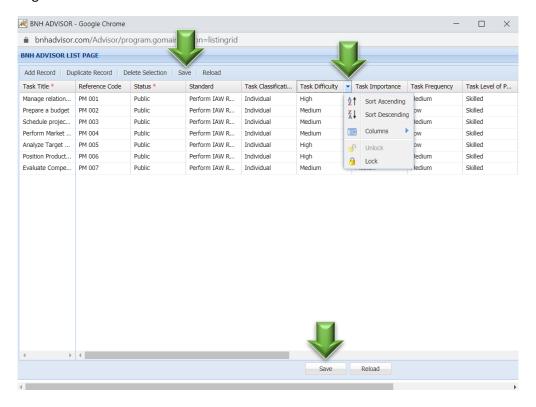


**Edit Multiple Records:** To edit multiple Projects, Missions, Jobs, Tasks, Objectives, Courses or any other elements:

- Step 1: Click on the corresponding folder.
- Step 2: Click on the Edit All 'L' icon.



The Projects, Missions, Jobs, Tasks, Objectives, Courses, and so forth are presented in an Excel like tabular format. You may sort the data on any column (Title, for example), or lock (prevent the column from scrolling), by clicking on the arrow to the right of the column title, and selecting desired option. To edit a field, click the field, input or select option. Once the desired fields/records are edited, click on [Save] to save all changes.







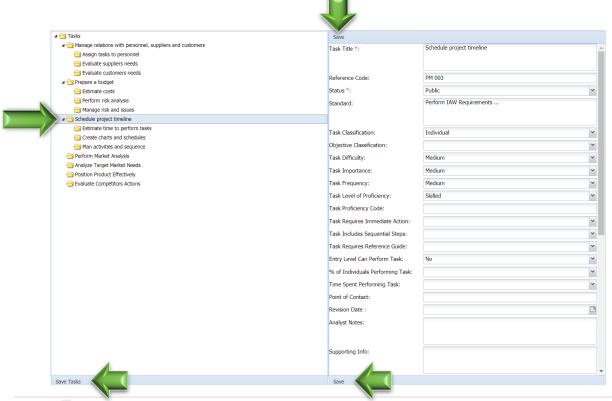
RNH

Modify Hierarchy: To change the hierarchy or the order of Tasks or Objectives:

- Step 1: Click on the corresponding folder.
- Step 2: Click on the Edit Tree 4 icon.



Tasks or Objectives are presented in a tree like structure. To change the hierarchy or order, simply drag and drop the tasks or objectives to the desired locations. All links to Missions, Jobs, Objectives, Courses, etc.; as well as attributes including Knowledge, Skills, Attitudes, References and so forth are preserved. For example, "Perform risk analysis" sub task may be dragged under the Tasks folder to become a Task. Moreover, all its links and attributes will remain intact. You may also view and edit the attributes of any Task or Objective by right clicking on the Task and selecting the Edit option. Once record is edited, click on [Save] button above the record to save; and the [Save Tasks] button to save hierarchy changes.



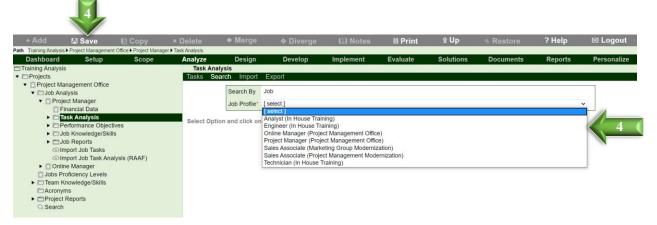


**Search and Copy:** You can search and copy Jobs, Tasks and Performance Objectives as follows:

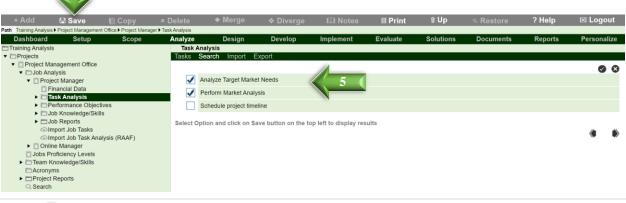
- Step 1: Click on the desired folder Job Analysis, Tasks Analysis or Performance Objectives.
- Step 2: Click on the [Search] tab.
- **Step 3**: Select the desired search criterion and click [**Save**] more options may be provided to display available elements.



**Step 4**: Select the desired item to copy data from and click [**Save**].



**Step 5**: Place checkmarks next to the desired elements (Tasks, for example) and click [**Save**] to copy the elements (Tasks) including attributes and sub elements (Sub Tasks).







Import Data: Dozens of Excel Spreadsheets are provided (<a href="http://www.bnhexpertsoft.com/data-collection-forms-configuration-version-12/">http://www.bnhexpertsoft.com/data-collection-forms-configuration-version-12/</a>) to simplify and speed offline data collection from Subject Matter Experts (SMEs). The attributes and options within each form (Job Tasks, for example) are identical to the corresponding (Job Tasks) fields within ADVISOR. Once completed, the data can be uploaded to ADVISOR Enterprise with a few mouse clicks, as follows:

- Step 1: Click on the folder where data should be imported. Please note that each spreadsheet is designed to import data under a specific folder within ADVISOR Enterprise. For example, the Mission Tasks spreadsheet is designed to import Tasks under Missions, while the Job Tasks spreadsheet is designed to import Tasks under Jobs.
- Step 2: Click on the [Import] tab.
- **Step 3**: Click [**Choose File**] and select the desired spreadsheet.
- **Step 4**: Indicate which row to start importing data from, in the **Start From Row** field. The top 4 rows in ADVISOR Excel spreadsheets are reserved for headings and instructions. Collected data typically starts on the 5<sup>th</sup> row.
- Step 5: Indicate where the data for each field resides within the Excel spreadsheet. For example, if Task Title is stored in column 1, then input 1; and so forth. Data in Excel spreadsheets is sequentially mapped to corresponding fields in ADVISOR. You are not required to import all attributes. For example, if the Status and Task Classification attributes are not required, do not input column numbers for these fields. ADVISOR will not import data for attributes that have not been assigned a column number.

**Step 6**: Click [Save] to import.



Note: **Reference Code** is also used for detecting duplicate records. For example, if Job Task is imported, ADVISOR will 1<sup>st</sup> verify whether the Job 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 Job Task in ADVISOR will be updated. If Cancel is selected, the import will be aborted.





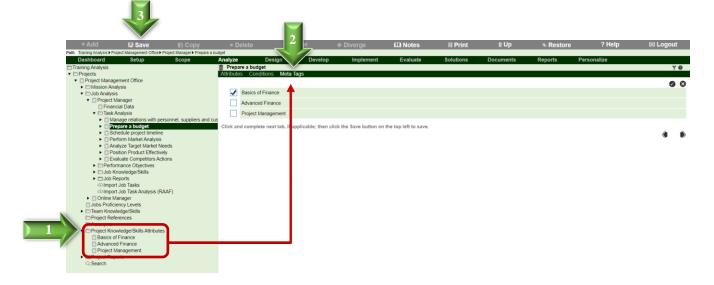


**Setup and Assign Meta Tags:** To minimize duplication each time a Mission, System or Project Task is added, it is stored in a centralized repository. The Tasks can, in-turn, be assigned to any Mission or System by clicking on the [**Select**] tab, placing checkmarks next to desired Tasks and clicking [**Save**].



Similarly, Knowledge, Skills and Attitudes (KSAs) are stored in a centralized repository and can be assigned to any Task or Objective.

To quickly zero in on desired Tasks or KSAs within a repository, Meta Tags can be created under the Project Attributes folder and assigned to any Task or KSA by clicking on [Meta Tags] tab, selecting the desired Meta Tags and clicking [Save].







**Specify Items per Page:** By default, 10 items (such as Projects, Tasks, Objectives, Knowledge/Skills, and so forth) are displayed on each page. Once the number of items exceeds 10, the remaining items are displayed on subsequent pages. The number of pages available for each item is indicated on the top right as shown below. To display the items within each page, click on the corresponding page number.



You can modify the number of items to be displayed on each page under [**Options**] tab for the **Preferences** node under the **Personalize** tab by specifying the number of items to be displayed on each page and clicking [**Save**].









**Limit Access to Data/Analysis:** By default, when a new Project, Job, Task, and so forth is created, its **Status** is set to **Public** to permit other Users to find, copy and reuse the Project, Job or Task using the Search function and in-turn minimize the effort needed to conduct the analysis. This does not imply that other Users can review and edit your Project, Job or Task. It simply implies that they can reuse. To maintain anonymity, you can set the Project, Job or Task Status to **Private**, and in-turn exclude them from the Search function.



**Collaborate with Team:** Each analysis including Project, Course and so forth is assigned to a specific User (Manager) – typically the individual that created the Project or Course. By default, only the Manager can view the Project or Course and make changes. To allow other Users to review and make changes, the Project or Course can be shared with them by clicking on the [**Sharing**] tab, placing checkmarks next their name and clicking [**Save**]. If the Project or Course Manager reports to another User, the Project or Course will be automatically shared with them. In this case, the checkmark next to the Supervisor name is presented in read only mode.

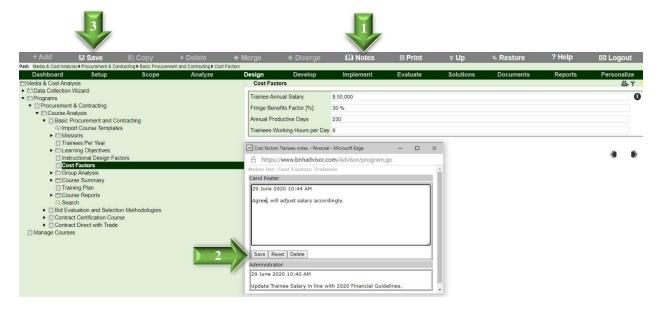








**Add Notes:** Users may add a Note to any screen by clicking on [**Notes**], typing the note in the new window and clicking [**Save**]. Notes from other Users are presented in read only mode in the bottom of the window. Users can only edit or delete their own Notes.



# 1.7 Learning ADVISOR

To use ADVISOR, you should know how to perform basic computer, Windows and Browser operations. For example, how to start and quit applications, selecting commands and dialog box options. To facilitate the learning process, ADVISOR comes with its own set of online tools. These include:

- > Online Tour: a slide show that highlights ADVISOR's main features. It is presented after User logs on ADVISOR. You can hide and redisplay by unchecking or rechecking the ADVISOR Tour field under the [Options] tab, under the Preferences node under the Personalize tab and clicking [Save].
- **Video Clips** to gain a better understanding of ADVISOR's main functions and features. To view, please visit the following: http://www.bnhexpertsoft.com/how-to-video-overview/.
- > Step-by-Step Guides for configuring ADVISOR, as well as conducting mission analysis, system analysis, competency analysis, job task analysis, media analysis, cost analysis, fidelity analysis, performance analysis, etc. To view and download, please visit the following: <a href="http://www.bnhexpertsoft.com/user-guides-version-12/">http://www.bnhexpertsoft.com/user-guides-version-12/</a>.
- Answers to Frequently Asked Questions are available online at: <a href="http://www.bnhexpertsoft.com/faq-1-install/">http://www.bnhexpertsoft.com/faq-1-install/</a>.
- ➤ Context Sensitive Online Help can be displayed for each screen by clicking on [Help]. Context sensitive video clips are also embedded throughout ADVISOR and can be viewed by clicking on the video icon.







- ➤ Basic Excel Data Collection Forms for various ADVISOR data elements along with data import instructions are available online at: <a href="http://www.bnhexpertsoft.com/data-collection-forms-configuration-version-12/">http://www.bnhexpertsoft.com/data-collection-forms-configuration-version-12/</a>.
- ➤ **Detailed Excel Data Collection Forms** for Project Tasks, System/Competency Tasks and Job Tasks along with data import instructions are available online at: <a href="http://www.bnhexpertsoft.com/detailed-data-collection-forms-version-12/">http://www.bnhexpertsoft.com/detailed-data-collection-forms-version-12/</a>.
- **Sample Reports** from each module are available online at: <a href="http://www.bnhexpertsoft.com/reports/">http://www.bnhexpertsoft.com/reports/</a>.
- **Technical Support:** Available 8:00 am to 6:00 pm EST by calling 1 (514) 745-4010. You may also fax your questions to 1 (514) 745-4011 or E-mail to <a href="mailto:support@bnhexpertsoft.com">support@bnhexpertsoft.com</a>.





# **Chapter 2: Dashboards**

#### 2.1 Introduction

ADVISOR maintains training effectiveness and efficiency over time (as missions, systems, jobs, policies, technologies, throughput, etc., change) by continually mapping training activities to operational requirements to identify gaps, duplications and training with minimal value. Impact including personnel/resource requirements; cost drivers; bottlenecks and deficiencies as well as recommended actions are quickly and concisely communicated through dashboards. A feature that would be highly beneficial for managing training programs. Few items to note:

1. When you click on the [**Dashboard**] tab, the results for the 1<sup>st</sup> Client are presented – i.e., Client with lowest sequence #. To view the Dashboard of another client, click on [**Choose Client**] and select.



- 10 Jobs/Roles are presented at a time. To find out which bar chart corresponds to which Job/Role, place the mouse over the bar chart to display the Job/Role title. If the Client has more than 10 Jobs/Roles, you can view more Jobs/Roles by clicking on [Next 10 Jobs]. To view earlier Jobs/Roles, click on [Previous 10 Jobs].
- 3. Similarly, you can view the % allocated to each segment of a pie chart by placing the mouse over relevant section.





- 4. Moreover, you can drill down on any Job/Role or specific segment of the pie chart to view data used to generate the chart by clicking on the corresponding bar chart or segment.
- 5. All data is automatically compiled and analyzed at the end of each day. If you made changes and wish to view the updated Dashboard, click on [Refresh].
- 6. You can also monitor Key Performance Indicators (KPIs) such as Training Alignment, Training Gap, Training Duplication, Cost Drivers, Training Cost per Individual, Time to Competency and Personnel/Resources Utilization/Bottlenecks over time by clicking on [Trends].
- 7. For each KPI, change can be observed over the past month, past year or past 5 years by clicking on [Choose Period] and selecting desired option. For example, is Training Alignment improving or getting worse over time.
- 8. To return to the Dashboard, click on [Dashboard].







# 2.2 Training Alignment

#### Overview

ADVISOR maps training activities to operational requirements to identify and highlight training that is no longer relevant, in other words Reveal Training Creep. Green indicates that the courses/training activities are highly aligned with operational requirements; Yellow somewhat aligned and Red poorly aligned.



#### How Training Alignment is Assessed ...

- ❖ ADVISOR identifies all active Courses for the Client.
- ❖ For each course, ADVISOR identifies whether the Learning Objectives (LOs), Teaching Points or Key Learning Points are linked to an Operational Requirements i.e. an Enabling Objective (EO) or a Performance Objective (PO).
- ❖ For each course, Training Alignment Score is calculated as follows: (Total # of hours of LOs linked to an EO or PO / Total # of hours of LOs in Course) x 100%
- Based on Training Alignment Score, each Course is classified as High (Green), Medium (Yellow) or Low (Red) as follows:

Classification	Training Alignment Score				
High	Greater than 90%				
Medium	50% to 90%				
Low	Less than 50%				

Overall Training Alignment Score is calculated as follows:

(Total # of hours of LOs linked to an EO or PO within all Courses assigned to the Client / Total # of hours of LOs in all Courses assigned to the Client) x 100%

#### How Courses within each Segment can be Viewed ...

Click on the High, Medium, or Low sections of the pie chart to display applicable courses including the requirement (i.e., the mission/goal, system, competency or job) that each course supports; where the requirement has been generated – by a mission/goal, system, competency or a job; how the course is delivered, its length and Training Alignment score. Few items to note:

- ❖ The # of Trainees reflect the # of individuals to be trained as of today in other words, it does not include individuals that have already taken the course. For example, if the annual # of trainees in a course is 100, the life of the course is 5 years, and the start date of the course is January 1<sup>st</sup>, 2019; the number of trainees will be 400 if the dashboard report is generated on January 1<sup>st</sup>, 2020; and 350 if the dashboard is generated on July 1<sup>st</sup>, 2020.
- ❖ Since Training Alignment Score is based on the Length of Learning Objectives, Teaching Points (TPs) or Key Learning Points (KLPs); time should be assigned time to LOs, TPs or KLPs. Otherwise, Training Alignment Score cannot be computed.
- ❖ To send an email to the Course Manager, click on their name.





Generate Excel

#### Training Alignment For Corporate Training Division

Prepared by:	Administrator					
Date:	18 August 2020 01:00 PM					

Course Title	Reference Code	End Date (mm/dd/yyyy)	# of Trainees	Requirement	Classification	Delivery Media	Length (hrs)	Alignment %	Manager
Basic Procurement and Contracting	PC-001	01/01/2028	1618	Assign delegated authorities for procurement and contracting	Mission	Instructor- led (Classroom)	9.35	100%	Administrator
Contract Direct with Trade	PC-004	01/01/2028	466	Procure goods and services for under \$25,000	Mission	Instructor- led (Classroom) Instructor with Equipment	13.95	92.86%	Administrator
Online Management	ON-SL-03	01/01/2029	1240	Online Manager Sales Associate	Job	Instructor- led (Classroom)	13.55	100%	Administrator

### How Learning Objectives with each Course can be Viewed ...

Click on the Course Title to view the Learning Objectives, Teaching Points or Key Learning Points in the Course including Length, as well as the Knowledge/Skills, Enabling/Performance Objectives, Tasks and Missions/Goals, Systems, Competencies or Jobs that each LO, TP or KLP supports. If an LO, TP or KLP does not support a KSA, EO, PO, Task, Mission/Goal, System, Competency or Job, then the requirement for this LO, TP or KLP should be questioned. In other words, why is this LO, TP or KPL needed?

Generate Excel

#### **Basic Procurement and Contracting**

Learning Objective		Knowledge/Skill	Enabling Objective	Performance Objective	Task	Mission		Do not
Course Overview	0.2							support an
Audience: a. Overview of Procurement Authorities (PA), b. Key Activities, c. Title	0.1						•	operational
Other Authorities: a. Project Manager (PM), b. The Directorate of Quality Assurance (DQA), c. Contracting Officer, d. Contracting Authority	0.1						+	requirement.  Are they
Objectives	0.2	Objectives	Recognize Roles and	Recognize Role in the Procurement and		Assign delegated authorities for		needed
			Responsibilities	Contracting Process		procurement and contracting		
Course Content	0.1	Course Content	Recognize Roles and Responsibilities	Recognize Role in the Procurement and Contracting Process		Assign delegated authorities for procurement and contracting		
Course Legend: a. Very Important Icon, b. Important Icon, c. Question Icon, d. Interesting Icon, e. Activity Icon, f. Link Icon	0.15	Course Legend: a. Very Important Icon, b. Important Icon, c. Question Icon, d. Interesting Icon, e. Activity Icon, f. Link Icon	Recognize Roles and Responsibilities	Recognize Role in the Procurement and Contracting Process		Assign delegated authorities for procurement and contracting		





# 2.3 Training Gap

#### Overview

ADVISOR maps training requirements to training activities to identify and highlight missing training, in other words Training Gaps. Each Job/Role is represented by a bar chart. The title of the Job/Role is displayed when the mouse is placed over the bar chart. Green represents training requirements that are being addressed, and Red training requirements that are not being addressed.



#### Notes:

- ❖ 10 Jobs/Roles are presented at a time. To view more, click on [Next 10 Jobs]. To view earlier Jobs/Roles, click on [Previous 10 Jobs].
- ❖ Jobs with identical Reference Codes for the same Client are assumed to be the same. In other words, the data for all Jobs with the same Reference Code are combined and presented under a single bar chart.

#### How Training Gaps are Assessed ...

- ADVISOR identifies all Jobs for the Client.
- For each Job, the Tasks and Sub Tasks are identified along with training requirements (train or no train) based on Difficulty, Importance and Frequency (DIF) model or user defined specification.
- For each Task or Sub Task that requires training, the corresponding Performance/Training/Enabling Objectives are identified.
- For each Performance/Training/Enabling Objective, the Knowledge, Skills and Attitudes (KSAs) along with the level of competency needed to perform the Task to the desired standard are identified.
- Knowledge, Skills and Attitudes (KSA) Gaps are compiled next by comparing desired KSA levels to current levels.
- Learning Objectives (LOs), Teaching Points (TPs) or Key Learning Points (KLPs) needed to close the KSA Gaps are than identified including the Course in which they reside.
- ❖ If a KSA Gap is linked to an LO, TP or KLP within a Course, than the training requirement is assumed to be addressed i.e., no training gap. If on the other hand, no links to Course LOs, TPs or KLPs are found, the training requirement is considered not addressed; and in-turn implies a Training Gap.
- The Training Gap Score (Red portion of the Bar Chart) is calculated as follows:

(Total # of KSAs with Gaps not linked to a Course / Total # of KSAs with Gaps) x 100% Note: The Green portion of the Bar Chart is calculated as follows:

(Total # of KSAs with Gaps linked to a Course / Total # of KSAs with Gaps) x 100%





#### How Training Gaps can be Viewed ...

Click on the Bar Graph to display Tasks and Sub Task for the Job/Role; as well as Training Requirements, Training Priority, Performance/Training/Enabling Objectives, Knowledge Skills Attitudes (KSA) required to perform each Task or Sub Task, KSA Gaps, and where the KSA Gaps are being addressed – i.e., LOs, TPs or KLPs within various courses/training activities. Few items to note:

- ❖ The current Training Gap Analysis focuses on individual versus collective training. In other words, Performance, Training and Enabling Objectives that are directly linked to various courses/training activities (i.e., collective training), are not taken into consideration.
- ❖ LOs, TPs and KLPs within a Course that are not linked to a Training Requirements (i.e. KSA Gap) are not included in the Training Gap chart or report − since they represent unwarranted or unnecessary training, and are captured in the Training Alignment Report (Section 2.2).
- ❖ To send an email to the Job/Role Manager, click on their name.

Generate Excel

Training Gap For CoPilot

Prepared by: Administrator

Date: 18 August 2020 01:07 PM

Manager	Task	Task Training Requirement	Training Priority	Performance/Enabling Objective	Knowledge/ Skill	Gap	Learning Objective	Course	
Administrator	Drive plane on tarmac	Train		Drive plane on tarmac	Start Up	Yes	Start Up	Copilot Training	
			Not applicable		Maneuver Plane on Tarmac	Yes	Maneuver Plane on Tarmac	Copilot Training	
					Tow Plane on Tarmac	Yes	Tow Plane on Tarmac	Copilot Training	
	Operate radio r communications systems		Not applicable	Operate radio communications systems	Radio control tower	Yes	Radio control tower	Copilot Training	
Administrator					Operate Emergency Radio Systems	Yes	Operate Emergency Radio Systems	Copilot Training	
					Radio request to land and necessary procedures	Yes	Radio request to land and necessary procedures	Copilot Training	Training
<u>Administrator</u>	Perform emergency procedures		Not applicable	Perform emergency procedures\\n	Radio Mayday	Yes	Radio Mayday	Copilot Training	requiremen
					Request Emergency Landing	Yes	Request Emergency Landing	Copilot Training	not addressed.
Administrator	Perform pre flight take off procedures	Train	Not applicable	Perform pre flight take off procedures\\n	Perform pre flight checklist	Yes	Perform pre flight checklist	•	addressed.
					Perform all pre flight safety checks	Yes	Perform all pre flight safety checks	4	





# 2.4 Training Duplication

#### Overview

ADVISOR uncovers potential duplication across multiple training programs by identifying where similar Knowledge, Skills and Attitudes (KSA) Gaps are addressed. Potential Training Duplication is flagged when the same KSA Gap is addressed within multiple active courses. Green indicates that each KSA Gap is addressed in a single course; Yellow indicates that similar KSA Gaps are addressed within two courses; and Red indicates that similar KSA Gaps are address in more than two courses.



#### Notes:

- Similar KSA Gaps addressed by multiple Learning Objectives (LOs), Teaching Points (TPs) or Key Learning Points (KLPs) within the same course are not flagged as duplicates.
- ❖ KSA Gaps that are not linked to any course are not taken into consideration.
- Active courses imply courses that are still underway. For example, if the course start date is January 1<sup>st</sup>, 2016 and its expected life is 3 years, than the course will not be considered active if the dashboard is generated on January 1<sup>st</sup>, 2020. If, on the other hand, its expected life is 5 years, than the course will be considered active.

#### How Training Duplication is Assessed ...

- ❖ ADVISOR identifies all Projects for the Client.
- For each Project, ADVISOR identifies all KSAs. KSAs with identical Reference Codes are assumed to be similar – even if they belong to different Projects. KSAs with no Reference Codes are assumed to be unique.
- Knowledge, Skills and Attitudes (KSA) Gaps from Missions/Goals, Systems, Competencies and Jobs are compiled next.
- Learning Objectives (LOs), Teaching Points (TPs) or Key Learning Points (KLPs) needed to close the KSA Gaps are than identified including the Course in which they reside.
- ❖ Based on the number of active courses that address similar KSA Gaps, training duplication is classified as High (Green), Medium (Yellow) or Low (Red) as follows:

Classification	Criterion
High	Similar KSA Gaps are addressed in more than 2 active courses
Medium	Similar KSA Gaps are addressed in 2 active courses
Low	Similar KSA Gaps are addressed in 1 active course





#### How Duplicate Training can be Viewed ...

Click on the High, Medium, or Low sections of the pie chart to display relevant Knowledge, Skills and Attitudes (KSAs) and where the KSA Gaps are being addressed. Few items to note:

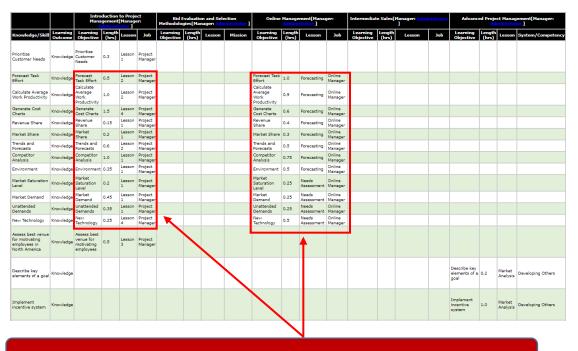
- ❖ KSAs gaps with or without LOs, TPs or KLPS that are not linked to any course are not included in the Training Duplication chart or report since they represent a requirement that has not been addressed and are captured under Training Gap report (Section 2.3).
- LOs, TPs and KLPs within a Course that are not linked to a Training Requirements (i.e. KSA Gap) are not included in the Training Duplication or report since they represent unwarranted or unnecessary training, and are captured in the Training Alignment Report (Section 2.2).
- To identify Knowledge, Skills and Attitudes (KSA) with identical Reference Codes (i.e., KSAs that have been assumed to be similar), click on the KSA Title. The titles of similar Knowledge/Skills/Attitudes along with Learning Outcomes and the Projects that they belong to are presented.
- To send an email to the Course Manager, click on their name.

Generate Excel

Training Duplication
For Corporate Training Division

Prepared by: Administrator

Date: 18 August 2020 01:10 PM



Similar KSA Gaps addressed within multiple courses ...





# 2.5 Training Cost

#### Overview

ADVISOR identifies upcoming training activities within each year, as well as forecasts budget, personnel and resources needed to develop, deliver, administer, manage, maintain and support all courses within each year.



#### Note:

❖ Active courses imply courses that are still underway. Only active courses are included in Training Cost report. For example, if the course start date is January 1<sup>st</sup>, 2016 and its expected life is 3 years, than the course will not be included if the dashboard is generated on January 1<sup>st</sup>, 2020. If, on the other hand, its expected life is 5 years, than the course will be included in 2020.

## How Training Costs are Assessed ...

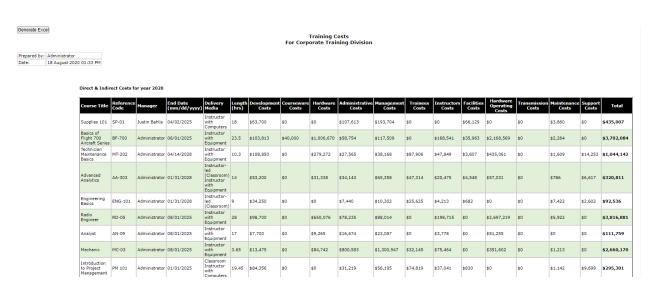
- ❖ ADVISOR identifies all active Courses for a Client.
- ❖ ADVISOR determines the end date of each course as follows: Course Start Date + Expected Life
- ❖ ADVISOR identifies in which years each course is delivered.
- Training Courses including throughput are compiled for each year. The process continues until all scheduled courses have been accounted for.
- Based on course length, number of trainees, expenditures, personnel and resource requirements; the direct and indirect costs needed to develop, deliver, administer, manage, and support each course per year as well as personnel and resource requirements are forecasted.
- The total direct and indirect costs for each year is computed by adding the corresponding costs of all scheduled courses within that year.



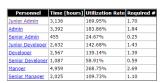


## How Costs, Personnel & Resource Requirements can be Viewed ...

Total training costs for each year can be viewed by placing the mouse over the corresponding point in the graph. To view a detailed breakdown of the costs, click on the point/year. All scheduled Courses for that year are presented, along with Reference Code, Course Manager, Course End Date, Delivery Media and Length. Furthermore, detailed cost breakdown of each Course for selected year based on current delivery option is presented. Please note that only upcoming costs are accounted for in the table below. In other words, it does not include money already spent. For example, if a course is scheduled to run 6 times per year, and the start date of the course is January 1<sup>st</sup>, 2020; only ½ the costs will be included if the dashboard is generated on July 1<sup>st</sup>, 2020.



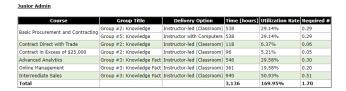
Moreover, Personnel and Resources requirements for selected year are also presented along with the Number of Hours needed by each [Time hours], Utilization Rate (i.e., % of available time needed to address requirements), and the number individuals, equipment or facilities needed [Required #].



Resources	Time [hours]	<b>Utilization Rate</b>	Required #
Classroom	825	41.13%	0.41
Computer Room	432	21.56%	0.22
High Fidelity Simulator	0	0.00%	0.00
Medium Fidelity Simulator	0	0.00%	0.00
Small Plane	513	25.60%	0.26

To find out where each person or resource is allocated, click on the person or resource title. The Courses/ Training Activities that the individual or resource has been assigned are presented along with the Time Needed, Utilization Rate and Required #.

Generate Excel







# 2.6 Cost Drivers

## Overview

ADVISOR identifies upcoming training activities and forecasts expenditures over training programs life cycle to uncover cost drivers — i.e., training activities that consume the most budget, personnel and resources.



#### Note:

❖ Active courses imply courses that are still underway. Only active courses are included in Cost Drivers report. For example, if the course start date is January 1<sup>st</sup>, 2016 and its expected life is 3 years, than the course will not be included if the dashboard is generated on January 1<sup>st</sup>, 2020. If, on the other hand, its expected life is 5 years, than only the costs for the 5<sup>th</sup> year are included.

# **How Training Costs are Assessed ...**

- ❖ ADVISOR identifies all active Courses for a Client.
- ❖ ADVISOR determines the end date of each course as follows: Course Start Date + Expected Life
- Based on course length, number of trainees, expenditures, personnel and resource requirements, the direct and indirect costs needed to develop, deliver, administer, manage, and support each course over its remaining life are forecasted.
- ❖ Total direct and indirect costs for each activity (i.e., development, administrative, instructors, transmission, courseware, management, facilities, maintenance, hardware, trainees, operating and support) are computed by adding the corresponding costs from all scheduled courses.





#### How Cost Drivers can be Viewed ...

The percentage of cost allocated to each activity (development, administrative, instructors, transmission, courseware, management, facilities, maintenance, hardware, trainees, operating and support) can be viewed by placing the mouse over the corresponding segment of the pie chart. To view a detailed breakdown of the costs, click on the pie chart. All scheduled Courses are presented, along with Reference Code, Course Manager, Course End Date, Delivery Media and Length. Furthermore, detailed cost breakdown of each Course based on current delivery option is presented. Please note that only upcoming costs are accounted for in the table below. In other words, it does not include money already spent. For example, if a course is scheduled to run 6 times per year, and the start date of the course is January 1<sup>st</sup>, 2020; only ½ the costs will be included if the dashboard is generated on July 1<sup>st</sup>, 2020.

Generale Eusel

Cost Drivers
For Corporate Training Division

Perspared by: Administrator
Date: 28 February 2020 03:08 PM

Direct & Indirect Costs	[2020 to 20	028]																
Course Title	Reference Code	Manager	End Date (mm/dd/yyyy)	Delivery Media	Length (hrs)	Development Costs	Courseware Costs	Hardware Costs	Administrative Costs	Management Costs	Trainees Costs	Instructors Costs	Facilities Costs	Hardware Operating Costs	Transmission Costs	Maintenance Costs	Support Costs	Total
Technician Maintenance Basics	MT-202	Administrator		Instructor with Equipment	10.3	\$108,850	\$0	\$279,272	\$778,097	\$1,077,364	\$469,166	\$460,444	\$101,829	\$12,280,589	\$0	\$45,424	\$402,330	\$16,003,36
Advanced Analytics	AA-303	Administrator	01/31/2028	Instructor-led (Classroom) Instructor with Equipment	14	\$58,275	\$0	\$28,340	\$513,738	\$1,174,155	\$389,760	\$184,286	\$99,848	\$778,039	\$0	\$0	\$159,714	\$3,386,155
Engineering Basics	ENG-101	Administrator	01/31/2028	Instructor-led (Classroom)	9	\$34,250	<b>s</b> 0	\$0	\$143,049	\$198,067	\$109,293	\$0	\$11,188	\$0	s0	\$114,262	\$42,712	\$652,821
Leadership Decisiveness Intro	BSC-090	Administrator	02/03/2028	Instructor with Equipment	4	\$3,500	\$0	\$164,590	\$1,161,522	\$1,608,261	\$382,030	\$238,974	\$12,080	\$7,308,400	\$0	\$1,225	\$187,765	\$11,068,34
Intermediate Sales		Administrator	01/01/2028	Instructor-led (Classroom)	8	\$30,500	\$0	\$0	\$393,066	\$707,519	\$286,724	\$226,158	\$10,003	\$0	\$0	\$10,594	\$98,944	\$1,763,508
Online Management		Administrator	01/01/2028	Instructor-led (Classroom)	13.55	\$85,688	\$0	\$0	\$196,982	\$354,568	\$510,797	\$170,448	\$75,390	\$0	\$0	\$0	\$88,054	\$1,481,928
Sales Basics	SL-001	Administrator	01/01/2028	Instructor with Computers	15.4	\$68,075	\$30,000	\$0	\$172,145	\$238,355	\$407,189	\$114,171	\$50,499	\$0	s0	\$28,410	\$0	\$1,108,845
Contract in Excess of \$25,000	PC-005	Administrator	01/01/2028	Instructor-led (Classroom) Instructor with Equipment	7.5	\$36,374	\$0	\$709	\$161,333	\$281,457	\$105,791	\$32,727	\$5,110	\$19,523	\$0	\$146,922	\$25,337	\$815,282
Contract Direct with Trade	PC-004	Administrator	01/01/2028	Instructor-led (Classroom) Instructor with Equipment	13.95	\$53,627	\$50,000	\$680	\$190,128	\$406,041	\$249,384	\$68,948	\$3,266	\$751	\$0	\$217,824	\$26,454	\$1,267,103
Contract Certification Course	PC-003	Administrator	01/01/2028	Instructor with Equipment	4.55	\$52,187	\$0	\$414,004	\$549,026	\$629,235	\$609,458	\$64,418	\$32,563	\$1,963,546	\$0	\$350,380	\$88,991	\$4,753,808
Bid Evaluation and Selection Methodologies	PC-002	Administrator	01/01/2028		0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	so	\$0	\$0	\$0
Basic Procurement and Contracting	PC-001	Administrator	01/01/2028	Instructor-led (Classroom) Instructor with Computers	9.35	\$36,512	\$0	<b>s</b> 0	\$712,449	\$1,567,387	\$856,680	\$207,094	\$14,499	\$0	\$0	\$0	\$151,880	\$3,546,500
Total					109.6	\$567,838	\$80,000	\$887,595	\$4,971,535	\$8,242,410	\$4,376,272	\$1,767,667	\$416,276	\$22,350,847	\$0	\$915,040	\$1,272,182	\$45,847,66



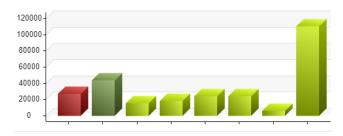


# 2.7 Training Cost per Individual

#### Training Cost per Individual

#### Overview

ADVISOR identifies courses/training activities required by each Job/Role and forecasts the total training cost per individual.



#### Note:

- ❖ 10 Jobs/Roles are presented at a time. To view more, click on [Next 10 Jobs]. To view earlier Jobs/Roles, click on [Previous 10 Jobs].
- ❖ Active courses imply courses that are still underway. Only active courses are included in Training Cost per Individual. For example, if the course start date is January 1<sup>st</sup>, 2016 and its expected life is 3 years, than the course will not be included if the dashboard is generated on January 1<sup>st</sup>, 2020. If, on the other hand, its expected life is 5 years, than the course will be included.

### How Training Costs are Assessed ...

- ❖ ADVISOR identifies all Jobs/Roles for a Client.
- ❖ ADVISOR identifies all active Courses for a Client.
- Courses allocated to each Job/Role are identified by examining the Target Audience for each Course.
- Based on course length, number of trainees, expenditures, personnel and resource requirements, the direct and indirect costs needed to develop, deliver, administer, manage, and support each course over life are forecasted.
- The cost per trainee/individual is computed by dividing the total direct and indirect course costs by the total number of trainees.
- The cost per Job/Role is computed by adding the direct and indirect costs per trainee/individual of all relevant courses.





## How Training Cost Breakdown can be Viewed ...

The total direct and indirect costs for each Job/Role can be viewed by placing the mouse over the bar chart. To view a detailed breakdown of the Job/Role costs, click on the corresponding bar chart. All active courses allocated to the Job/Role are presented, along with Reference Code, Course Manager, Course End Date, Delivery Media and Length. Furthermore, Direct, Indirect and Total Costs per Trainee for each Course based on current delivery option are presented. Few items to note:

- Only active courses are included in table below. For example, if the course start date is January 1<sup>st</sup>, 2016 and its expected life is 3 years, than the course will not be included if the dashboard is generated on January 1<sup>st</sup>, 2020. If, on the other hand, its expected life is 5 years, than the course will be included.
- ❖ To send an email to the Course Manager, click on their name

Generate Exce		Training Co For Analysi
Prepared by:	Administrator	
Date:	18 August 2020 01:43 PM	

Course Title	Reference Code		End Date (mm/dd/yyyy)	Job	Delivery Media	Length (hrs)	Direct Cost per Trainee	Indirect Cost per Trainee	Total Cost per Trainee
Advanced Analytics	AA-303	Administrator	01/31/2028	Analyst	Instructor-led (Classroom) Instructor with Equipment	14	\$2,254	\$3,194	\$5,448
Supplies 101	SP-01	Justin Bahlis	04/02/2025	Analyst	Instructor with Computers	18	\$26	\$659	\$685
Analyst	AN-09	Administrator	08/01/2025	Analyst	Instructor with Equipment	17	\$85,977	\$12,210	\$98,187
Analyst Course	An-07	Administrator	08/01/2025	Analyst	Instructor with Computers	12	\$279	\$1,300	\$1,579
Total						61	\$88,536	\$17,363	\$105,899

To view a detailed cost breakdown of each course, click on Course Title. The total direct and indirect Development, Courseware, Hardware, Administrative, Management, Trainees, Instructors, Facilities, Operation, Transmission, Maintenance and Support costs over life are presented along with Total Number of Trainees and Cost per Trainee.

#### Generate Excel

Course Title	Group Title	Delivery Option	Length [hours]	Development Costs	Courseware Costs	Hardware Costs	Administrative Costs	Management Costs	Trainees Costs	Instructors Costs	Facilities Costs	Hardware Operating Costs	Transmission Costs	Maintenance Costs	Support Costs	Total	Total Number of Trainees	Cost per
Advanced	Knowledge Fact	(Classroom)	12	\$45,500	\$0	\$0	\$246,304	\$640,391	\$1,064,205	\$241,205	\$87,600	\$0	\$0	\$19,110	\$160,917	\$2,505,232	1070	\$2,341
Analytics	Psychomotor		2	\$7,700	\$0	\$31,338	\$584,000	\$949,000	\$86,393	\$256,700	\$23,000	\$1,386,900	\$0	\$0	\$0	\$3,325,031	1070	\$3,108

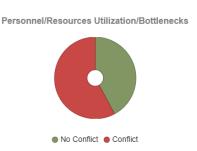




# 2.8 Personnel/Resources Utilization/Bottlenecks

#### Overview

ADVISOR forecasts personnel and resources needed to undertake current and upcoming projects, and maps them to existing capabilities to identify excess capabilities and bottlenecks. In other words, to identify whether sufficient personnel and resources are available to meet current and upcoming demands.



## How Personnel/Resources Utilization/Bottlenecks are Assessed ...

- ADVISOR identifies all Personnel and Resources for a Client. Personnel include all individuals with ADVISOR User Accounts and Project Accounts assigned to the Client, and classified as a Project Team Member. Resources – including Facilities and Equipment – are defined under the Inventory folder.
- Activities assigned to each individual and resource over a 5 year period are compiled and presented in a Gantt chart.
- ❖ For each individual or resource, the Utilization Rate for each Activity is computed by dividing the Time Assigned to the Activity (Project Task) by the Time Available for individual or resource during this period. For example, the Utilization Rate for an Activity that requires 60 hours to complete within two weeks, is 75% if the individual or resource has 80 hours available (75% = 60/80). The Gantt chart is presented in Green, in this case, since the individual or resource has sufficient time to complete. The Utilization Rate would be 150% if the individual or resource has 40 hours available (150%=60/40). In the case, the Activity is presented in the Gantt chart in Red to indicate a potential bottleneck.
- Similarly, if multiple Activities are assigned to an individual or resource during the same time period, a bottleneck could arise if the combined Time Assigned to all Activities exceeds the Time Available for the individual or resource.
- ❖ For each individual or resource, a Daily Calendar over the 5 year period is also generated to indicate how many hours are assigned to the individual or resource in each day; and whether the allocated time is (Green) within available hours or (Red) exceeds available hours.
- ❖ Pie Chart is generated next based on the % of individuals and resources that have conflicts (bottlenecks) in their schedule − i.e., with Utilization Rate exceeding 100% − versus those that don't.
- To view personnel and resources that have or do not have conflicts in their schedule, click on the corresponding segment of the pie chart.





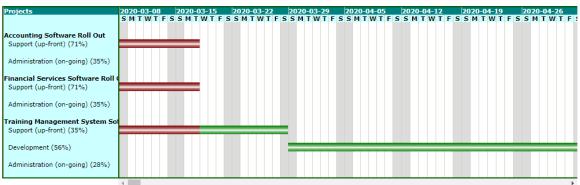


## How Gantt & Daily Schedules can be Viewed ...

Click on the Individual Name or Resource Title to view a Gantt chart of Projects and Tasks assigned to the individual or resource as well as the Utilization Rate for each Activity/Task. The Gantt chart is followed by a Daily Calendar for the 5 year period that indicates the number hours assigned to the individual or resource in each day; and whether the allocated time is (Green) within available hours or (Red) exceeds available hours. Few items to note:

- Activities/Tasks and Daily Calendar with Utilization Rate above 100% are color coded Red.
- ❖ Activities/Tasks and Daily Calendar with Utilization Rate below 100% are color coded in Green.
- The Gantt chart and Daily Calendar only present upcoming Activities/Tasks. In other words, Activities/ Tasks that have been completed are not presented.
- The Gantt chart and Daily Calendar are limited to a maximum of 5 years.

#### **Stephany Berry**



March 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
		Hours: 14.25	Hours: 14.25	Hours: 14.25	Hours: 14.25	Hours: 0
		Rate: 178.08%	Rate: 178.08%	Rate: 178.08%	Rate: 178.08%	Rate:
15	16	17	18	19	20	21
Hours: 0	Hours: 14.25	Hours: 14.25	Hours: 2.84	Hours: 2.84	Hours: 2.84	Hours: 0
Rate:	Rate: 178.08%	Rate: 178.08%	Rate: 35.48%	Rate: 35.48%	Rate: 35.48%	Rate:
22	23	24	25	26	27	28
Hours: 0	Hours: 2.84	Hours: 0				
Rate:	Rate: 35.48%	Rate:				
29	30	31				
Hours: 0	Hours: 4.5	Hours: 4.5				
Rate:	Rate: 56.25%	Rate: 56.25%				

April 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
			Hours: 4.5	Hours: 4.5	Hours: 4.5	Hours: 0
			Rate: 56.25%	Rate: 56.25%	Rate: 56.25%	Rate:
5	6	7	8	9	10	11
Hours: 0	Hours: 4.5	Hours: 0				
Rate:	Rate: 56.25%	Rate:				
12	13	14	15	16	17	18
Hours: 0	Hours: 4.5	Hours: 0				
Rate:	Rate: 56.25%	Rate:				
19	20	21	22	23	24	25
Hours: 0	Hours: 4.5	Hours: 0				
Rate:	Rate: 56.25%	Rate:				
26	27	28	29	30		
Hours: 0	Hours: 4.5	Hours: 4.5	Hours: 4.5	Hours: 4.5		
Rate:	Rate: 56.25%	Rate: 56.25%	Rate: 56.25%	Rate: 56.25%		





# 2.9 Recommended Media

#### Overview

ADVISOR identifies viable delivery options for each course/training activity, and recommends technologies that could improve training effectiveness and efficiency. In other words, options that will generate the greatest impact.



#### Note:

❖ Active courses imply courses that are still underway. Only active courses are considered in the analysis. For example, if the course start date is January 1<sup>st</sup>, 2016 and its expected life is 3 years, than the course will not be included if the dashboard is generated on January 1<sup>st</sup>, 2020. If, on the other hand, its expected life is 5 years, than the course will be included.

#### How Recommended Media is Assessed ...

- ❖ ADVISOR identifies all active Courses for a Client.
- ADVISOR determines the end date of each course as follows: Course Start Date + Expected Life
- For each course, ADVISOR identifies viable delivery options for each Learning Objective (LO), Teaching Point (TP) or Key Learning Point (KLP) based on instructional design requirements.
- ❖ For each viable delivery option, ADVISOR forecasts the direct and indirect costs needed to develop, deliver, administer, manage, and support each course over life − based on course length, number of trainees, expenditures, personnel and resource requirements.
- Potential Direct, Indirect and Total Savings as well as Return on Investment (ROI) are computed by comparing the direct and indirect costs of current delivery options to viable delivery options.
- ❖ For each LO, TP or KLP, the option that best meets instructional design requirements at lowest cost is recommended i.e., option with highest value. Users may override ADVISOR's recommendations, as needed.
- ❖ Potential Savings from each recommended media (i.e., instructor-led, print, tapes, computer based training, electronic performance support systems, mobile learning, social learning, conferencing, virtual classrooms, training devices and virtual reality) are combined for all active Courses and presented in a pie chart to highlight options that could generate the greatest impact.





## How Recommendations for Each Course and Learning Objective can be Viewed ...

The percentage of savings that can be generated by each media (i.e., instructor-led, print, tapes, computer based training, electronic performance support systems, mobile learning, social learning, conferencing, virtual classrooms, training devices and virtual reality) can be viewed by placing the mouse over the corresponding segment of the pie chart. To find out which courses can benefit from each media recommendation, click on the corresponding segment of pie chart. Relevant Courses are presented along with Reference Code, Course Manager, Course Start Date and Course End Date. Moreover, each Course is divided into Segments, if applicable; and for each Segment Current Delivery Option, Recommended Delivery Option, Length, and Potential Direct, Indirect and Total Savings, as well as Return on Investment (ROI) that may result from Recommended Delivery Option are presented. Please note that only active courses are included in table below. Few items to note:

- Potential Direct, Indirect and Total Savings as well as the ROI are based on total course's life cycle. In other words, if the course is already underway, potential savings and ROI may no longer be accurate and in-turn the values are dimmed.
- Recommended Media is based on option selected by User under User Recommendation node for each Course. This may include ADVISOR Recommendation, Currently Used or User Defined Option.
- ❖ To send an email to the Course Manager, click on their name



Course Title	Reference Code	Manager	End Date (mm/dd/yyyy)	Current Delivery	Recommended Delivery	Length (hrs)	Direct Saving	Indirect Saving	Total Saving	ROI
Advanced Analytics	AA-303	Administrator	01/21/2020	Instructor-led (Classroom)	Internet Virtual Classroom	12	\$363,620	\$502,409	\$866,029	4.42%
Advanced Analytics	AA-303	Auministrator	01/31/2020	Instructor with Equipment	Level 2 - Part Task Trainer	2	\$1,291,513	\$748,959	\$2,040,472	8.33%
Engineering Basics	ENG-101	Administrator	01/31/2028	Instructor-led (Classroom)	Internet Virtual Classroom	9	\$478,782	\$77,720	\$556,502	4.54%
Intermediate Sales	IM-SI-04	Administrator	01/01/2020	Instructor-led (Classroom)	Internet Virtual Classroom	1	\$352,933	\$177,000	\$529,933	11.38%
Intermediate Sales	114-36-04	AUTHINISTIATOL	01/01/2020	Instructor-led (Classroom)	Video Conferencing	8	\$936,437	\$796,564	\$1,733,001	7.27%
Online Management	ON-SL-03	Administrator	01/01/2028	Instructor-led (Classroom)	Internet Virtual Classroom	13.55	\$1,289,115	\$249,950	\$1,539,065	6.12%
Sales Basics	SL-001	Administrator	01/01/2028	Instructor with Computers	Internet Virtual Classroom	16.05	\$784,663	\$353,667	\$1,138,330	4.9%
Basic Procurement and Contracting	DC 001	Administrator	01/01/2020	Instructor-led (Classroom)	Video Conferencing	8.95	\$757,013	\$1,133,035	\$1,890,048	12.5%
Deale Procurement and Contracting	rC-001	Administrator	01/01/2020	Instructor with Computers	Internet Virtual Classroom	0.4	\$32,000	\$606,039	\$638,039	4.77%
Total						69	\$6,286,076	\$4,645,343	\$10,931,419	

To view Learning Objectives (LOs), Teaching Points (TPs) or Key Learning Points (KLPs) within each Course Segment, click on the Course Title. LOs, TPs or KLPS are presented along with Current Delivery Option, Cost and Time; Recommended Delivery Option, Cost and Time; as well as potential cost and time savings.

Generate Excel

Cost Analysis Report

# **Engineering Basics**

Learning Objective	Cu	rrent		Recomi	mended		Si	vings
Learning Objective	Media	Cost	Time [hours]	Media	Cost	Time [hours]	Cost	Time [hours]
Requirements Analysis Techniques	Instructor-led (Classroom)	\$170,395	1.00	Internet Virtual Classroom	\$108,562	1.00	\$61,834	0.00
Statistical Procedures	Instructor-led (Classroom)	\$170,395	1.00	Internet Virtual Classroom	\$108,562	1.00	\$61,834	0.00
Internal Sources	Instructor-led (Classroom)	\$170,395	1.00	Internet Virtual Classroom	\$108,562	1.00	\$61,834	0.00
External Sources	Instructor-led (Classroom)	\$170,395	1.00	Internet Virtual Classroom	\$108,562	1.00	\$61,834	0.00
Current Needs	Instructor-led (Classroom)	\$170,395	1.00	Internet Virtual Classroom	\$108,562	1.00	\$61,834	0.00
Accounting Techniques	Instructor-led (Classroom)	\$255,593	1.50	Internet Virtual Classroom	\$162,842	1.50	\$92,750	0.00
Future Requirements	Instructor-led (Classroom)	\$221,514	1.30	Internet Virtual Classroom	\$141,130	1.30	\$80,384	0.00
Forecasting Techniques	Instructor-led (Classroom)	\$204,474	1.20	Internet Virtual Classroom	\$130,274	1.20	\$74,200	0.00
Total		\$1,533,556	9.00		\$977,054	9.00	\$556,502	0.00





# 2.10 Time to Competency (hours)

#### Overview

ADVISOR identifies courses/training activities required by each Job/Role and forecasts the time to competency. In other words, time needed by each individual to attain the necessary level of competency to perform Job/Role Tasks to the desired standards under the prescribed conditions.



#### Note:

- 10 Jobs/Roles are presented at a time. To view more, click on [Next 10 Jobs]. To view earlier Jobs/Roles, click on [Previous 10 Jobs].
- ❖ Active courses imply courses that are still underway. Only active courses are included in Time to Competency assessment. For example, if the course start date is January 1<sup>st</sup>, 2016 and its expected life is 3 years, than the course will not be included if the dashboard is generated on January 1<sup>st</sup>, 2020. If, on the other hand, its expected life is 5 years, than the course will be included.

## How Time to Competency is Assessed ...

- ❖ ADVISOR identifies all Jobs/Roles for a Client.
- ❖ ADVISOR identifies all active Courses for a Client.
- Courses allocated to each Job/Role are identified by examining the Target Audience for each Course.
- The length of each course based on current delivery option is assessed.
- ❖ Time to competency for each Job/Role is computed is computed by adding the lengths of all relevant courses i.e., time required to complete all courses/training activities.





18 August 2020 01:54 PM

#### How Time Breakdown can be Viewed ...

The time to competency for each Job/Role can be viewed by placing the mouse over the bar chart. To view a detailed breakdown of courses/training activities for a Job/Role, click on the corresponding bar chart. All active courses allocated to the Job/Role are presented, along with Reference Code, Course Manager, Course End Date, Delivery Media and Length – based on current delivery option. Few items to note:

- Only active courses are included in table below. For example, if the course start date is January 1<sup>st</sup>, 2016 and its expected life is 3 years, than the course will not be included if the dashboard is generated on January 1<sup>st</sup>, 2020. If, on the other hand, its expected life is 5 years, than the course will be included.
- ❖ To send an email to the Course Manager, click on their name

Generate Excel

Time to Competency
For Analyst

Prepared by: Administrator

Course Title	Reference Code	Manager	End Date (mm/dd/yyyy)	Delivery Media	Length (hrs)
Advanced Analytics	AA-303	Administrator	01/31/2028	Instructor-led (Classroom), Instructor with Equipment	14
Supplies 101	SP-01	Justin Bahlis	04/02/2025	Instructor with Computers	18
<u>Analyst</u>	AN-09	Administrator	08/01/2025	Instructor with Equipment, Instructor with Equipment	17
Advanced Analytics	An-07	Administrator	08/01/2025	Instructor with Computers	12
Total					61

To view a detailed breakdown of the time allocated for each Learning Objective (LO), Teaching Point (TP) or Key Learning Point (KLP) within each course, click on Course Title. The media, time and rating (i.e., how well is the media suited for the content – measured as a % of instructional design requirements that the media meets) for current and recommended delivery options are presented.

Generate Excel

Media Analysis Report

# **Advanced Analytics**

Learning Objective	Curre	ent		Recomm	ended	
Learning Objective	Media	Time [hours]	Rating	Media	Time [hours]	Rating
Basic Contracting Processes	Instructor-led (Classroom)	1.00	96%	Internet Virtual Classroom	1.00	94%
Financial Techniques and Considerations	Instructor-led (Classroom)	1.00	96%	Internet Virtual Classroom	1.00	94%
Standard Sourcing Methods	Instructor with Equipment	2.00	93%	Level 2 - Part Task Trainer	2.00	93%
Advanced Sourcing Methods	Instructor-led (Classroom)	2.00	96%	Internet Virtual Classroom	2.00	94%
Employee Responsibilities	Instructor-led (Classroom)	1.00	96%	Internet Virtual Classroom	1.00	94%
Customer Needs	Instructor-led (Classroom)	1.00	96%	Internet Virtual Classroom	1.00	94%
Estimate Monthly Procurements	Instructor-led (Classroom)	1.00	96%	Internet Virtual Classroom	1.00	94%
Forecast Timeline	Instructor-led (Classroom)	1.00	96%	Internet Virtual Classroom	1.00	94%
Current Payment Methods	Instructor-led (Classroom)	1.00	96%	Internet Virtual Classroom	1.00	94%
Future Payment Methods	Instructor-led (Classroom)	1.00	96%	Internet Virtual Classroom	1.00	94%
Legislation	Instructor-led (Classroom)	1.00	96%	Internet Virtual Classroom	1.00	94%
Proposed Ammendments	Instructor-led (Classroom)	1.00	96%	Internet Virtual Classroom	1.00	94%
Total		14.00			14.00	

Rating indicates the % of instructional design requirements that the media meets. For example, if the media supports 9 out of the 10 instructional requirements that the analyst sneeffied, it would have 90% rating. Media that does not meet a critical for

