Welcome to ACEIT 8.1

November 2022

Welcome to ACEIT 8.1

We are thrilled to announce a variety of new features to enhance your ACEIT experience!

ACEIT 8.1 focuses on updates to ACE

ACEIT 8.1 provides improvements in many areas

- General Model Set-up and Operability Improvements
- Tree Structure and Section Changes
- Documentation Enhancements
- Content Pane Expansions
- Executive Report Addition
- And much, much more…

ACEIT 8.1 New File Type

- On occasion ACE file format updates have been necessary
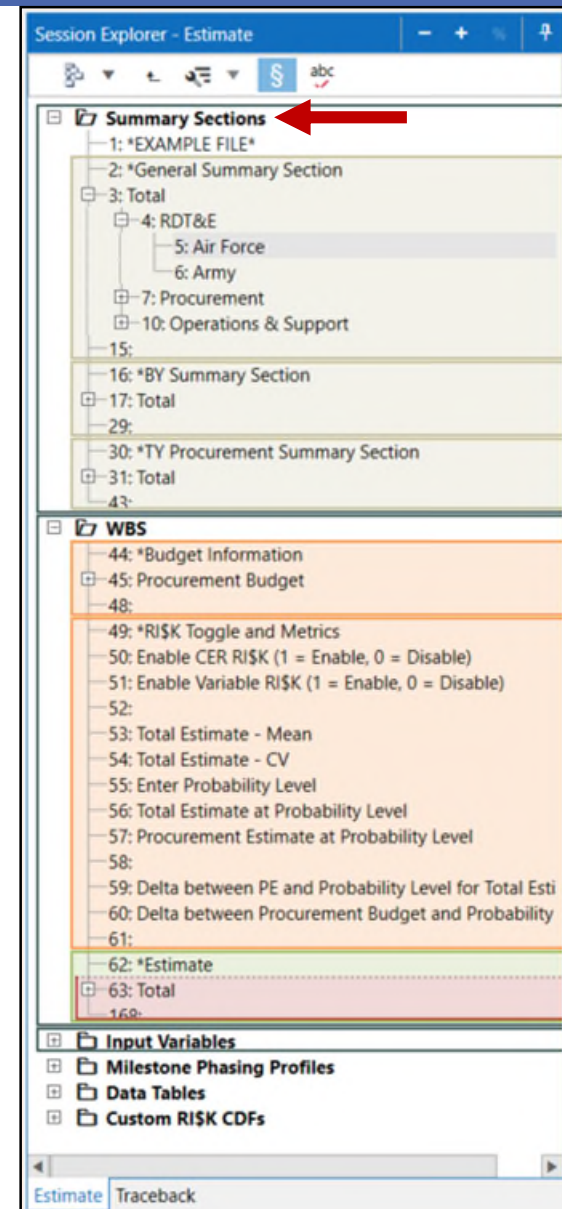
- ACE 8.1 files use a new file extension .acem
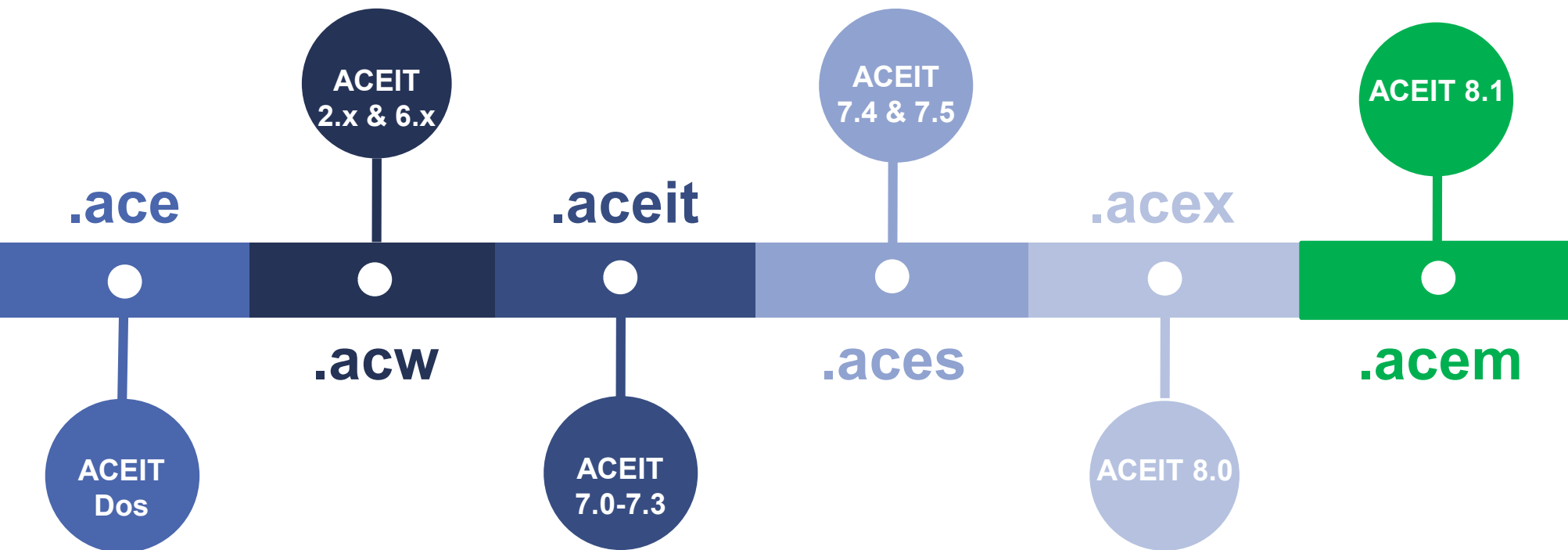
- ACEIT 8.1 can Save As file type as ACEIT 8.0 SP1 and SP2

Opening Sessions in ACE 8.1

- Older version files open in 8.1 with row shifts in the display hierarchy due to section/tree structure upgrades

- Summary Section rows will move into a *new Summary Section* folder

- A new dialog shows the affected rows

Rows moved during conversion

This 8.0 SP2 format file is being opened in ACE 8.1. As a result of section/tree structure upgrades, you will see the following changes:

Original Row(s)	New Row(s)	Original Folder	New Folder	WBS Description of First Row
1 to 43	2 to 44	WBS	Summary Sections	*EXAMPLE FILE*
44 to 168	45 to 169	WBS	WBS	*Budget Information
169 to 305	170 to 306	Input Variables	Input Variables	*INPUT VARIABLES

Copy Table | OK | Cancel

Session Explorer - Estimate

- Summary Sections
  - 1: *EXAMPLE FILE*
  - 2: *General Summary Section
  - 3: Total
    - 4: RDT&E
      - 5: Air Force
      - 6: Army
    - 7: Procurement
    - 10: Operations & Support
  - 15:
  - 16: *BY Summary Section
  - 17: Total
  - 29:
  - 30: *TY Procurement Summary Section
  - 31: Total
  - 43:
- WBS
  - 44: *Budget Information
  - 45: Procurement Budget
  - 48:
  - 49: *RI$K Toggle and Metrics
  - 50: Enable CER RI$K (1 = Enable, 0 = Disable)
  - 51: Enable Variable RI$K (1 = Enable, 0 = Disable)
  - 52:
  - 53: Total Estimate - Mean
  - 54: Total Estimate - CV
  - 55: Enter Probability Level
  - 56: Total Estimate at Probability Level
  - 57: Procurement Estimate at Probability Level
  - 58:
  - 59: Delta between PE and Probability Level for Total Esti
  - 60: Delta between Procurement Budget and Probability
  - 61:
  - 62: *Estimate
  - 63: Total
  - 168:
- Input Variables
- Milestone Phasing Profiles
- Data Tables
- Custom RI$K CDFs

Estimate | Traceback

New Session Additions

- New options when creating a New ACE Session

- Select a **Custom Inflation Table** at start

- ACEIT 8.1 released with MIL STD **881E** WBS/CESs

Session Options Upgrades

- **Multiple Session Options changes**
  - Inflation
    - Table location shown with hover
  - Format
    - Changes to Format Option descriptions
  - Variables Removed
    - Old Variable Type Options removed due to upgrades to Variable-on-the-Fly

New User Settings

- **User Settings Upgrades**
  - Light and Dark modes
  - Regular and Large Font
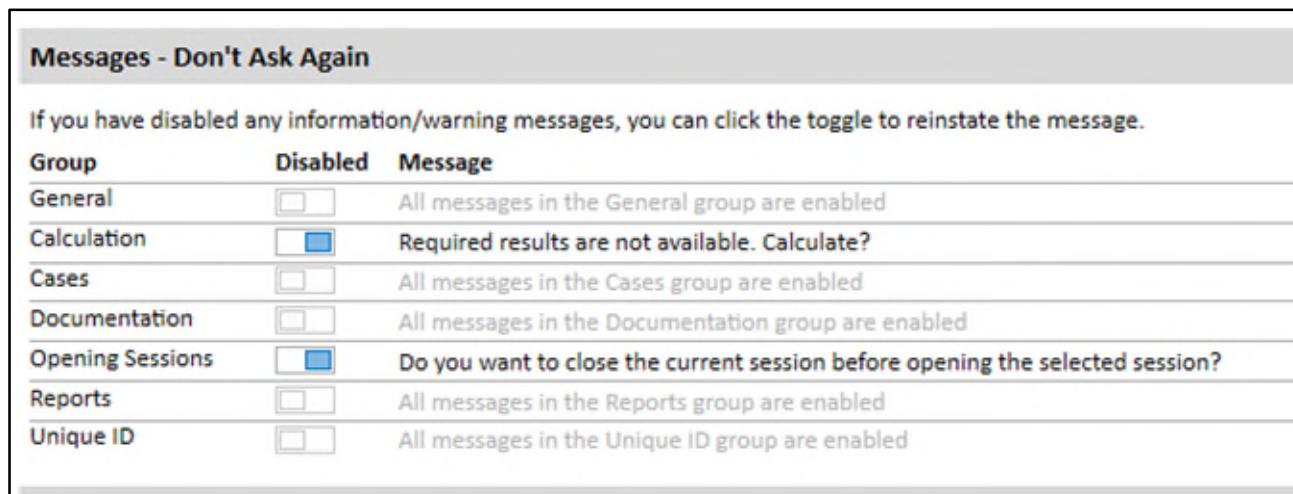 - Control Don't Ask Again Messages

New User Settings

- **"Don't ask me again" is now a User Setting under Options**
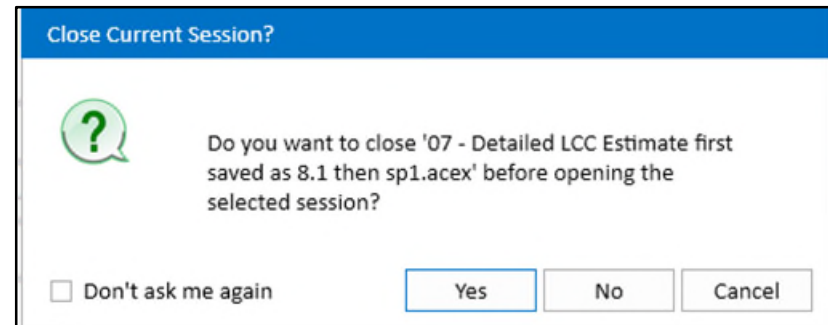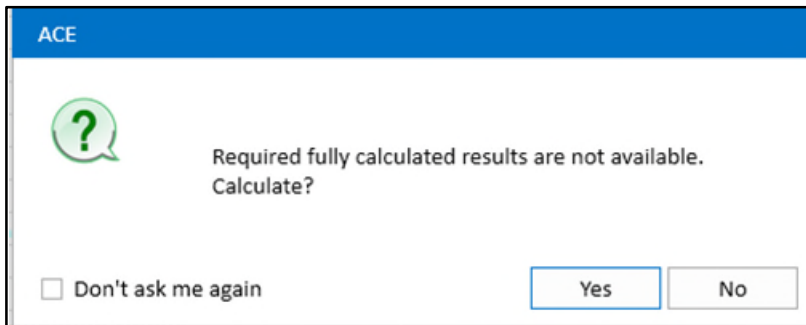
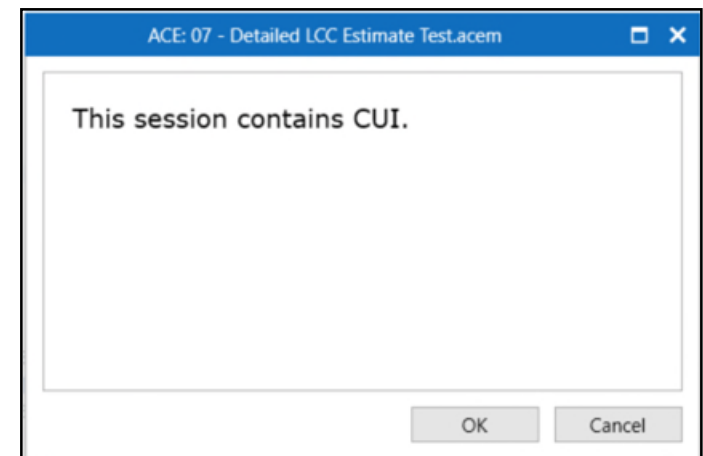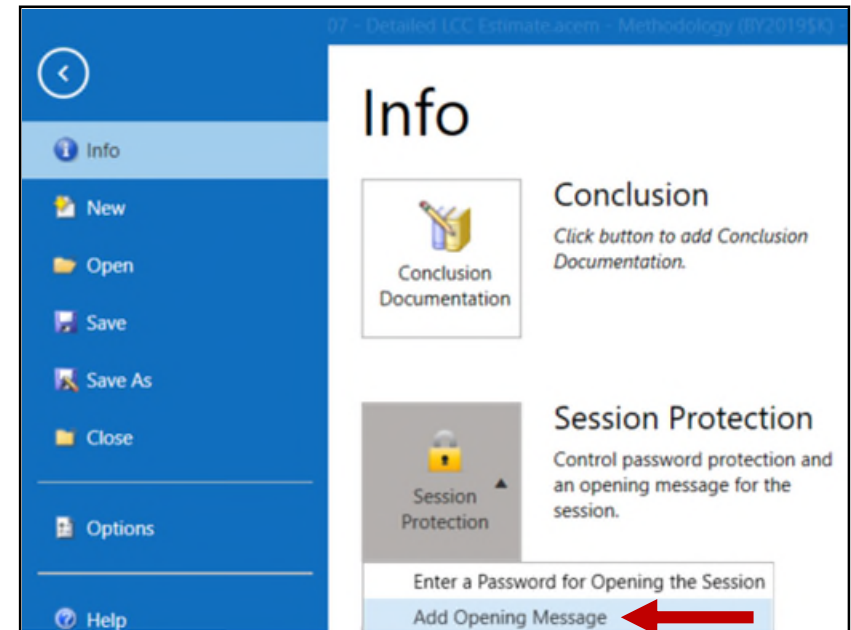- **User controls which messages are displayed**

User-Defined File Opening Message

- A user-defined popup message can display when a session is opened

- Add a session open message with Session Protection

- Message is displayed when the session is opened

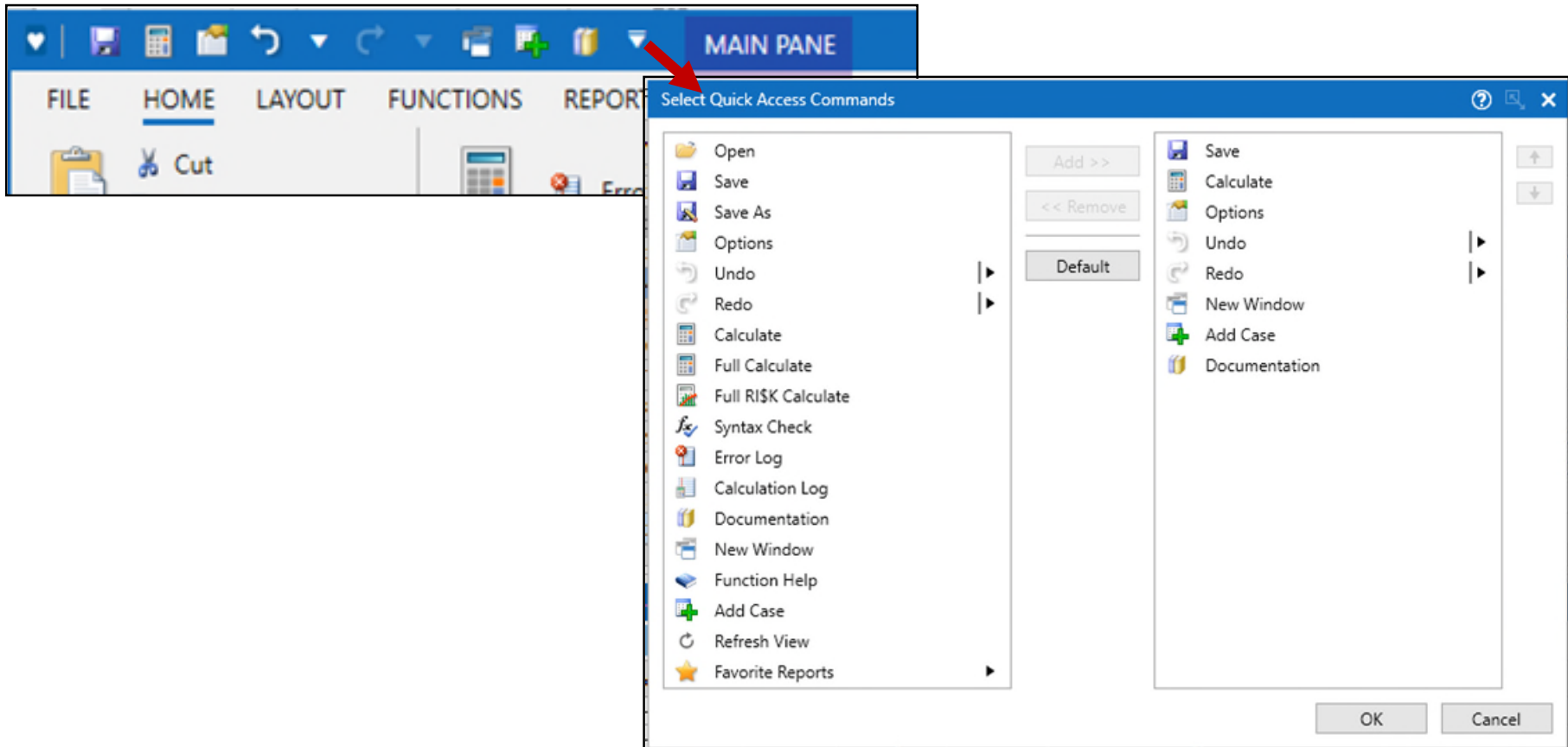 - Enter text specific to your session

Ribbon Remodel

- ACE Ribbons have changed
  - Simplified approach to Ribbons
  - Removed duplicate ribbon icons
  - Removed Construction Ribbon: added icons to Home
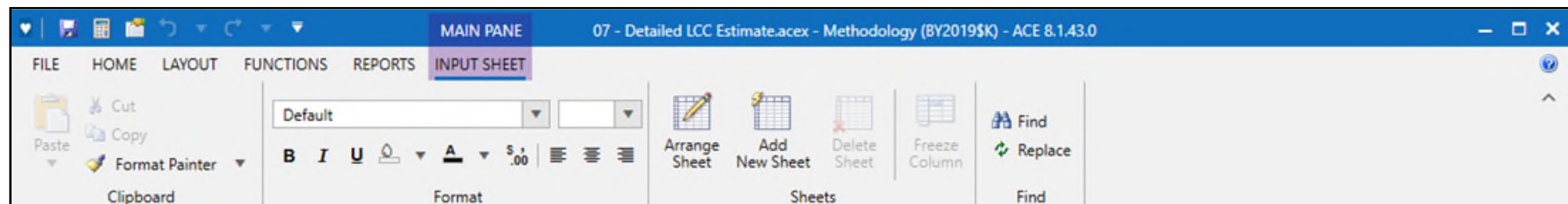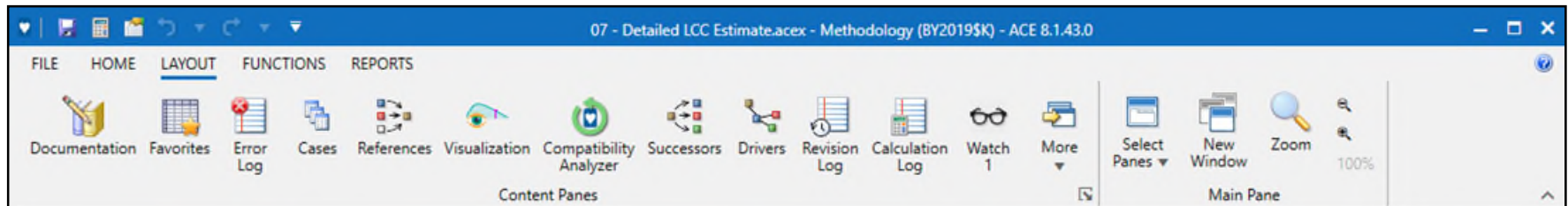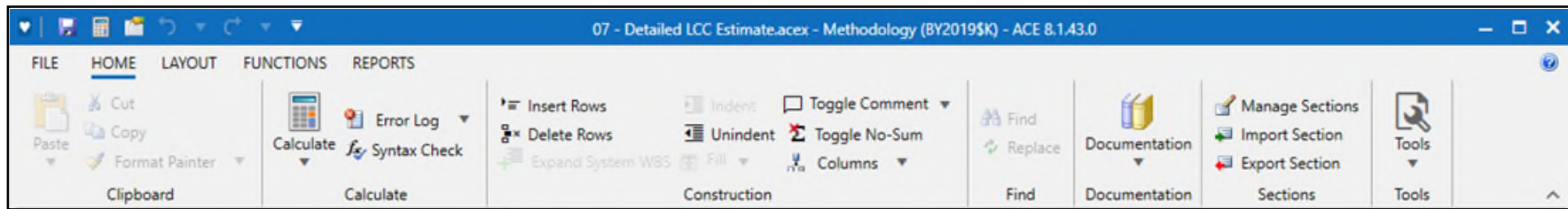
Quick Access Toolbar Enhancements

- Customize your Quick Access Toolbar with your frequent actions

  - Select from a list of common actions

Window Zoom Enhancements

- Zoom different sections of the interface independently

Favorite Functionality Enhancements

- Favorites help you quickly access the content areas (rows, Reports, etc.) that you frequently select

- ACEIT 8.1 includes improvements to Favorite Features

  - Perform a string search for a favorite

  - Include Data Table or other "off-sheet" item (Milestone Profile or RI$K CDF) as a favorite
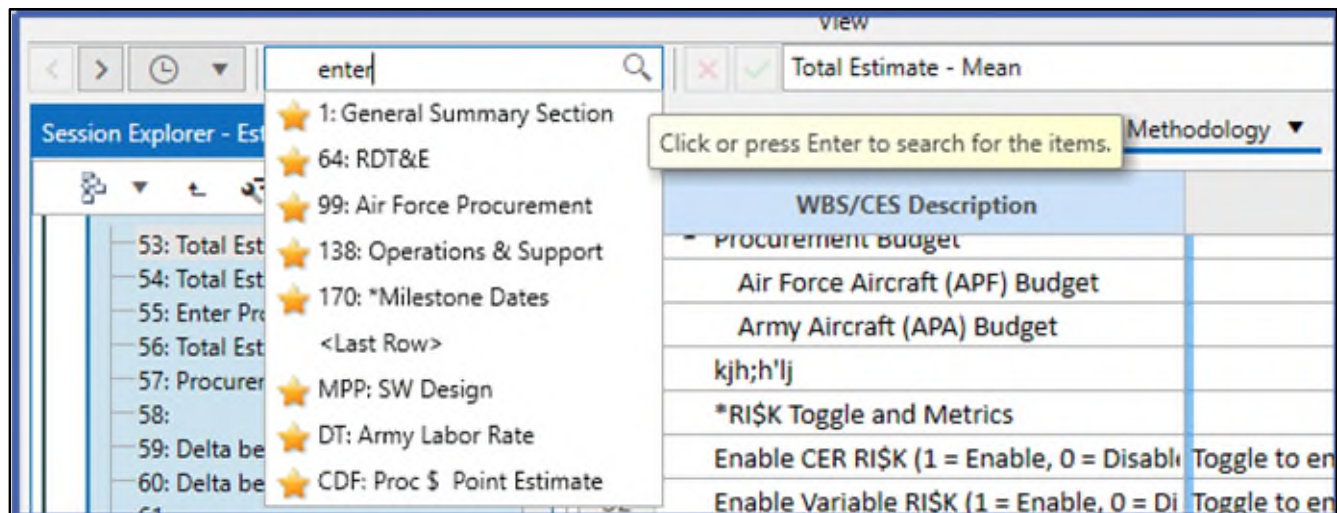
Modifications to New Windows
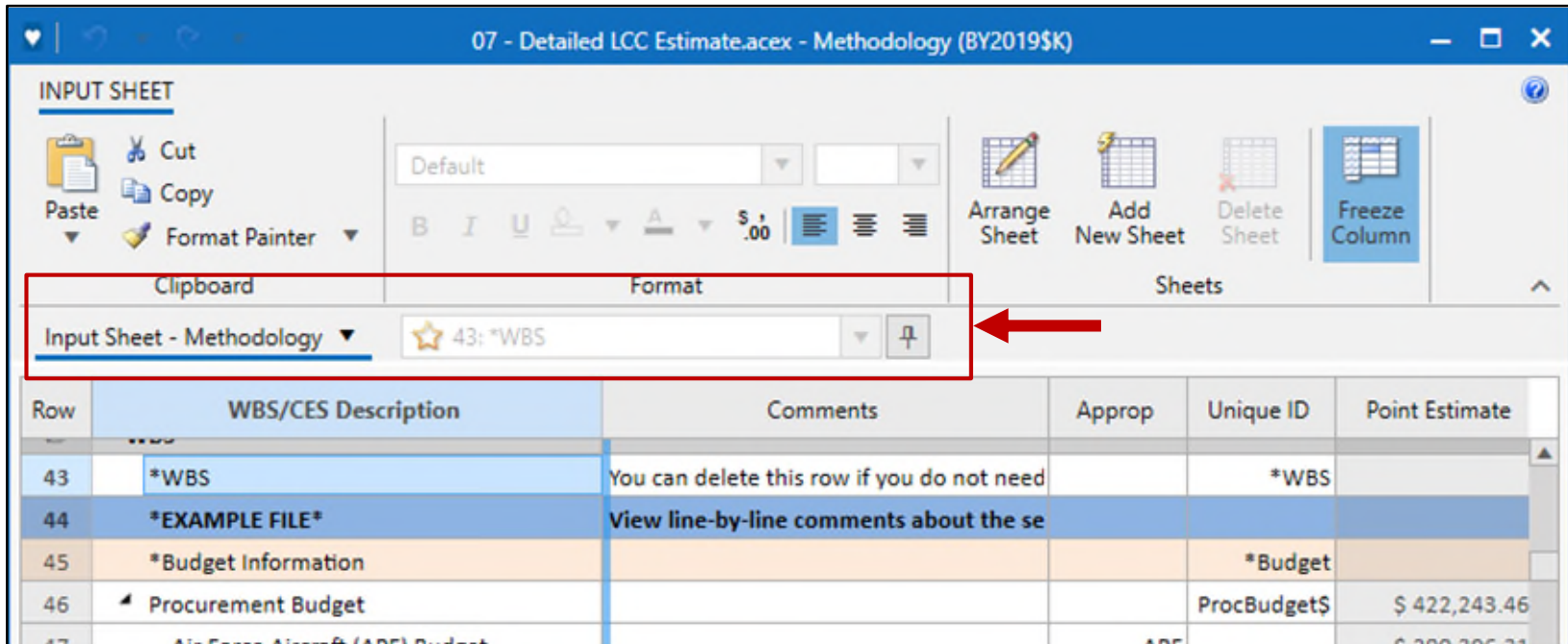
- Streamlined the ribbon by consolidating two ribbons into one and adding the Main Pane tabs to the Window

- Turned the Sync button into a Pin that provides clearer control between the New window and the Main Pane

- Added the Favorites navigation bar

Added WBS Spell Checker

- Run a spell check on your WBS/CES Descriptions
  - Accessible from the Session Explorer toolbar
  - Designed to look and work like most Office spell checkers
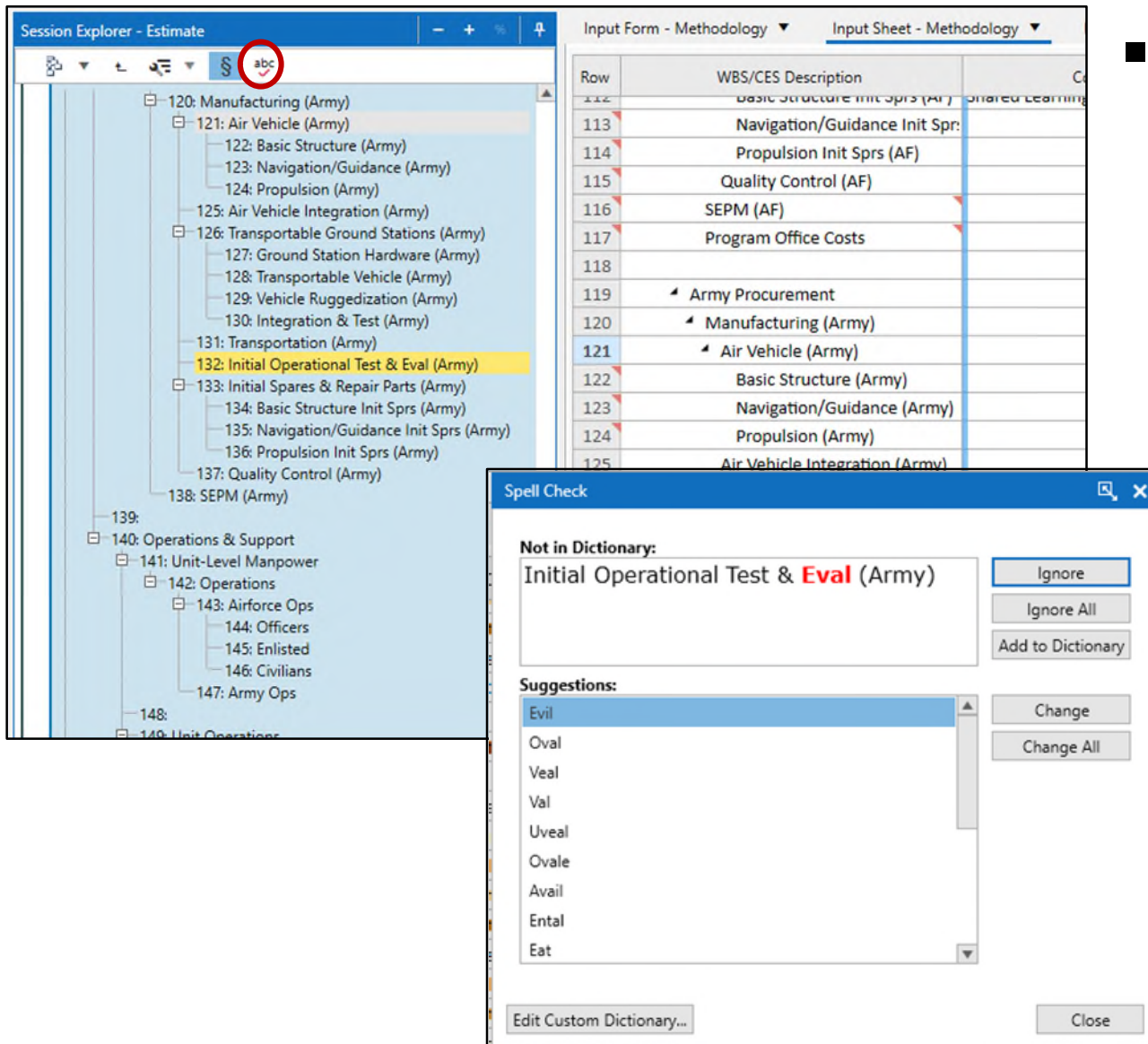
Enhancements to Find and Replace

- Find and Replace is now available on Results and Overrides tabs and within the New Windows

- Search within a highlighted selection to refine your search

- Find All results are now presented in the dialog

Tree Structure Improvements and New Sections
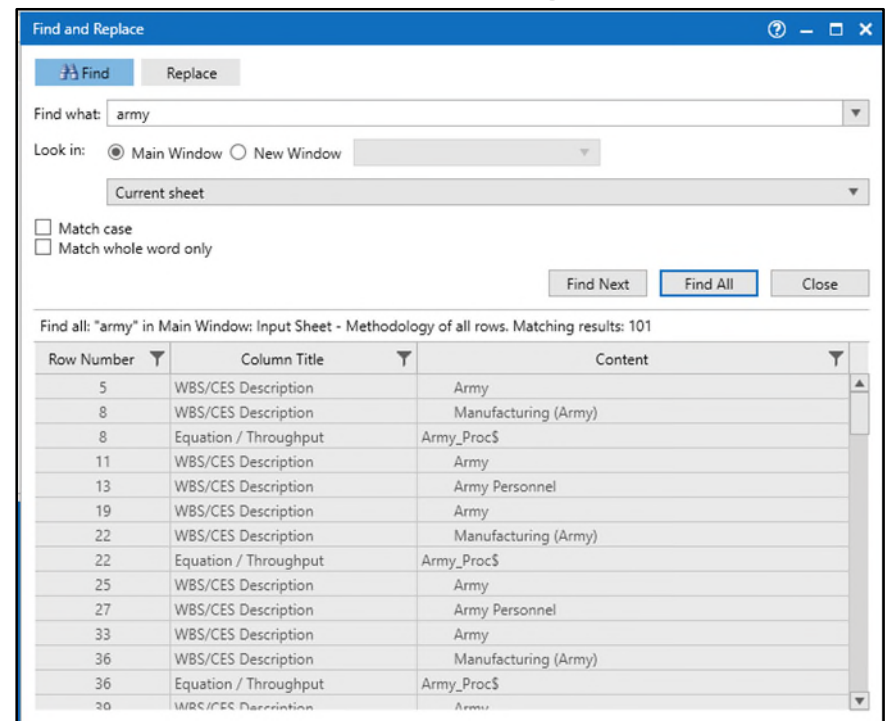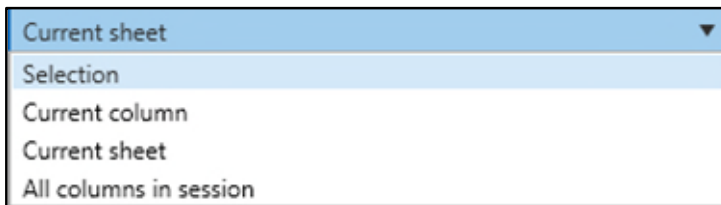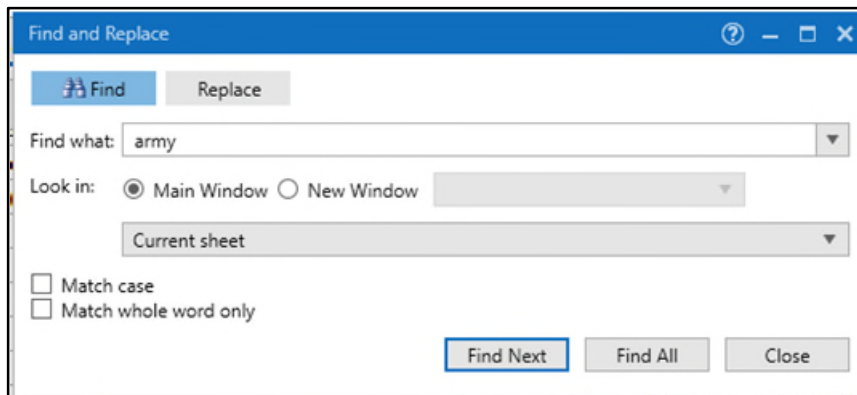
- ACE 8.1 goal: tree structure improvements
  - Strengthen stability and maintainability
  - Gain performance improvements
  - Adjust UI to make it more intuitive
- The key to providing an enhanced tree structure turned out to be changing how sections work
- To maintain the benefit of sections without the adverse effects, we upgraded two section concepts:
  - Implemented a new way of defining sections for reports
  - Summary Sections now defined in their own folder

Prior Section Behavior

- Sections are used to control the rows displayed in reports

- Sections defined by entering a variable name into the Unique ID column, preceded by an asterisk

- Each section was defined with a header row and continued until the next header was detected

- There was no concept of nested sections

- To create reports that spanned multiple sections you had to select multiple sections in the report definition

Displaying Sections in ACE 8.1
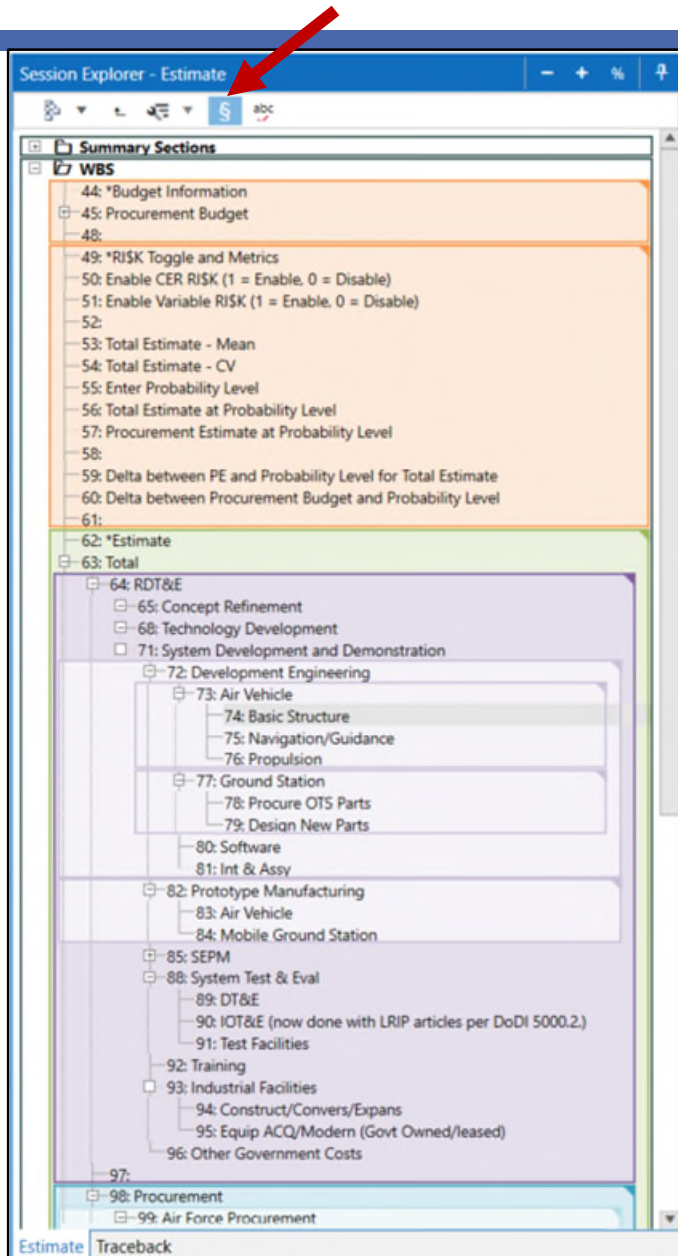
- The mechanism to define rows for a section has changed

- New sections are a layer on top of the tree structure and can be created in the Session Explorer or the Input Sheet
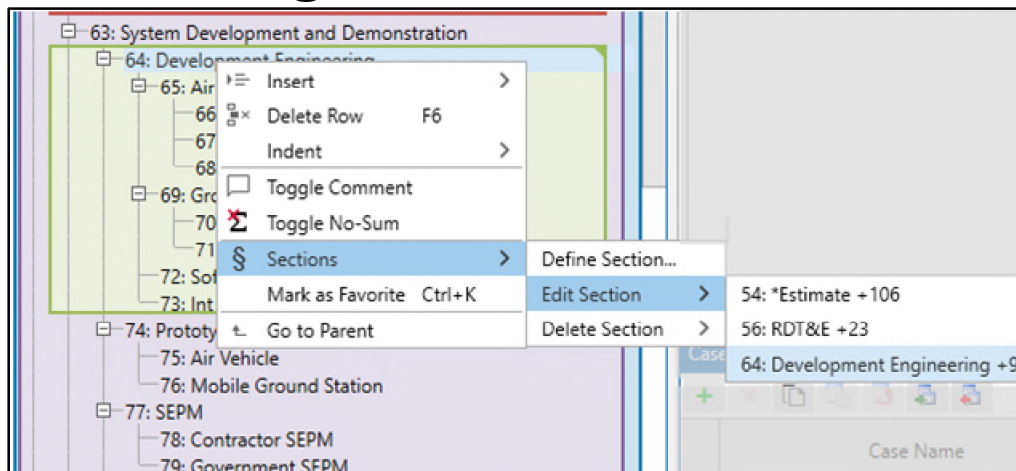
- Section Header rows (comments with special Unique IDs) are no longer required

Sections can be nested within other sections

Defining Sections in ACE 8.1

- Create or edit a section by highlighting the desired first row in the Session Explorer and selecting §Sections from the right-click menu
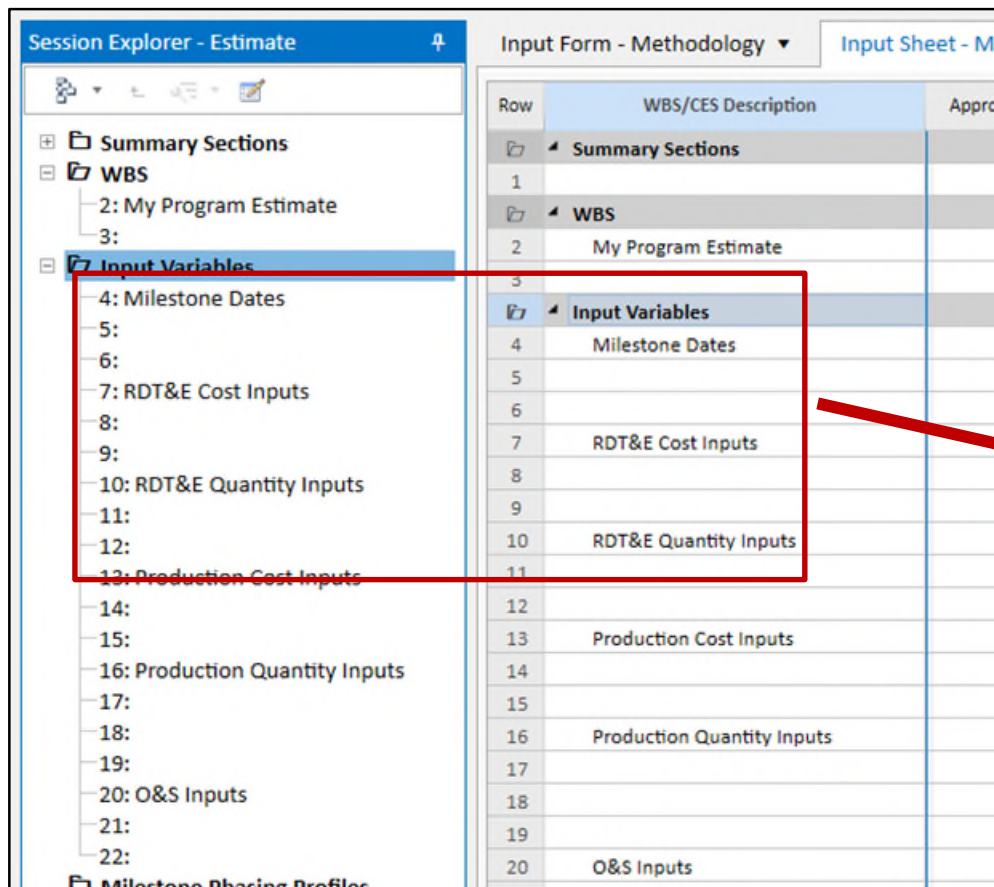
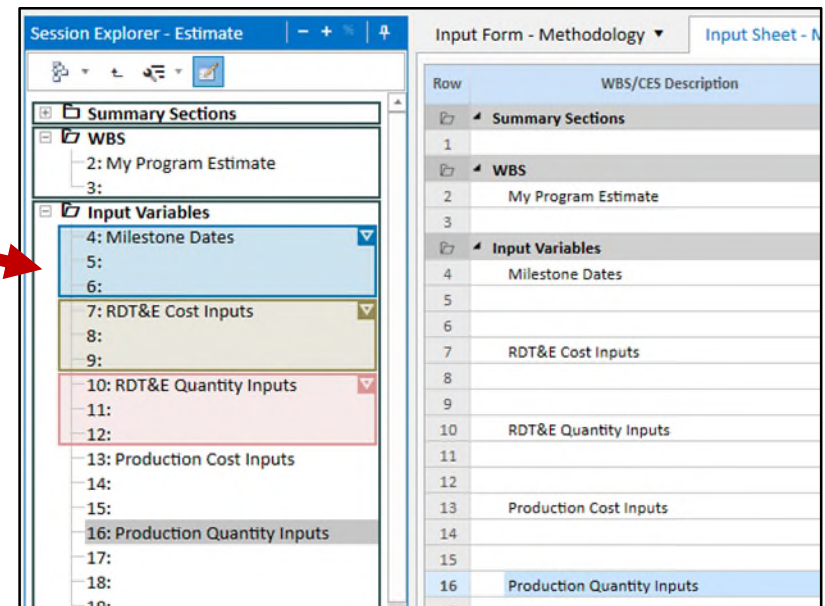- Menu displays the different sections that a row is part of

- If there are multiple sections, each is listed with the number of rows within the section

- Use the Define/Edit Section dialogs to set the first and last rows of the section and change the color

Input Variable Sections

- For Input Variables, create a few "buckets" by defining the first rows of sections to start organizating the folder

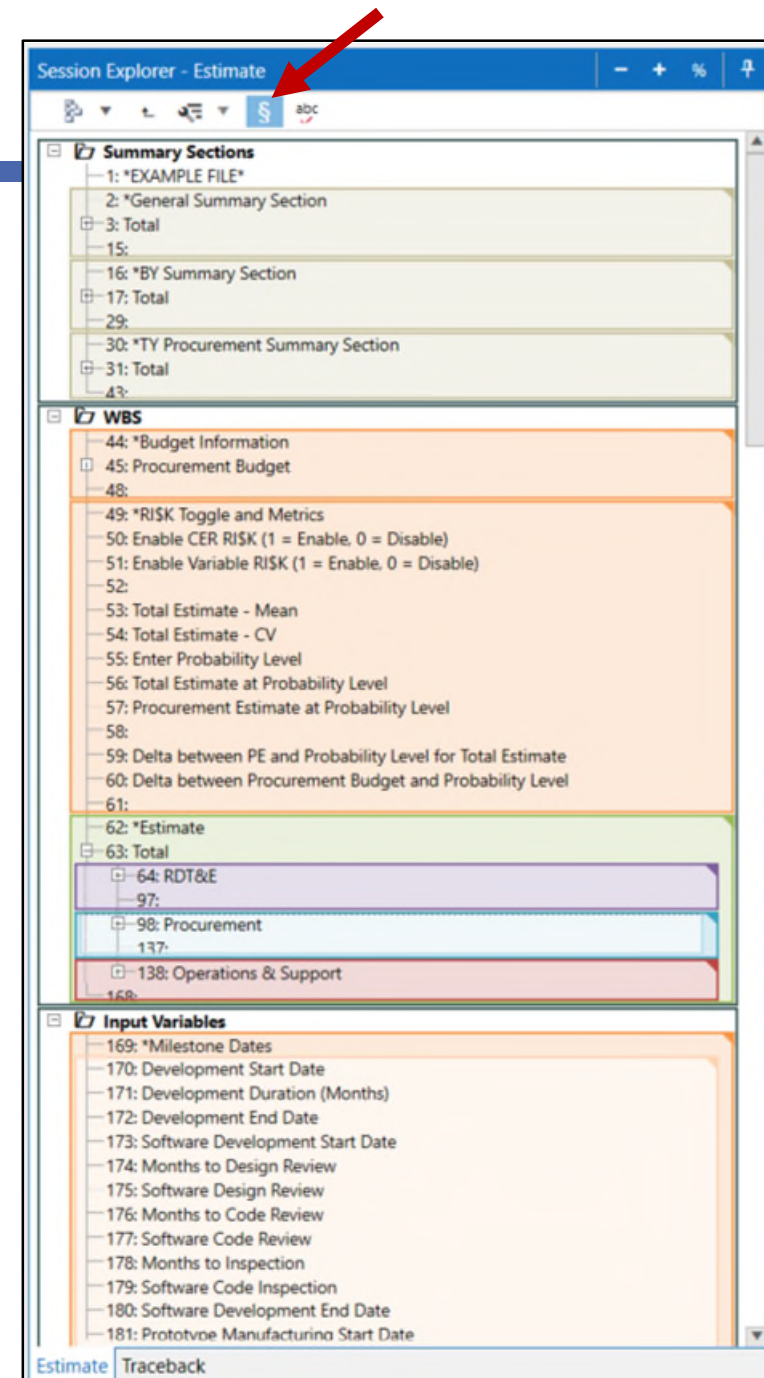- These initial rows can be either comment or regular rows

Section Folders in ACE 8.1

- **The Session Explorer tree consists of three folders now**
  - Summary Sections
  - WBS
  - Input Variables
- **Each folder is a "system section" meaning it is automatically designated as a section and cannot be edited or deleted**

Summary Sections in ACE 8.1
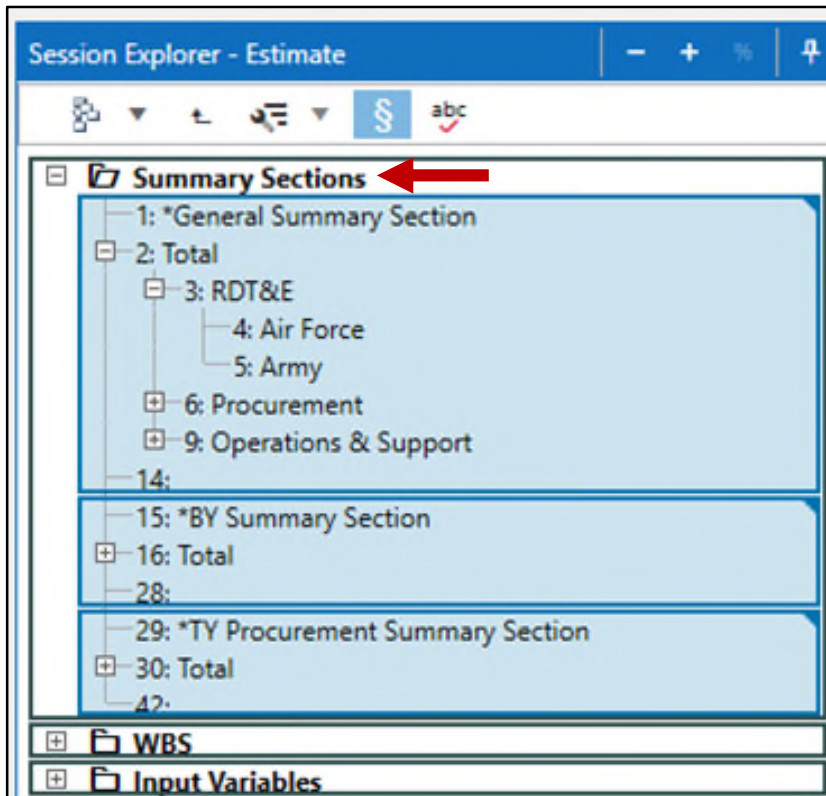
- Used to calculate different breakouts of results, e.g. Phases or Sumif functions on approp

- Older sessions opened in 8.1 will see existing Summary Sections moved to this folder

  - Summary Sections in older files had the Summary Result Type defined in a column on the Input Sheet

  - In 8.1, the Summary Result Type has been moved to the Define Section dialog

Defining Summary Sections in ACE 8.1

- Create or edit a Summary Section by highlighting the desired first row in the Session Explorer and select §Sections from the right-click menu
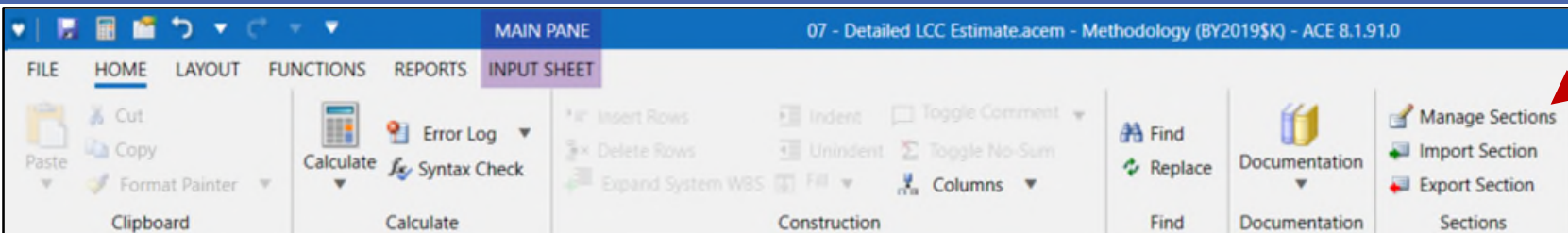

- Set the Result Type for the Summary section
- The default is As Calculated but can be set to BY, TY or SY

Manage Sections - See/Edit All Sections at Once

- Change the rows in a section

- Change the section's color

- Hide the total

- Select a different Milestone Profile section

- Delete multiple sections at once

Import/Export Sections

- Import/Export behavior streamlined

- Export Section (formerly Save Section)

  - Single dialog

  - Variables from exported rows are easily resolved with the new session variables

Import/Export Sections

- **Import Section** (formerly Insert Section)

  - Includes location specification for the import

Creating Input Variables On the Fly

- Steps to create a new variable have been modified
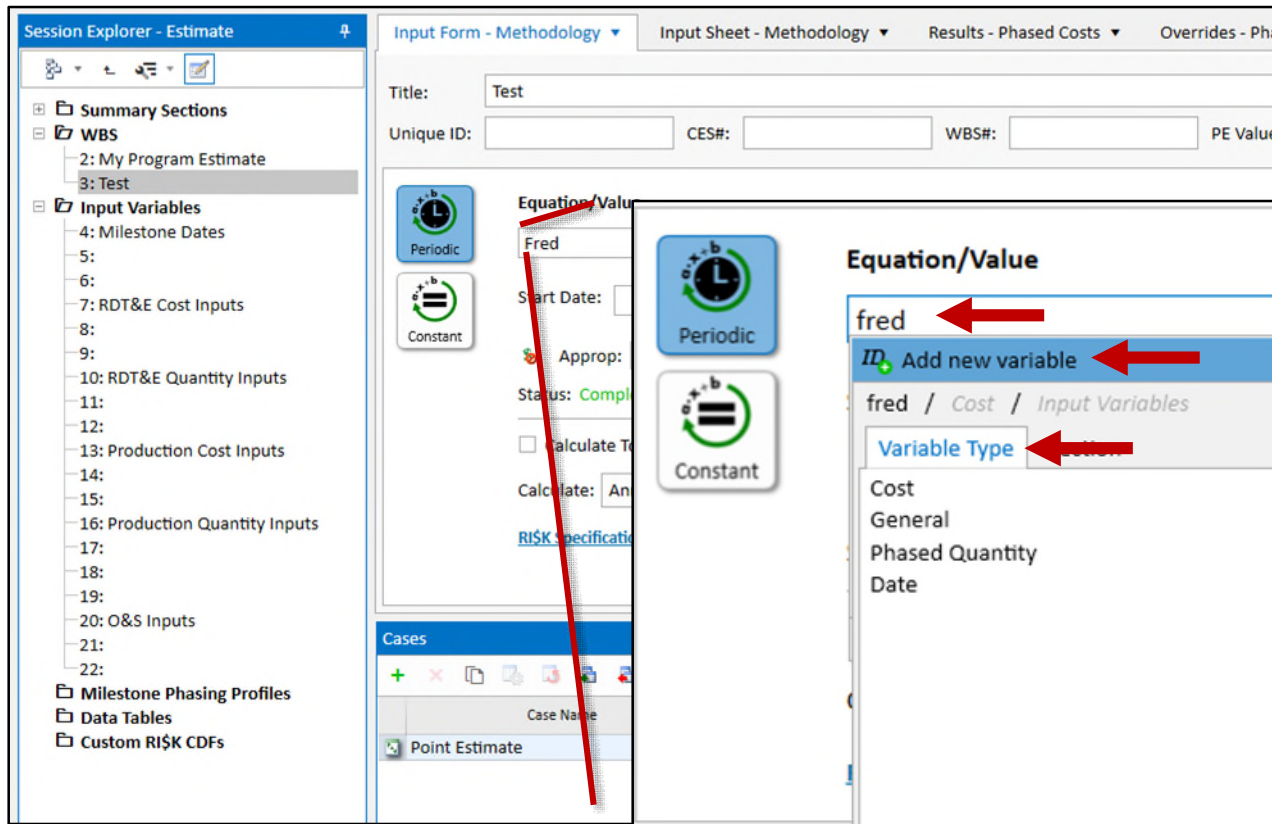
1. Type in variable
2. Click on Add new variable
3. Select Variable Type
4. Select Section
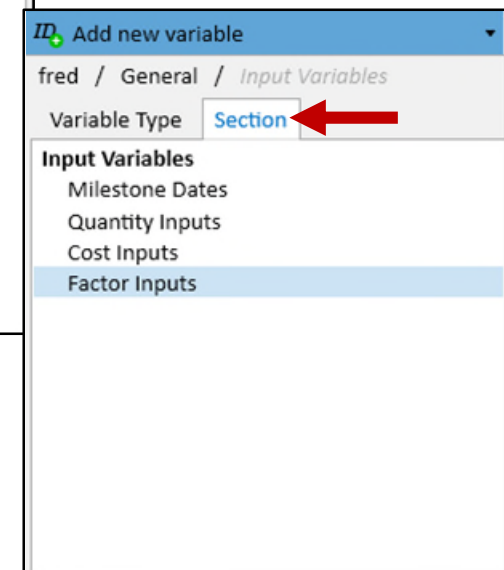
- Four types of variables: Cost, General, Phased Quantity and Date

- Variable Sections removed from Options

Data Table Enhancements

- Added ability for Excel data with $'s and decimal places to be pasted into data tables

Documentation Enhancements

- Add ability to add definitions to Data Tables, Milestone Profiles, and CDFs
  - Document icon opens the Documentation Pane and displays a checkmark when a definition has been added

Documentation Export/Import Reinstated

- Formally known as Documentation Load/Unload, Export/Import facilitates outside Documentation editing
  - Shifted from row to individual cell documentation

For Documentation Import:

- An .rtf file of edited documentation overwrites previous documents

For Documentation Export:

- Export System and User documentation
- Specify rows to export

Upgrades to Documentation Manager

- **Now includes off-sheet items in locations**
  - DT = Data Table
  - Column in (WBS) or (Equ)
- **Added Size column**

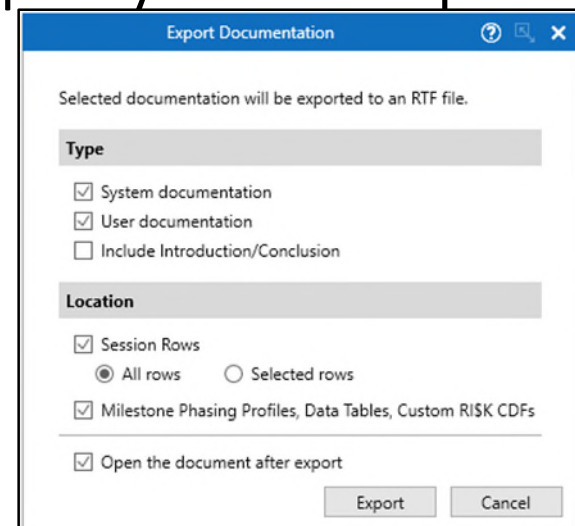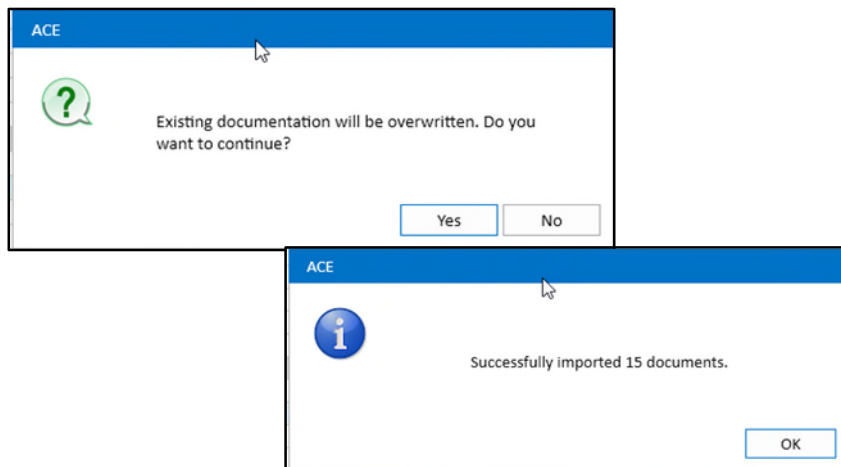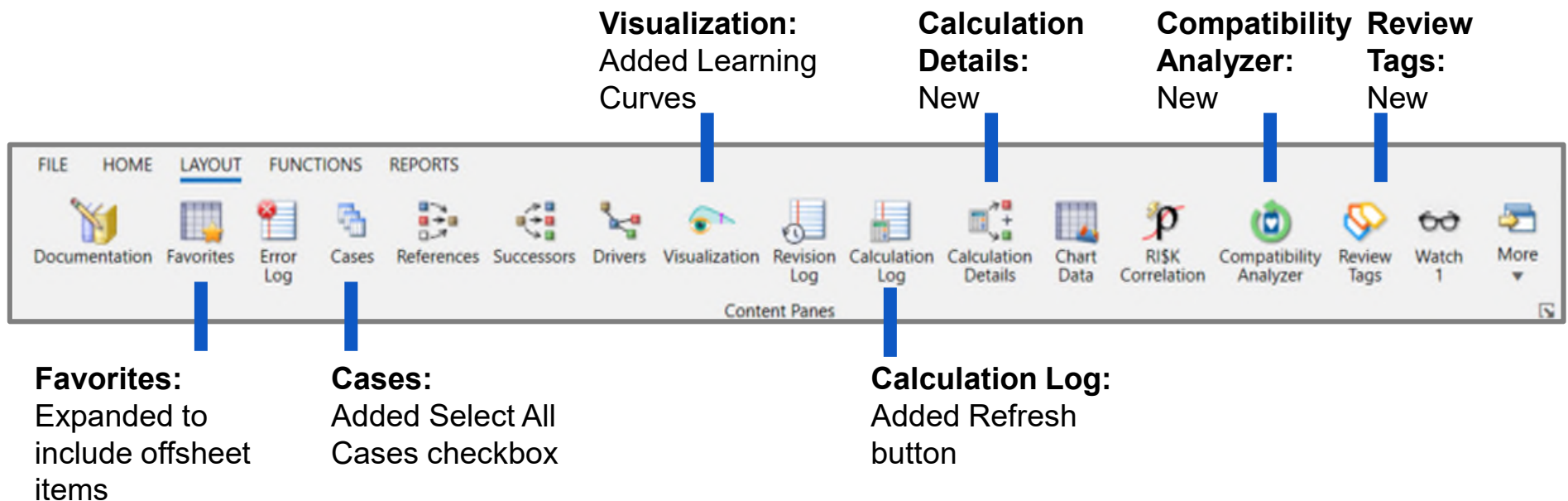| Type	Locations	Content	Size
User	102 (WBS); DT: ArmyLab$	MANUFACTURING - This element includes the costs of ma... the final system.	1.47 KB
User	110 (Equ), 132 (Equ)	This is just a fixed cost per year ($3M for AF and $4...t date for the row.	1.89 KB
User	269 (WBS)	AF Hourly Labor Rates/AF Personnel needed per Mission...l Manpower for the AF.	1.55 KB
User	273 (Equ)	Maintenance Hourly Labor Rate: This constant input i...ll maintenance rows.	1.70 KB
User	288 (Equ), 289 (Equ)	Intermediate Maintenance - Hours to perform/Number of...e Maintenance costs.	1.76 KB
User	290 (Equ)	Intermediate Maintenance - Number needed each year: ...s has been exceeded.	2.20 KB
User	291 (Equ)	Depot Maintenance - Hours to perform/Number of flying...t Maintenance costs.	1.75 KB
User	296 (Equ)	Failure Rate (%): This is a constant input used to c...eplenishment spares.	1.70 KB
User	297 (Equ)	Organizational Maintenance - Repair Rate: This const...n Maintenance costs.	1.72 KB
User	298 (Equ), 299 (Equ)	Software/Hardware Maintenance Percentage: These cons...e maintenance costs.	1.73 KB
User	300 (Equ), 301 (Equ)	Hardware/Software Mod Percentage: These constant inp...m improvement costs.	1.72 KB
User	228 (Equ)	1. Model Form and Equation TableModel Form and Eq...0000 5.0000	220 KB
User	111 (WBS), 133 (WBS)	This is broken in three rows so spares are bought for...hicle Basic Structure.	1.39 KB
User	106 (Equ), 114 (Equ), 124 (Equ), 136 (Equ)	This row for both Army and Air Force is a simple unit...ction of the estimate.	1.24 KB
User	115 (Equ), 137 (Equ)	This row is calculated by multiplying a time-phased f...he finish date column.	1.42 KB
User	116 (WBS), 138 (WBS); DT: ArmyHrsPerMsn	SYSTEM ENGINEERING/PROGRAM MANAGEMENT - The system en...hasing method works.	2.47 KB
User	116 (Equ), 138 (Equ)	DEVELOPMENT COST FACTOR - System/Project Management (... 600 300,000	9.18 KB
User	117 (WBS)	OTHER - This element includes any funded costs not in...and liabilities.	1.70 KB
User	117 (Equ)	These are constant costs that occur every year of pro... year of procurement.	1.28 KB
User	103 (WBS)	AIR VEHICLE - The air vehicle element refers to the c...omplete air vehicle.	1.72 KB
User	127 (Equ)	This row is calculated simply as the hardware unit co...uantity (ArmyGSQty).	1.37 KB
User	128 (Equ)	This row is calculated as the vehicle unit cost (GSTV... quantity (ArmyGSQty).	1.18 KB
User	129 (Equ)	This row is calculated as a factor of the vehicle cos...ction of the estimate.	1.21 KB
User	104 (Equ), 112 (Equ), 122 (Equ), 134 (Equ)	R phasing is used for learning curves. This row estim...earning Input Sheet.	1.47 KB
User	113 (Equ), 123 (Equ), 135 (Equ)	StepVal function works similar to HLookUp in Excel. T...y yearly buy quantity.	2.28 KB
User	168 (Equ), 169 (Equ)	OpCycle Function: This function is used to calculate...ons and modernization.	1.64 KB
User	141 (WBS)	Unit Level Manpower: This activity calculates the ...ny Mission Schedule.	2.25 KB

Preview

Add Attached Document   Edit   Delete   Close

Content Pane Enhancements

- Content Panes allow you to work with information from across the session

- Content Panes are accessible through the Layout Ribbon

- ACEIT 8.1 includes a series of updates to existing Content Panes and some new additions

Visualization: Added Learning Curves

Calculation Details: New

Compatibility Analyzer: New

Review Tags: New

Favorites: Expanded to include offsheet items

Cases: Added Select All Cases checkbox

Calculation Log: Added Refresh button

Additions to Visualization

- **Illustrations of the learning curves parameters**
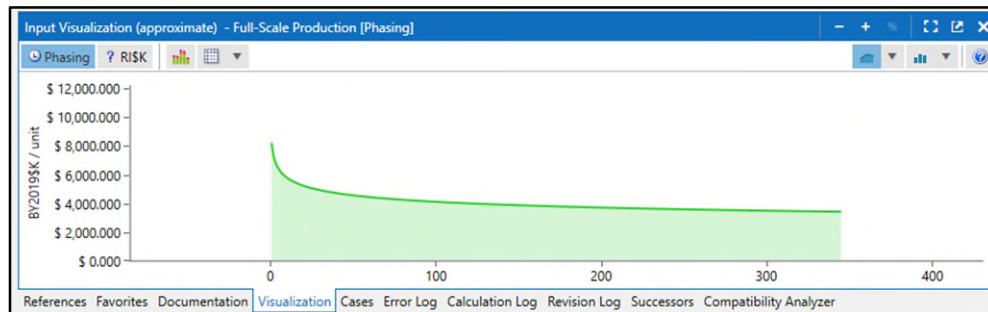
Change Mode

- **Applied learning**
  - Shows how the curve will behave across the row's time phasing
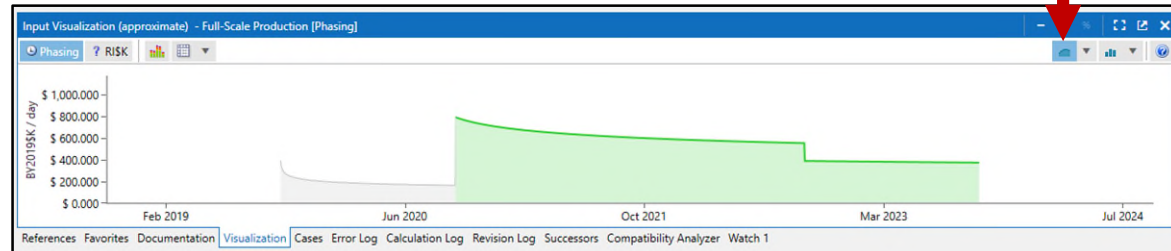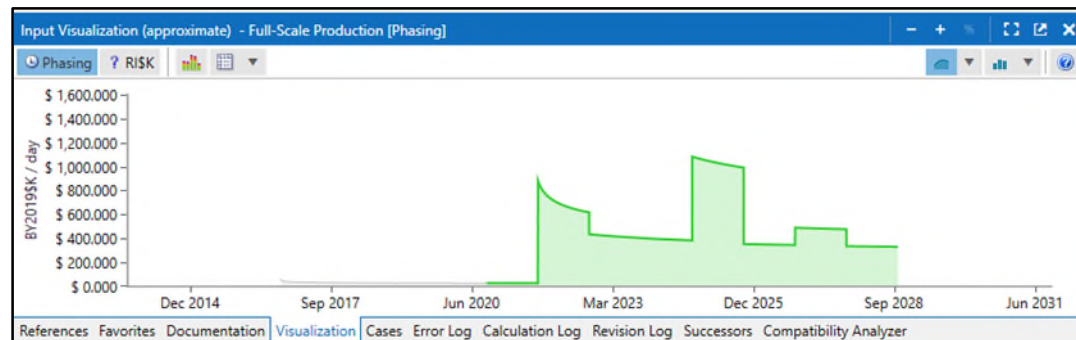

- **Theoretical learning**
  - Shows the T1
  - Explains cost improvement across fictional units

- **Shared learning**
  - In the Applied mode, shows the behavior across shared learning rows

New Calculation Details Pane

- Calculation Details shows the specifics of a row's calculation: It separates the operations and attempts to describe the calculation

Cell Tagging: Highlighting Cells

- Cell Tagging facilitates highlighting individual cells with a purpose

Cell Tagging: Highlighting Cells

- Cell Tagging includes several features:
    - Toggle on/off the display of highlighted cells
    - Choose a highlight color for the currently selected cell(s) in the Input Sheet
        - Includes up to ten tags
        - Change the highlight color
        - Enter a label for each tag type
    - Add and delete text "tags" related to colors
    - Manage Cell Tagging in the Review Tags Pane

New Review Tags Pane

- The Review Tags content pane shows the Cell Tags
  - Display the highlighted cells on the Input Sheet by selecting the Show Highlighted Cell toggle
  - Double-click on a Row: Cell combination to navigate to it on the Input Sheet
  - Delete a highlighted cell from the Pane

Additions to Cases Pane

- Added Compare checkbox to select all Cases in Cases Pane
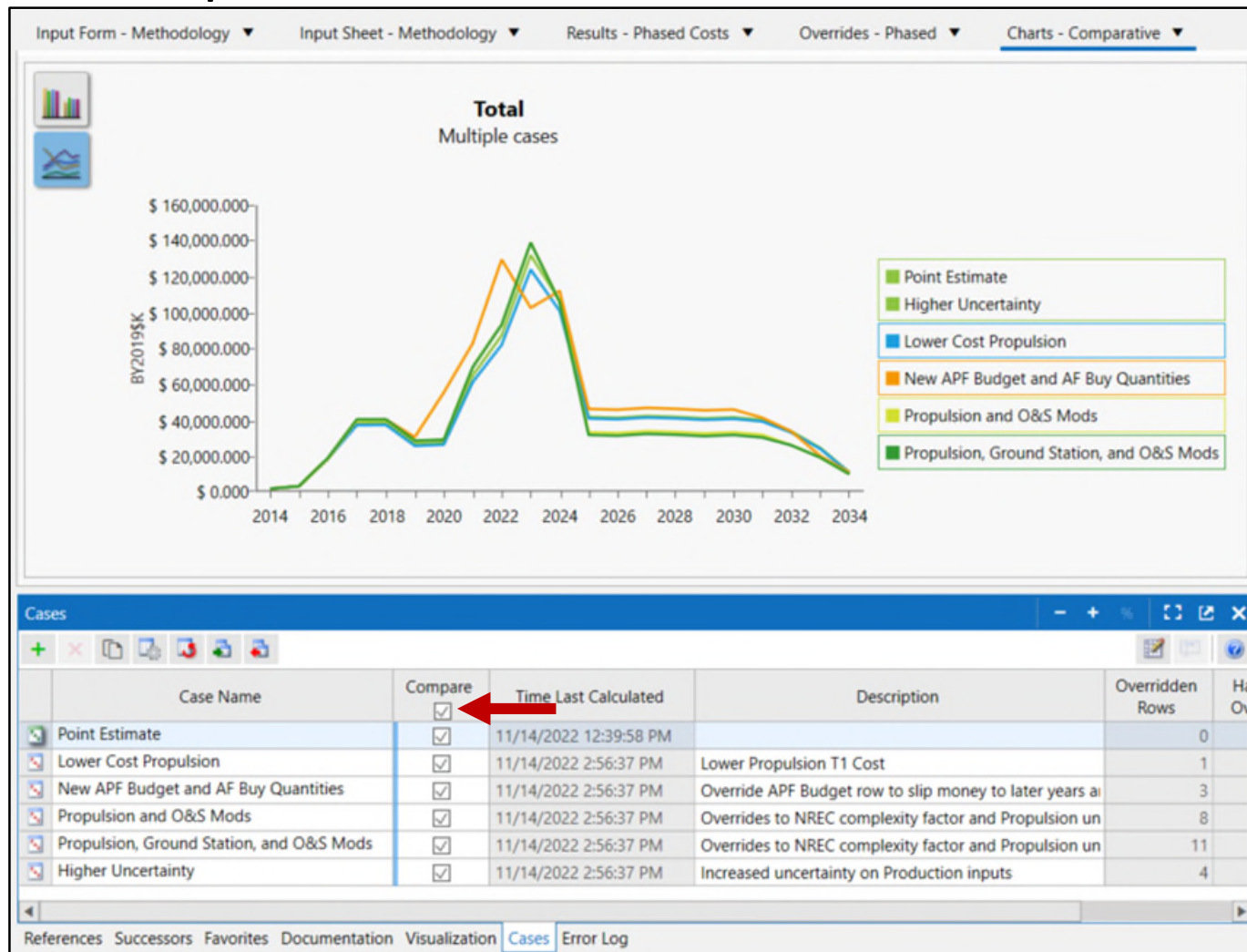
RI$K Improvements

- Probability levels for Mean result values added to Results: RI$K Statistics and RI$K Stats Reports

| Input Form - Methodology ▼ | Input Sheet - Methodology ▼ | Results - RI$K Statistics ▼ | Overrides - Phased ▼ | Charts - Estimate ▼ |

| Row	WBS/CES Description	Point Estimate	Mean	Std Dev	CV	5%	10%	15%	20%	25%	30%
63	Total	$ 907,388.167 (43%)	$ 939,232.230 (55%)	$ 129,667.684	0.138057	'49,740.516	'86,060.629	09,153.979	28,801.773	54,181.409	72,035
64	RDT&E	$ 63,446.758 (13%)	$ 70,747.085 (51%)	$ 6,510.383	0.092023	60,106.168	62,596.472	63,839.946	65,364.500	66,369.709	66,888
65	Concept Refinement	$ 1,066.207	$ 1,066.207			$ 1,066.207	$ 1,066.207	$ 1,066.207	$ 1,066.207	$ 1,066.207	$ 1,066
66	Contractor A	$ 536.218	$ 536.218			$ 536.218	$ 536.218	$ 536.218	$ 536.218	$ 536.218	$ 536
67	Contractor B	$ 529.989	$ 529.989			$ 529.989	$ 529.989	$ 529.989	$ 529.989	$ 529.989	$ 529
68	Technology Development	$ 4,673.888	$ 4,673.888			$ 4,673.888	$ 4,673.888	$ 4,673.888	$ 4,673.888	$ 4,673.888	$ 4,673
69	Contractor A	$ 2,336.944	$ 2,336.944			$ 2,336.944	$ 2,336.944	$ 2,336.944	$ 2,336.944	$ 2,336.944	$ 2,336
70	Contractor B	$ 2,336.944	$ 2,336.944			$ 2,336.944	$ 2,336.944	$ 2,336.944	$ 2,336.944	$ 2,336.944	$ 2,336
71	System Development and Den	$ 57,706.663 (13%)	$ 65,006.991 (51%)	$ 6,510.383	0.100149	54,366.074	56,856.378	58,099.851	59,624.406	60,629.615	61,148
72	Development Engineering	$ 19,661.959 (50%)	$ 19,874.722 (55%)	$ 2,079.643	0.104638	16,714.380	17,402.391	17,788.151	18,124.754	18,435.590	18,753
73	Air Vehicle	$ 6,748.966 (48%)	$ 6,933.061 (54%)	$ 1,265.590	0.182544	$ 5,046.851	$ 5,447.706	$ 5,631.262	$ 5,831.775	$ 6,034.265	$ 6,169
74	Basic Structure	$ 4,501.693 (50%)	$ 4,639.988 (55%)	$ 1,159.787	0.249955	$ 3,001.369	$ 3,285.409	$ 3,487.981	$ 3,659.104	$ 3,812.162	$ 3,956
75	Navigation/Guidance	$ 1,531.022 (50%)	$ 1,530.924 (50%)	$ 336.390	0.219730	$ 977.035	$ 1,099.407	$ 1,181.924	$ 1,247.169	$ 1,303.960	$ 1,353
76	Propulsion	$ 716.251 (50%)	$ 762.149 (57%)	$ 278.234	0.365065	$ 403.672	$ 457.566	$ 498.040	$ 533.152	$ 565.289	$ 596

Added CDF Cleanup Wizard

- Quickly remove unused CDFs from your model
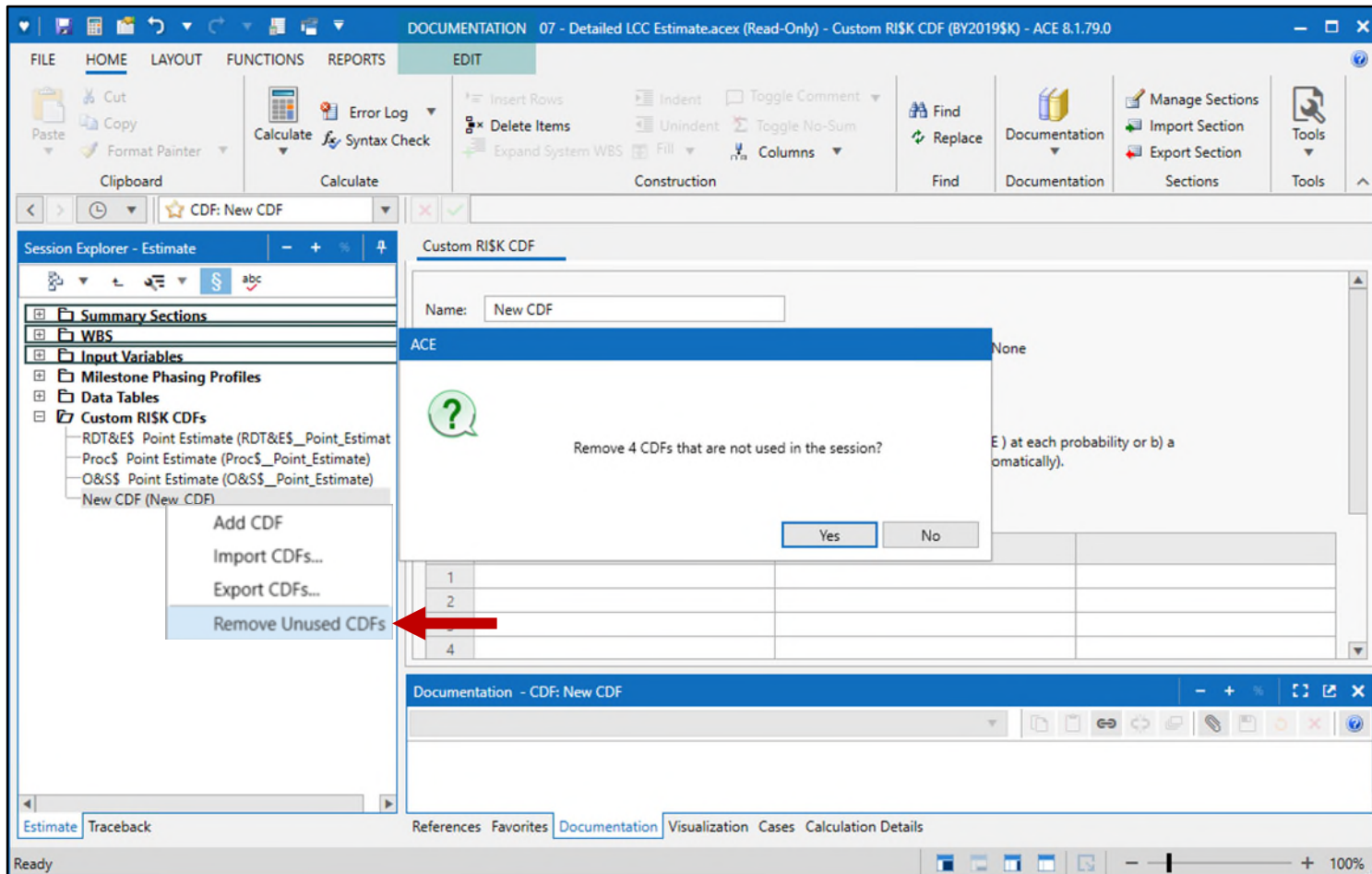
Backwards Compatibility

- We understand that every location cannot immediately upgrade to the latest version

- We created a **backwards compatibility strategy** to ensure you can keep working with colleagues with 8.0 versions

- 8.1 .acem files cannot be opened in 8.0

- **Strategy Goals**

  - Allow analysts to open an 8.0/SP1 or SP2 session in 8.1, make changes that don't use new features, and continue to save as an 8.0 session

  - Provide in-app messaging to help analysts understand backwards compatibility

Backwards Compatibility

- After experimenting with numerous file-flow maps, we got to the best possible balance of functionality and usability
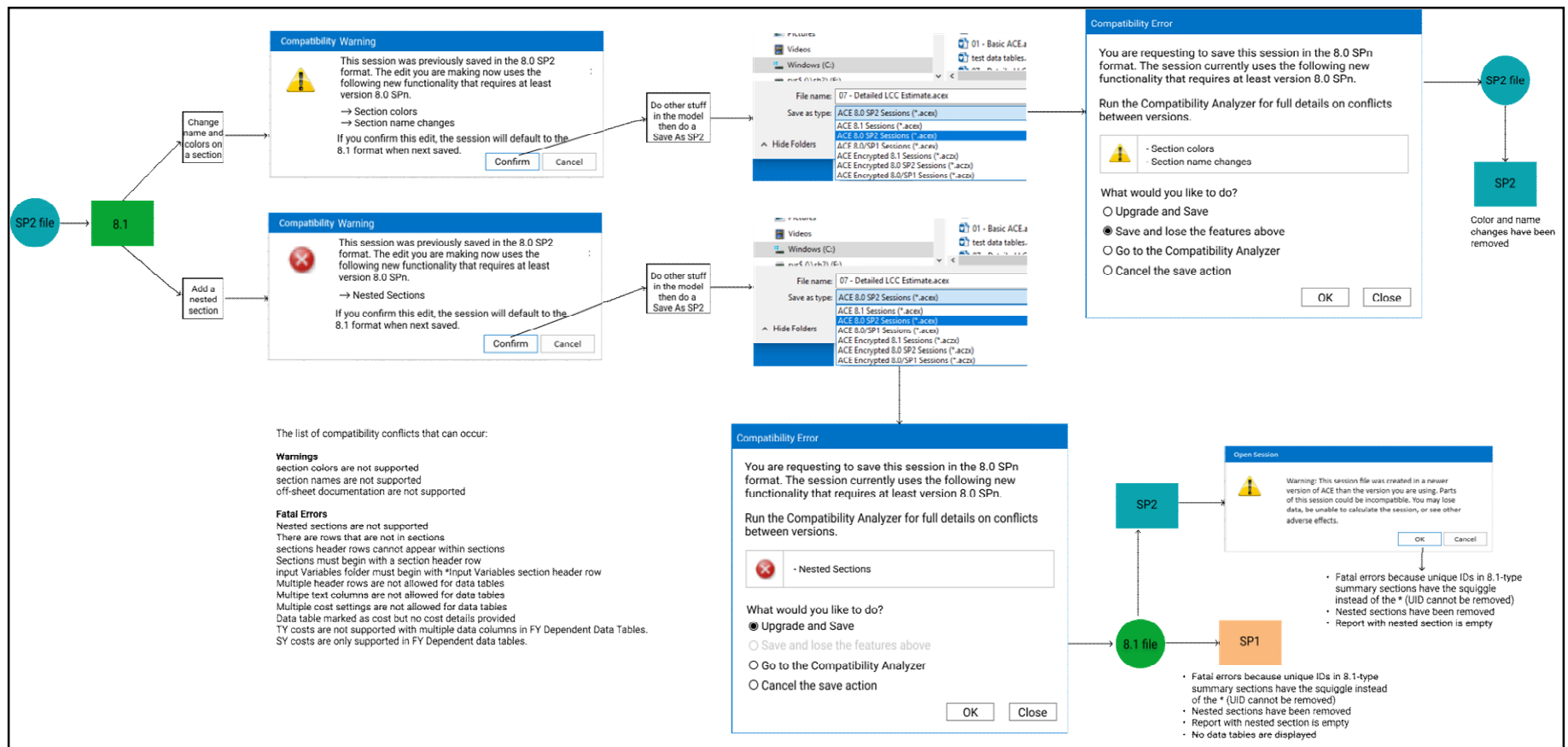
New Compatibility Mode

- Compatibility Mode allows ACE to continue to save your file in a previously saved file format

  - When you use a feature that is incompatible with the older file format ACE will prompt to upgrade to the new file format
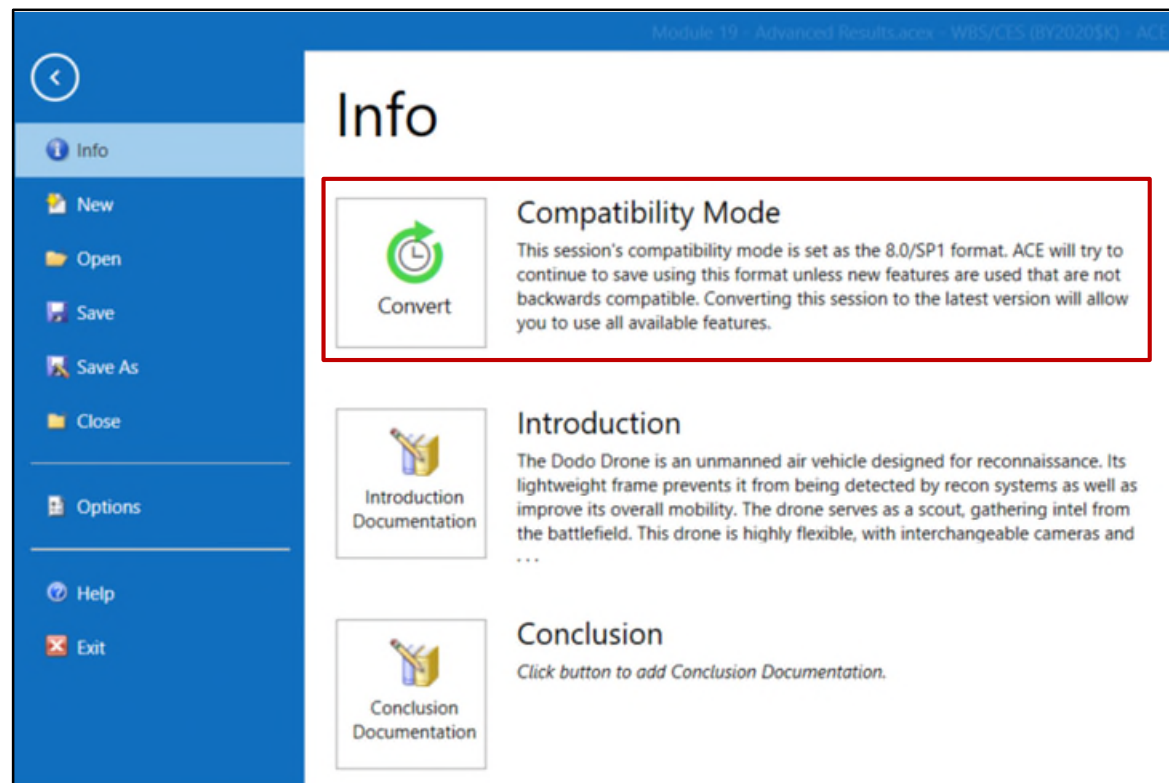
Clear Backwards Compatibility Messaging

- As you work in a 8.1 file and invoke new features messages will help you understand the file's compatibility
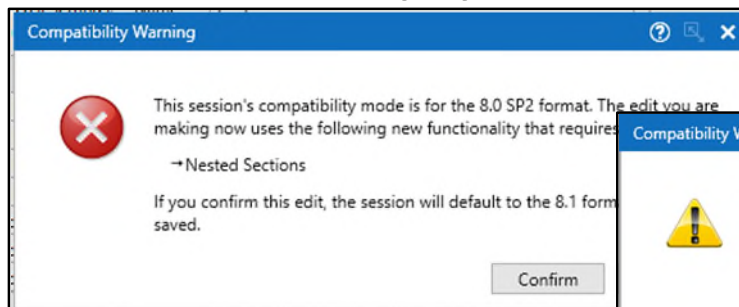
Warnings
- Section colors are not supported
- Section names are not supported
- Off-sheet documentation are not supported
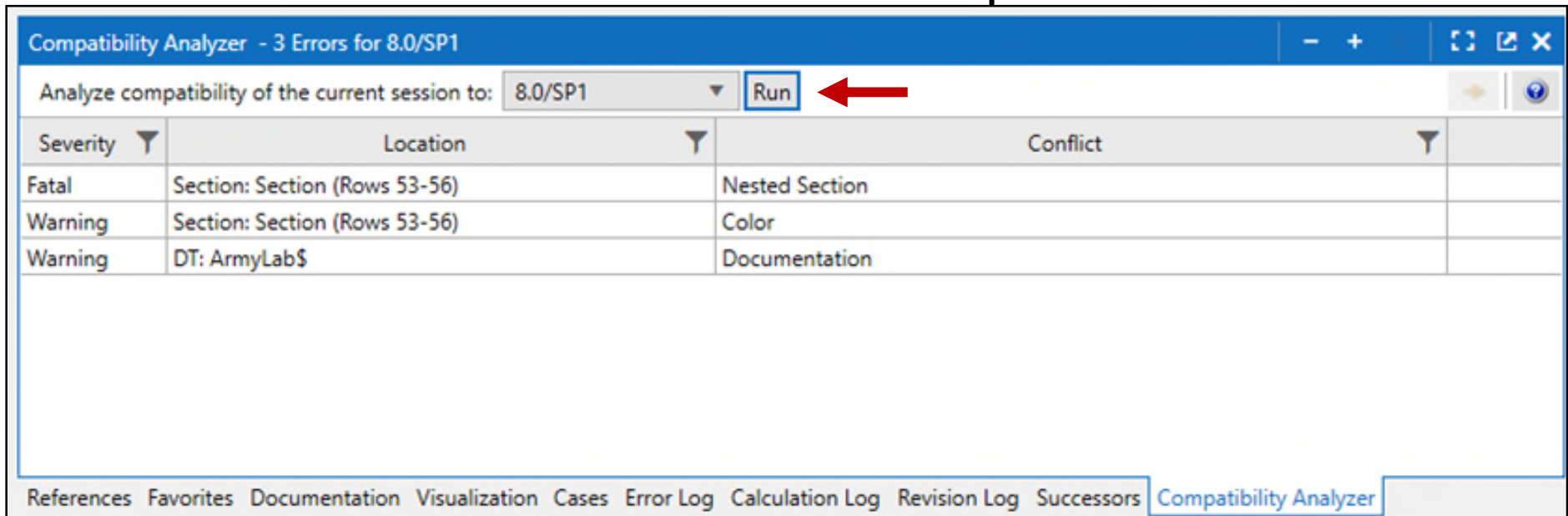
Fatal Errors
- Nested sections are not supported
- There are rows that are not in sections
- Sections header rows cannot appear within sections
- Sections must begin with a section header row
- Input Variables folder must begin with *Input Variables section header row
- Multiple header rows are not allowed for data tables
- Multiple text columns are not allowed for data tables
- Multiple cost settings are not allowed for data tables
- Data table marked as cost but no cost details provided
- TY costs not supported with multiple data columns in FY Dependent data tables
- SY costs are only supported in FY Dependent data tables
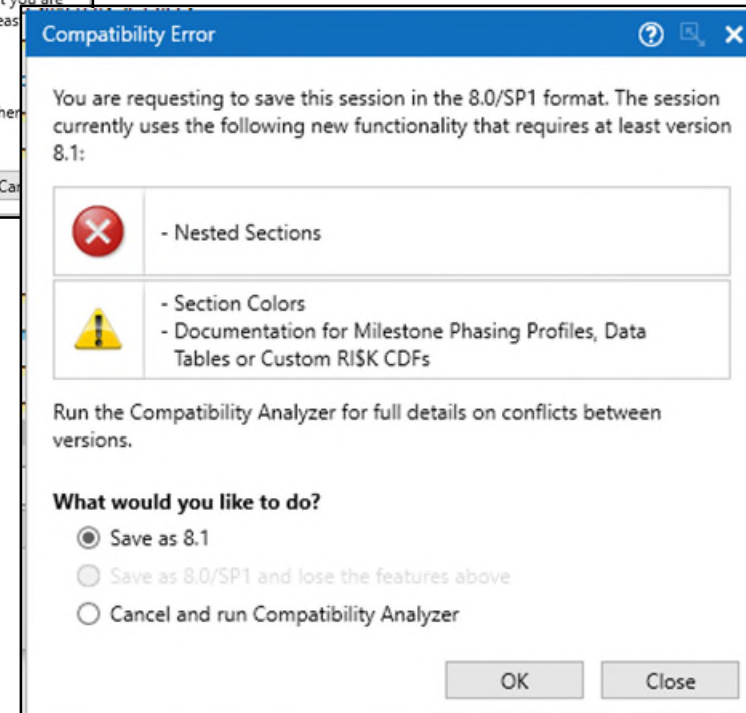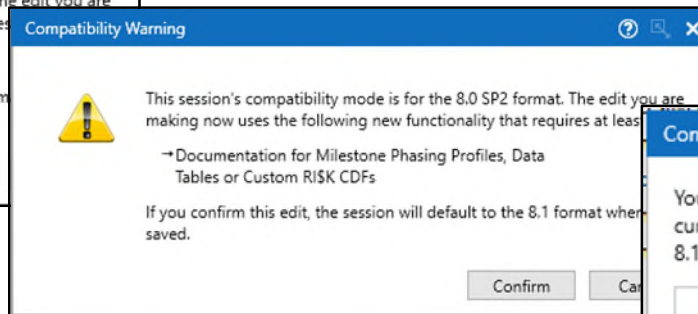
New Compatibility Analyzer Pane

- The Compatibility Analyzer can be run at any time to check the current version compatibility of the open session

    - Analyze compatibility compared to specific 8.0 Service Packs

    - Lists conflict location and description

Charts Improvements

- Moved several items from Chart Ribbon to Settings
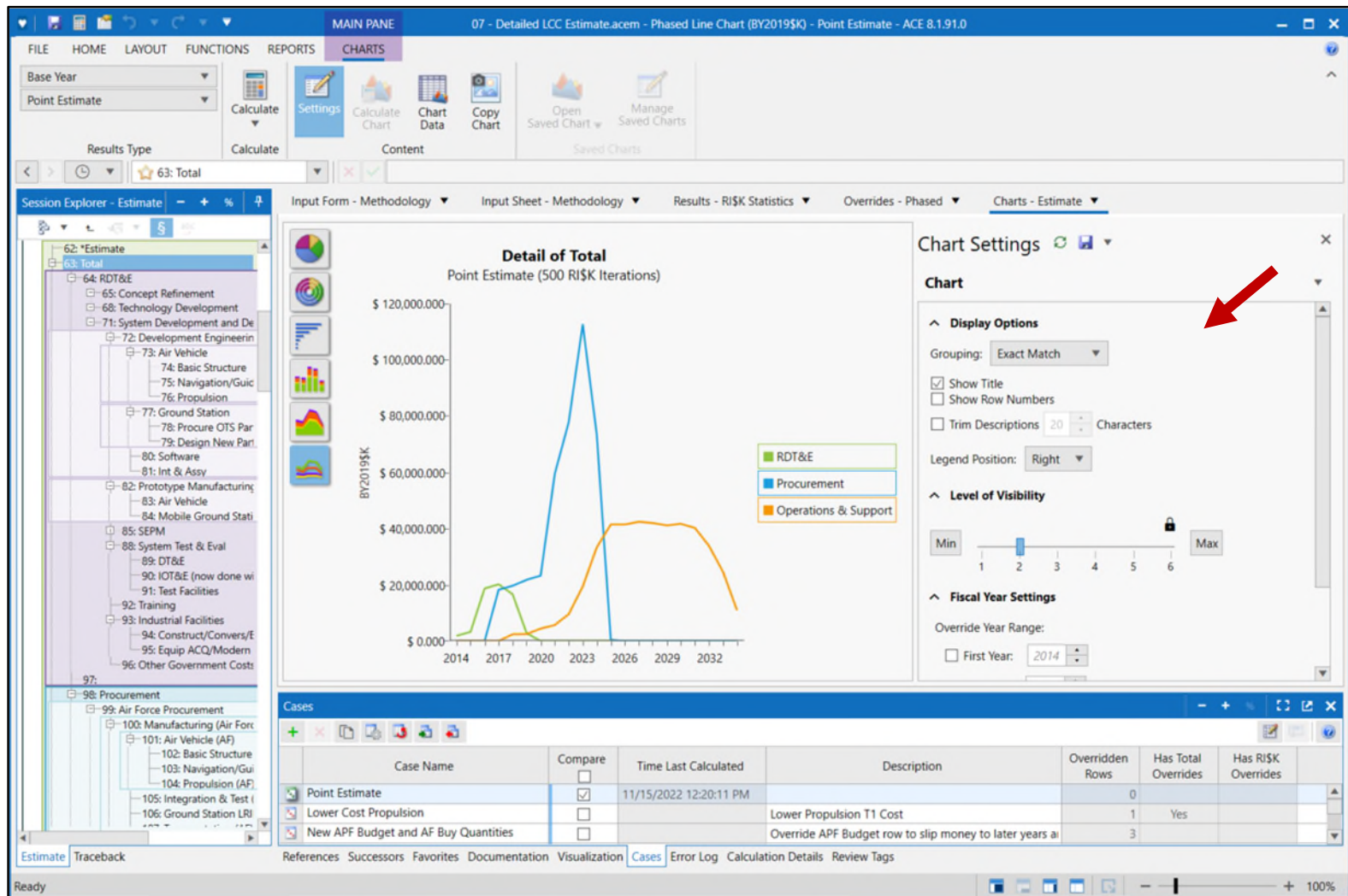
Convergence Chart Addition

- Added target line to the RI$K Convergence Chart
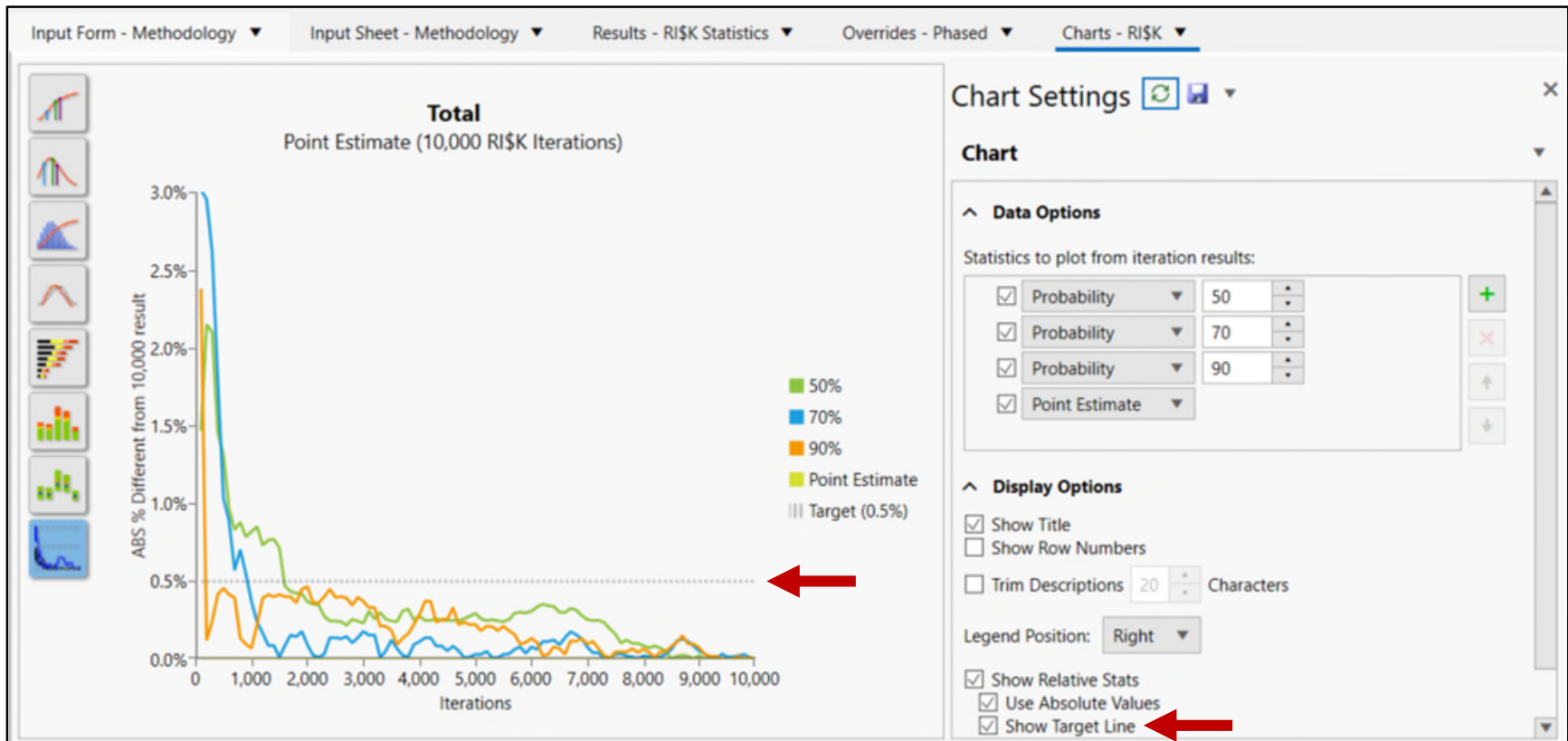
Reports Additions

- ACEIT 8.1 includes updates to existing Reports and some new reports types

Data Table:
New

Executive Summary:
New

Documentation:
Tabular Format of the new Detailed Documentation Report

Detailed Documentation:
New
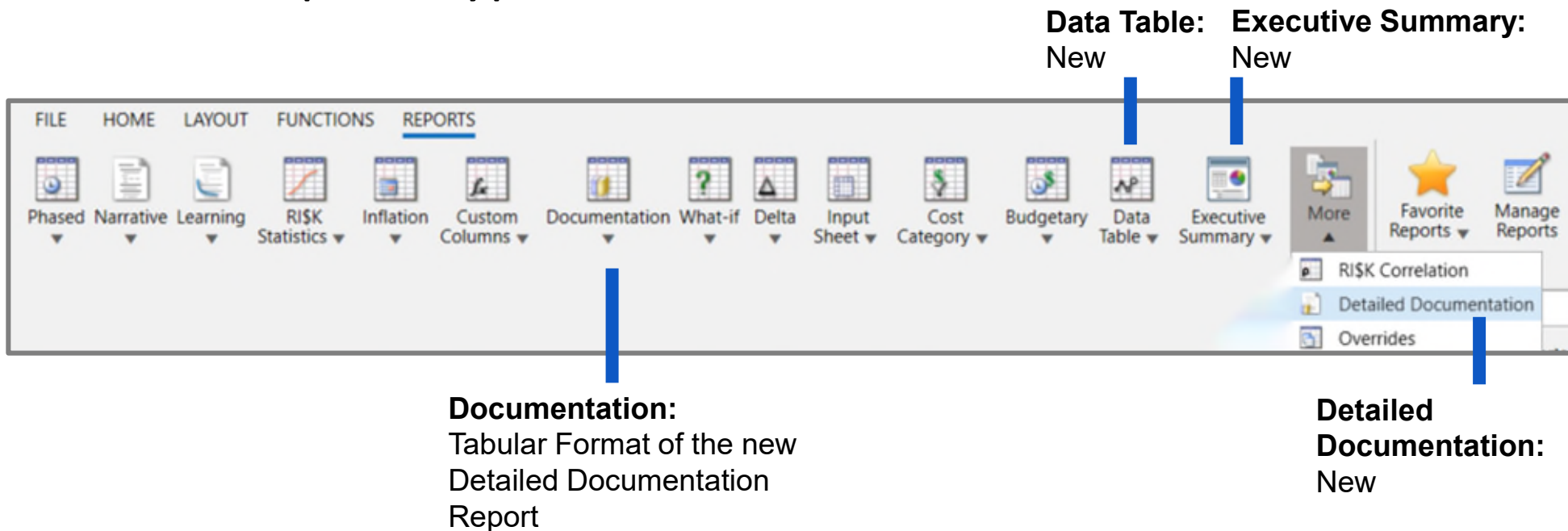
- Reports can be exported straight to Word/Excel without generating them in ACE

New Detailed Documentation Reports

- Detailed Documentation available in tabular or narrative formats

New Data Table Report

- Create a report for any Data Table
  - Select an individual Data Table
 - Control how the cost values are displayed

New Executive Report Designer

- Create an Executive Summary report of your ACE Session

- Choose from a series of content types to build your framework
  - Text
  - Row
  - Milestone Phasing Profile
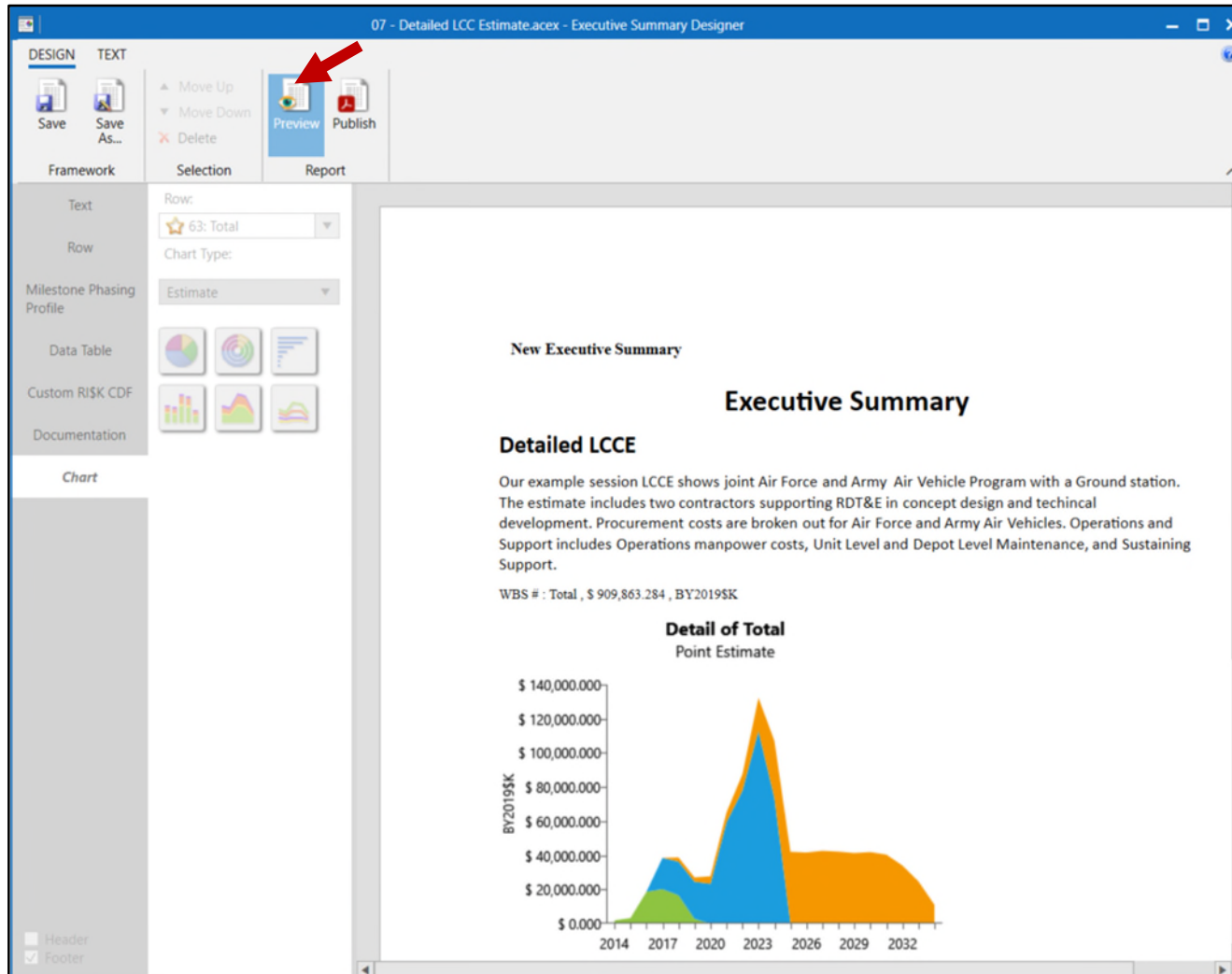 - Data Table
  - Custom RI$K CDF
  - Documentation
  - Charts
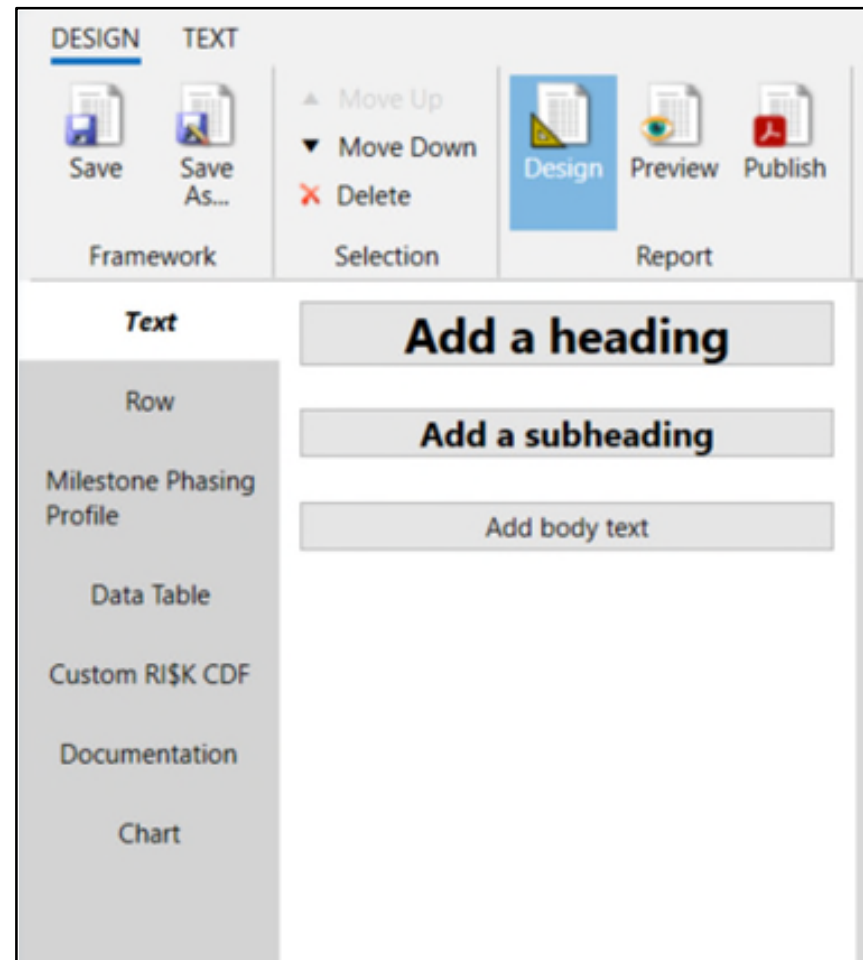
New Executive Report Designer

- Build a document framework referencing information from the session
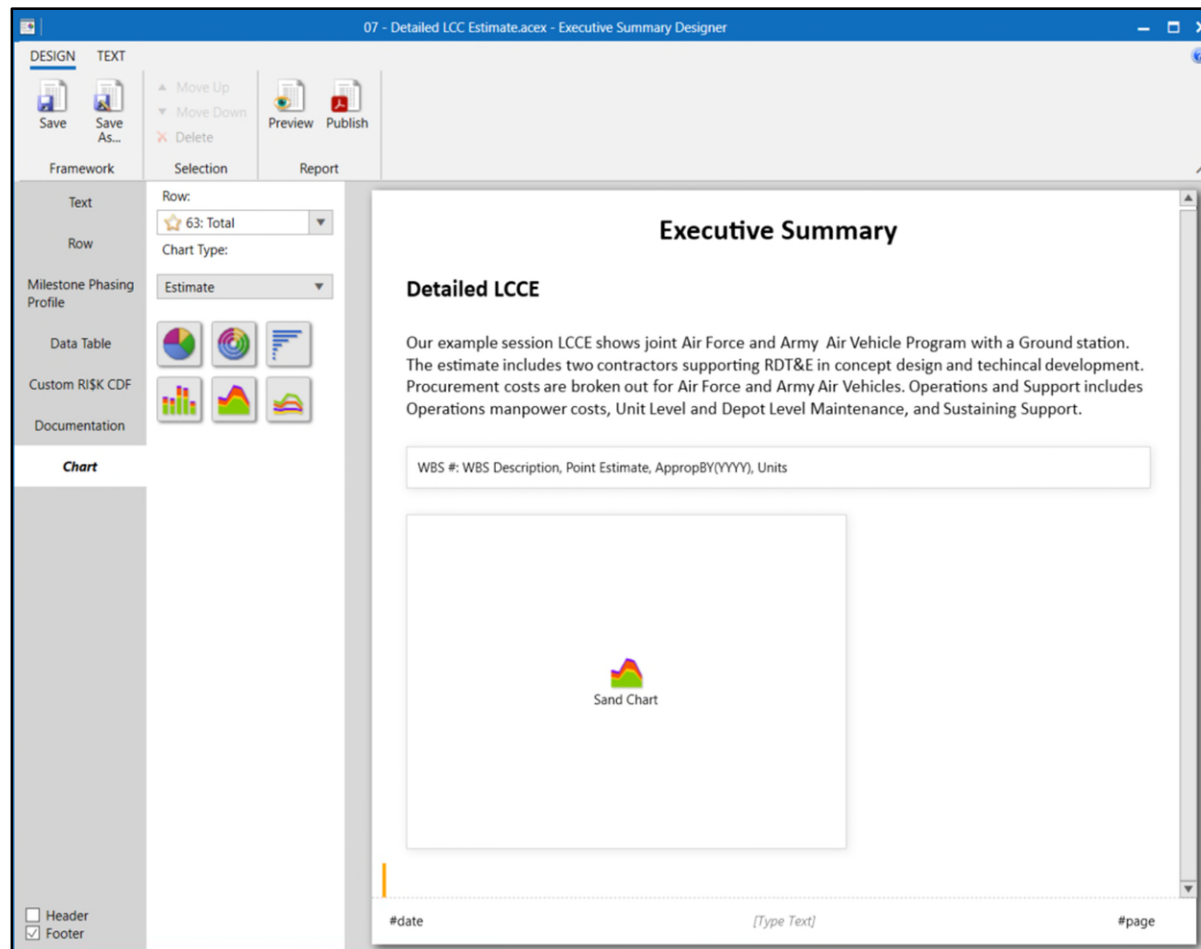
New Executive Report Designer

- Preview the framework with data from the session

Executive Summary Designer
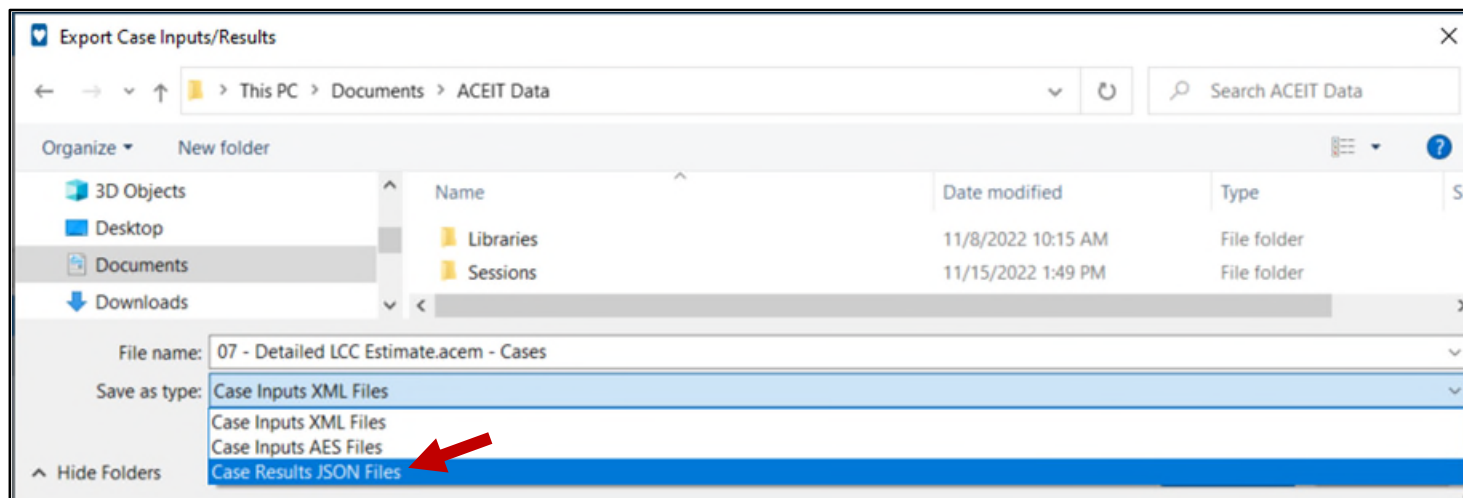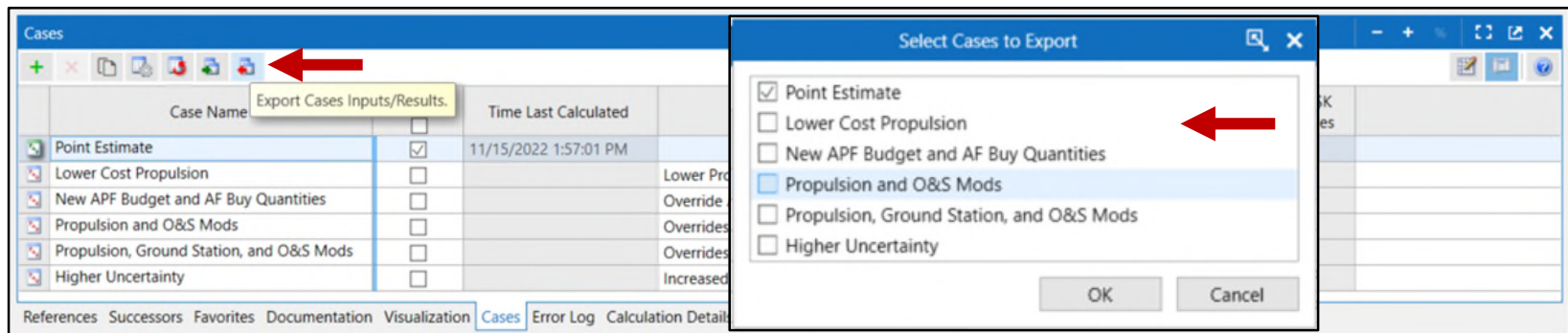
- Publish to PDF

Reports Exported Straight to Word and Excel

- Reports can bypass creation within ACE and be exported directly to different file formats
  - Narrative reports
    - Word
    - Excel
    - PDF
  - Tabular reports
    - Excel
    - PDF
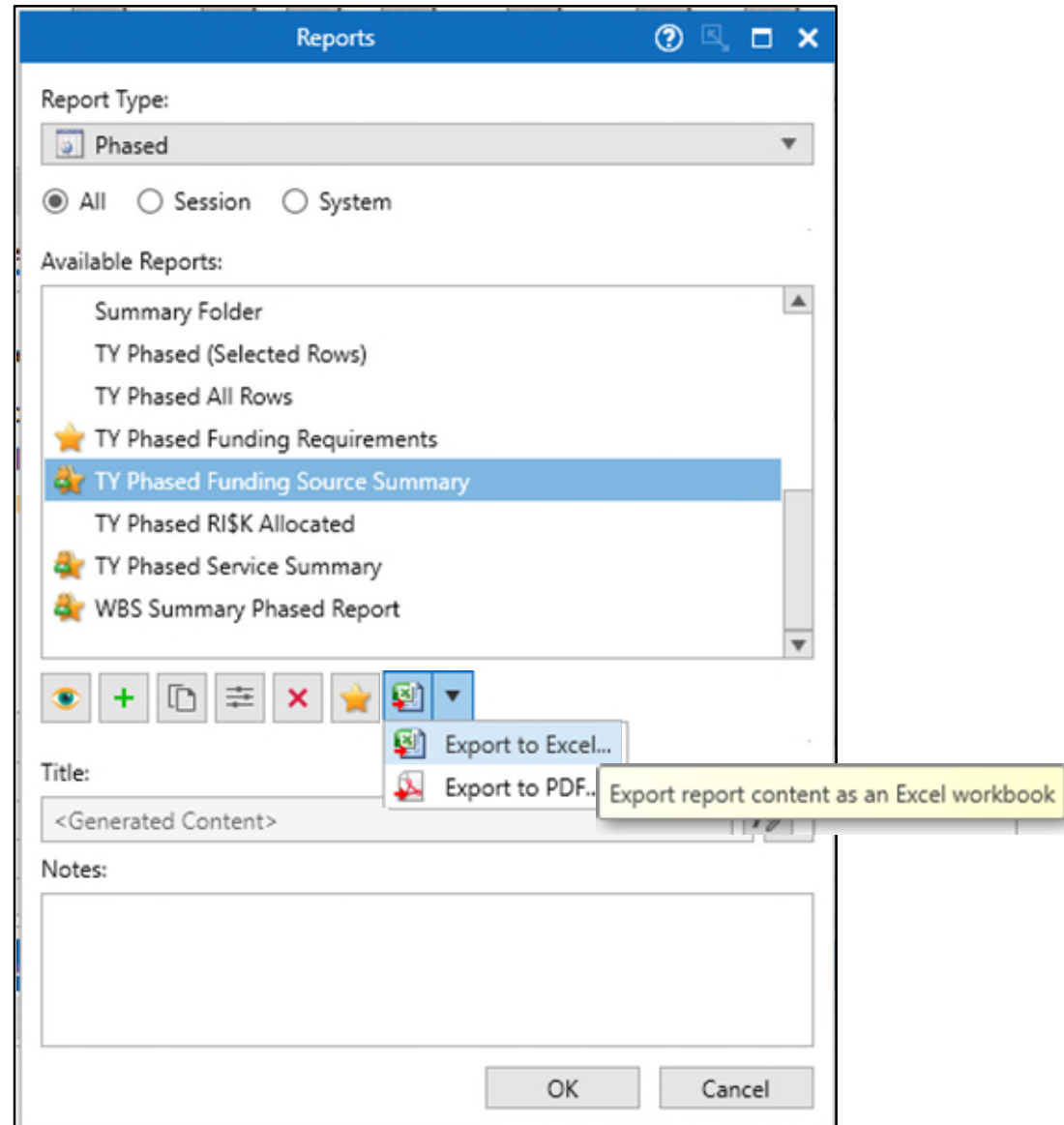
Export to JSON File

- Export case inputs and results to JSON File

- Select cases

- Save as type: Case Results JSON Files

Expanded JSON Export

- **JSON exports include**

    - Session: Session name

    - Case: Case Name

    - Row: Session row number

    - External Code

    - WBS: WBS description of row

    - Config: The configuration used to calculate the value (e.g., BY, TY, SY, BY with RI$K, etc.)

    - Approp Reportable BY

    - CES Number

    - WBS/Item Number

    - Approp

    - WBS Indent Level

    - Session Custom Columns and Values: Includes funding source to service and custom text columns

    - Attribute: This is the Total, or the FY describing the Value

    - Parent Info, Level N Parent Row, Level N Parent Ext Code, Level N Parent WBS

    - Value: The calculated value for the Row + Attribute combination

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        - ACEIT_Support@Tecolote.com