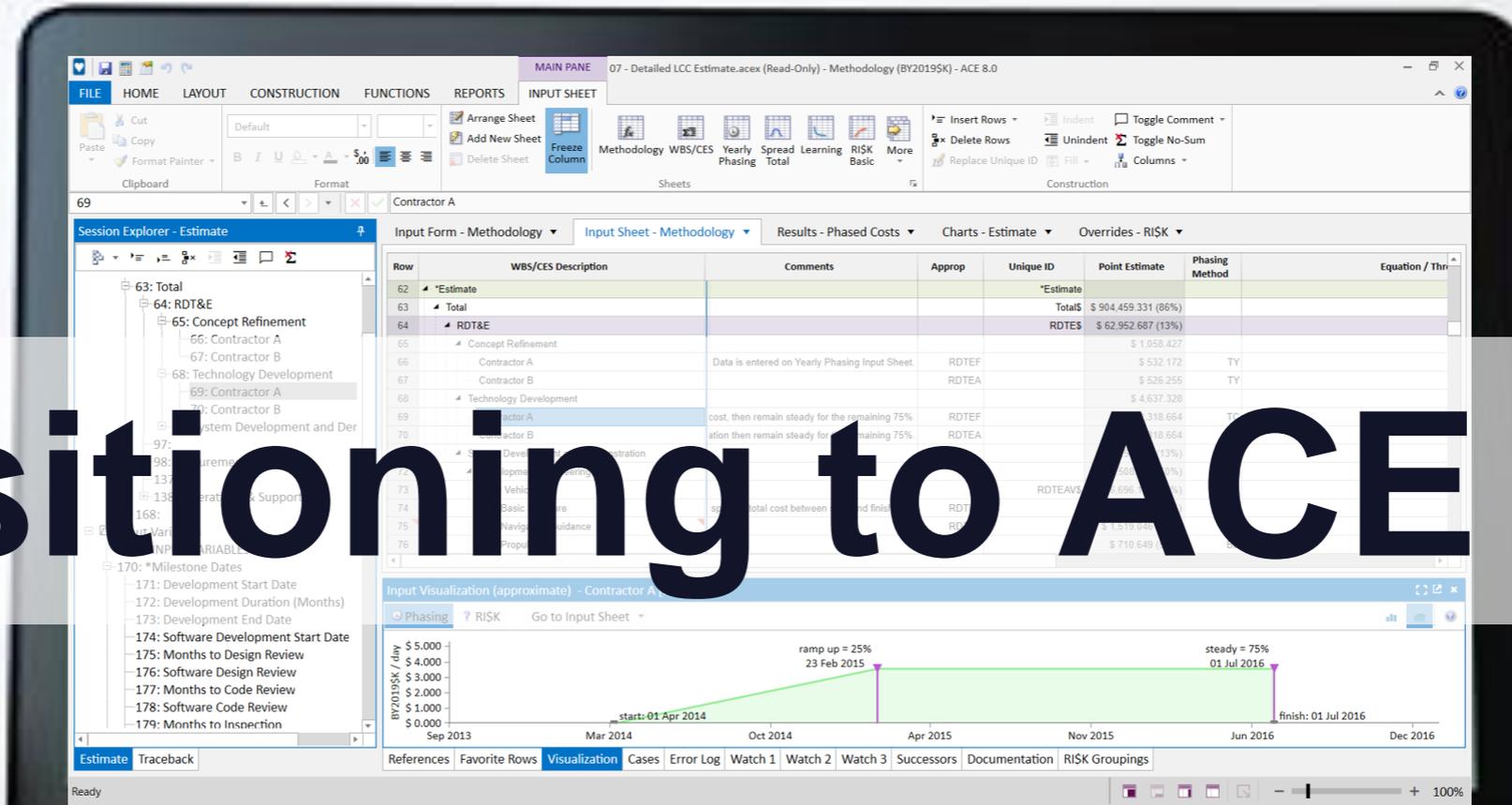


Transitioning to ACE 8.0



Agenda

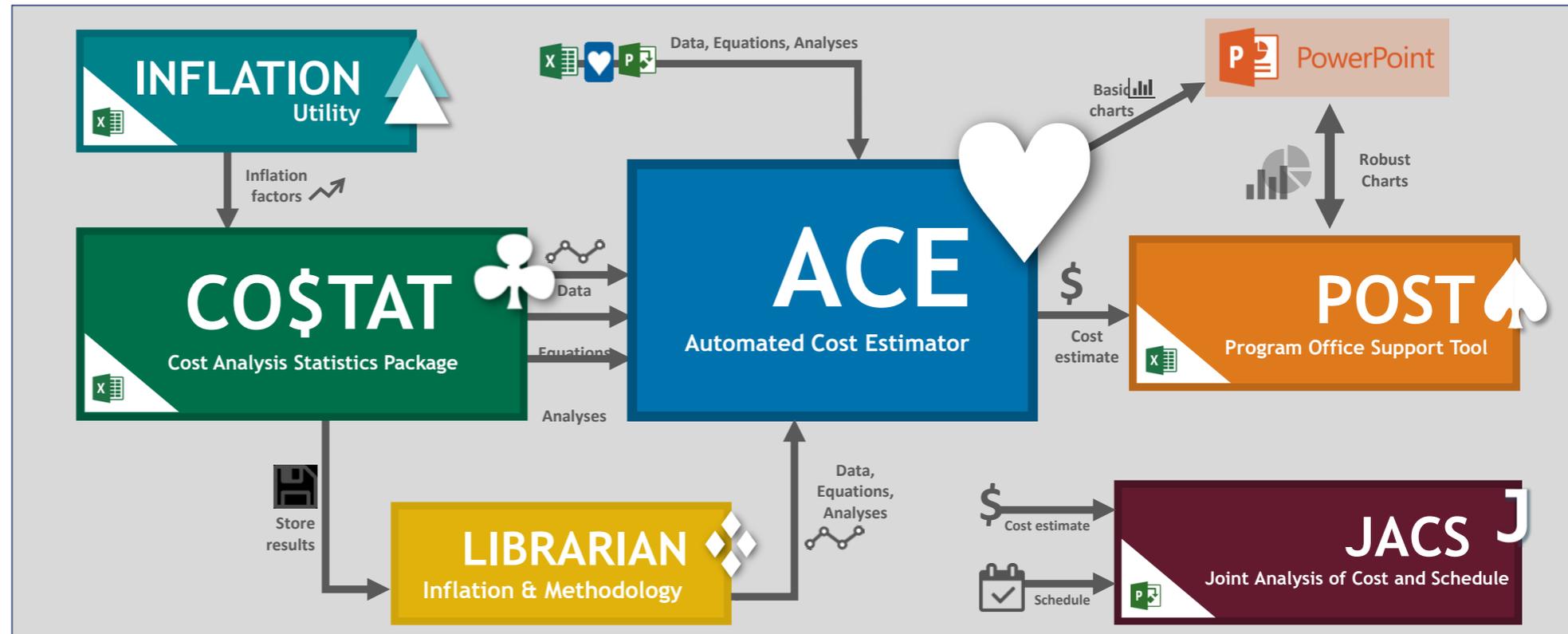
The purpose of this brown bag is to outline best practices to convert an ACE 7.5 session to ACE 8.0. This transition process includes steps in ACE 7.5 to prepare the session for conversion and then guidance on how to start capitalizing on ACE 8.0 enhancements.

This session outlines:

- Introduction
 - High level ACEIT 8.0 change summary
 - When to transition a file to ACE 8.0
- ACE 7.5 session preparation
- Opening the session in ACE 8.0
 - Understanding file extensions & backwards compatibility
 - Checking the file in ACE 8.0
 - Considering upgrading the ACE session for ACE 8.0 new features

ACEIT 8.0 Change Summary

- ACEIT 8.0 architectural changes
 - ACDB moved to JIAT
 - POSTDoc removed
- ACE 8.0 development
 - Major changes to ACE user interface
 - Same ACE calculation engine
 - Modifications to ACE file structure for new interface



Consulting ACEIT 8.0 User References

- Learn more about ACE 8.0 new features
- Read ACEIT 8.0 user references on ACEIT.com
 - At ACEIT.com/User Resources/Downloads/Productions Software
 - 8.0 Release Notes
 - 8.0 Service Pack 1 Release Notes
 - Transitioning From ACE 7.5 to 8.0
 - At ACEIT.com/ACEIT Suite/Welcome ACEIT 8.0
 - Welcome to ACEIT 8.0

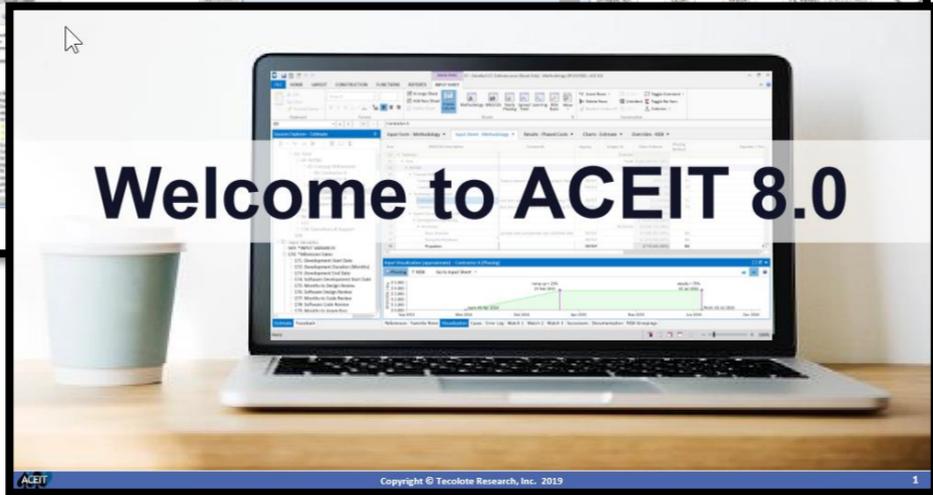
ACEIT 8.0 SP1 now available

TRANSITIONING FROM ACE 7.5 TO 8.0

**Transition visuals shown with ACE 7.5 and equivalent ACE 8.0 example files. All ACE 8.0 example files were updated to Base Year 2019 and a newer phasing schedule. Further, the new examples were modified to illustrate new features like the Weibull Phasing Method. In short, the point estimates values in the following images while similar are not the same.

ACE 7.5 to 8.0 Comparison

ACE 7.5						ACE 8.0							
DATA ENTRY													
Workscreens						Input Sheets (Main Pane tab)							
WBS/CSI Description	Approp	Unique ID	Point Estimate	Phasing Method	Equation / Throughput	Fiscal Year	WBS/CSI Description	Approp	Unique ID	Point Estimate	Phasing Method		
Total						\$ 97,489,382	Total						\$ 910,495,259
Concept Refinement						\$ 1,052,242	Concept Refinement						\$ 5,532,467
Contractor A						\$ 501,168	Contractor A						\$ 2,532,172
Contractor B						\$ 551,074	Contractor B						\$ 3,000,295
Technology Development						\$ 4,710,518	Technology Development						\$ 23,539,227
Contractor A						\$ 2,355,259	Contractor A						\$ 11,769,614
Contractor B						\$ 2,355,259	Contractor B						\$ 11,769,614
System Development and Demonstration						\$ 17,887,811	System Development and Demonstration						\$ 89,542,358
Development Engineering						\$ 28,258,341	Development Engineering						\$ 143,241,283
Air Vehicle						\$ 9,988,468	Air Vehicle						\$ 50,241,283
Basic Structure						\$ 4,427,028	Basic Structure						\$ 22,620,642
Navigation/Guidance						\$ 1,534,338	Navigation/Guidance						\$ 7,760,188
Propulsion						\$ 796,372	Propulsion						\$ 4,000,393
Ground Station						\$ 7,366,485	Ground Station						\$ 36,241,283
Phase CTS Path						\$ 881,728	Phase CTS Path						\$ 4,457,489



ACEIT 8.0 Release Notes
June 2019

The release notes outline the development work associated with ACEIT 8.0.

ACEIT 8.0 focuses on a major revision to ACE as well as smaller enhancements to COSTAT, POST, and JACS. In this version there are a few changes that may affect the calculated results. These changes are clearly highlighted in this document and no other result changes are anticipated. The outline exhibits the changes to ACE, COSTAT, JACS and POST, in that order.

ACEIT 8.0 Service Pack 1 Release Notes
April 2020

These release notes outline the development work associated with ACEIT 8.0, Service Pack 1. As this release is an upgrade to the major revision of ACE in ACEIT 8.0, these notes only cover the service pack. Please refer to [ACEIT 8.0 Release Notes, June 2019](#), for complete details on the numerous changes in the original 8.0 release.

The following improvements in ACEIT are included in this service pack.

- New Functionality**
 - Added RISK Fan Chart
 - Added Revision Log
- Improved Functionality**
 - Implemented significant performance upgrades throughout
 - Made numerous refinements to Model Structure
 - Revised RISK group seed editing
 - Made considerable refinements to Undo/Redo functionality
- Repaired Functionality**
 - Fixed defect in Overrides view
 - Fixed issue with RISK Results display
 - Included fixes for Excel-to-ACE and ACE-to-ACE Plugins

When Should You Transition a File to ACE 8.0?

- Confer with all organizations that are stake holders in the ACE session
 - Ensure that all organizations have access to ACEIT 8.0 before transitioning the file
 - ***Only make the switch to ACE 8.0 if all organizations have access to ACEIT 8.0***
 - ACE 8.0 files are not backwards compatible to ACE 7.5 due to file structure modifications
 - *This means once a file is transitioned into 8.0, you can not open it in 7.5 anymore*
- Select one organization/team member to transition the file to ACE 8.0
 - Recommend selecting the organization where most changes to the session originate
- When complete distribute the ACE 8.0 session to all participating team members

ACE 7.5 Session Preparation

```
private=function(b,d,e){return  
).attr("aria-expanded",!1),l  
("fade"),b.parent(".dropdow  
=d.find("> .active"),h=e&&  
,f).emulateTransitionEnd  
t=function(){return a.fn.t  
l,e).on("click.bs.tab.data  
ad.data("bs.offi")
```

ACE 8.0 is Different than ACE 7.5

- ACE 8.0 is a revolutionary interface change
 - To be able to tackle future cost estimating challenges we've introduced many new interface elements
 - We've modified features to expand their capabilities
 - We've created new visual displays to help you better understand inputs and results
 - We've emphasize better understanding of row connections in the file
 - We've developed some new terms or names

When the file transitions some areas of the feature set will go through more changes than others. This presentation is designed to help you best prepare your model to maximize the power of 8.0

Row	WBS/CES Description	Approp	Unique ID	Point Estimate	Phasing Method	Equation / Throughput	Fiscal Year	Units	Start Date	Finish
62	*Estimate		*Estimate							
63	Total		Total\$	\$ 909,863.284						
64	RDT&E		RDTES	\$ 63,508.912						
65	Concept Refinement			\$ 1,067.220						
66	Contractor A	RDTEF		\$ 536.734	TY	[Cost Throughput]		\$K		
67	Contractor B	RDTEA		\$ 530.487	TY	[Cost Throughput]		\$K		
68	Technology Development			\$ 4,678.474						
69	Contractor A	RDTEF		\$ 2,339.237	TC		2 2009	SM	irtDate,0,-15,0	startD
70	Contractor B	RDTEA		\$ 2,339.237	TS		2 2009	SM	irtDate,0,-15,0	startD
71	System Development and Demonstrati			\$ 57,763.217						
72	Development Engineering			\$ 19,681.254						
73	Air Vehicle		RDTEAVS	\$ 6,755.589						
74	Basic Structure	RDTEF		\$ 4,506.110	BE	Struc_T1\$*NRT1Ratio			DevStartDate	De
75	Navigation/Guidance	RDTEF		\$ 1,532.524	BE	425.555+25.555*NavWt	1997	\$K	DevStartDate	De
76	Propulsion	RDTEF		\$ 716.954	BE	ropMnth\$*DevDuration*NRPropComplex			DevStartDate	De
77	Ground Station		RDTEGSS	\$ 7,503.106						
78	Procure OTS Parts	RDTEF		\$ 976.217	BE	GSUCS*GndStatQty			rtDate,0,0,120	StartD
79	Design New Parts	RDTEF		\$ 6,526.889	BE	4500*GSComplex	2010	\$K	rtDate,0,0,120	StartD
80	Software	RDTEF	RDTEWS	\$ 3,283.755	MS	SWLab\$*SWManMonths			WDevStartDate	SWDe

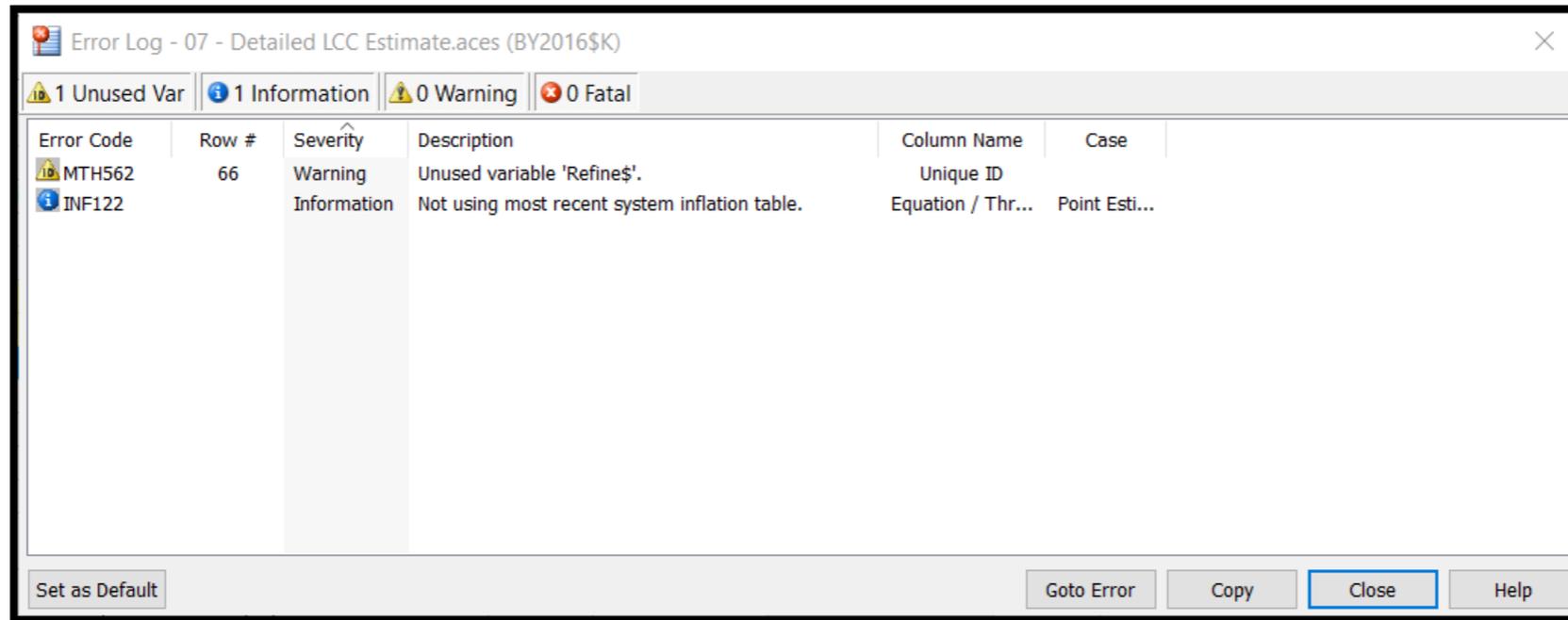
Case Name	Compare	Time Last Calculated	Description	Overridden Rows	Has Total Overrides	Has RISK Over
Point Estimate	<input checked="" type="checkbox"/>			0		
Lower Cost Propulsion	<input type="checkbox"/>		Lower Propulsion T1 Cost	1	Yes	
New APF Budget and AF Buy Quantities	<input type="checkbox"/>		Override APF Budget row to slip money to later	3		
Propulsion and O&S Mods	<input type="checkbox"/>		Overrides to NREC complexity factor and Propul:	8	Yes	
Propulsion, Ground Station, and O&S Mods	<input type="checkbox"/>		Overrides to NREC complexity factor and Propul:	11	Yes	

Transitioning a File to ACE 8.0 Starts in ACE 7.5

- Prepare the session for transition by cleansing the session in ACE 7.5
 1. Review Definitions
 2. Clear Error Messages
 3. Review Reports
 4. Scan Cell Formatting
- Examine the 7.5 session to understand the extent of the file transition
 1. Are there summary sections in the session?
 2. How many DEC's and Category columns does the session have?
 3. Are there inputs on the Yearly Phasing workscreen that are not associated with the Fiscal Years?
- Maintenance on the session
 1. This is a good time to review the sessions overall methodology:
 - Reduce the footprint of the model
 - Remove rows that are not core to the sessions mission

Preparing the Session: Clear Error Messages

- Look at the error log in the session
 - Are there any fatal errors or unused variables?
 - If so, correct them before moving on



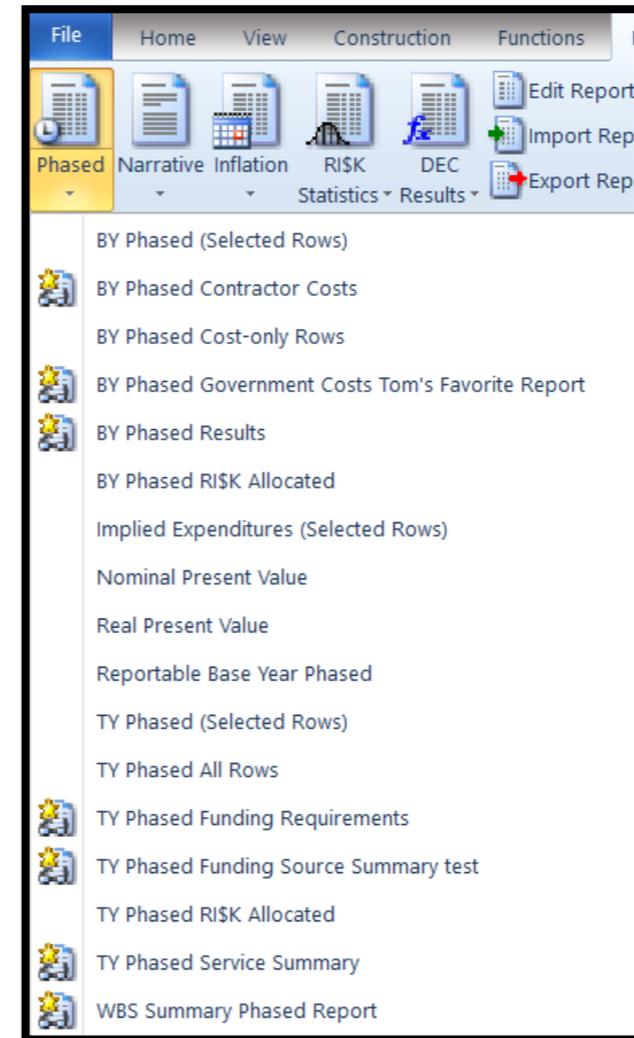
The screenshot shows a window titled "Error Log - 07 - Detailed LCC Estimate.aces (BY2016\$K)". The window has a summary bar at the top indicating "1 Unused Var", "1 Information", "0 Warning", and "0 Fatal". Below this is a table with the following data:

Error Code	Row #	Severity	Description	Column Name	Case
MTH562	66	Warning	Unused variable 'Refine\$'.	Unique ID	
INF122		Information	Not using most recent system inflation table.	Equation / Thr...	Point Esti...

At the bottom of the window, there are buttons for "Set as Default", "Goto Error", "Copy", "Close", and "Help".

Preparing the Session: Review Reports

- Review Session Reports
 - Only transition the reports you need going forward
 - Remove redundant or outdated reports
 - Update reports
 - Use best practices on report titles
 - Example “Tom’s Favorite Report”
 - Tom may no longer support the program
- Go to Results Ribbon > Edit Reports and review all Session Reports



Update

Remove

Preparing the Session: Scan Cell Formatting

- Prepare cell formatting for the transition
 - ACE 8.0 only applies formatting (fonts, font colors, and cell color highlighting) to an entire row
 - When the file is transitioned
 - Formatting on entire rows will transition directly to ACE 8.0
 - If cells are individually formatted, the row will adopt the formatting of the WBS/CES Description
 - Consider updating the cell formatting before the file transition

The meaning behind cell formatting can be captured in ACE 8.0 with cell definitions

Applied to the row

	WBS/CES Description	Approp	Unique ID	Point Estimate	Phasing Method	Equation / Throughput	Fiscal Year	Units	Summary Result Type
63	*Estimate		*Estimate						
64	Total		Total\$	\$ 907,466.992 (41%)*					
65	RDT&E		RDTES	\$ 63,375.769 (14%)*					
66	Concept Refinement		RefineS	\$ 1,058,240 *					
67	Contractor A	RDTEF		\$ 531.150 *	TY				\$K
68	Contractor B	RDTEA		\$ 527.090 *	TY				\$K
69	Technology Development			\$ 4,710.518 *					
70	Contractor A	RDTEF		\$ 2,355.259 *	TC		2.0	2006	\$M
71	Contractor B	RDTEA		\$ 2,355.259 *	TS		2.0	2006	\$M
72	System Development and Demonstration			\$ 57,607.011 (14%)*					
73	Development Engineering			\$ 20,030.041 (47%)*					
74	Air Vehicle		RDTEAVS	\$ 6,665.445 (49%)*					
75	Basic Structure	RDTEF		\$ 4,427.036 (50%)*	BE				
76	Navigation/Guidance	RDTEF		\$ 1,534.036 (50%)*	BE				
77	Propulsion	RDTEF		\$ 704.373 (50%)*	BE				
78	Ground Station		RDTEGSS	\$ 7,986.468 (50%)*					
79	Procure OTS Parts	RDTEF		\$ 965.726 *	BE				
80	Design New Parts	RDTEF		\$ 7,020.742 (50%)*	BE				

Transitions to 8.0

Not transitioned to 8.0

Examining the 7.5 Session: Summary Sections

- Summary sections at the top of the session translate best to 8.0
 - All rows Above the *IN_VAR Unique ID transition to WBS folder
 - All rows Below the *IN_VAR Unique ID transition to Input Variables folder
- For best results move summary sections Above the *IN_VAR row before file transition
- Sections marked with * at the beginning of the Unique ID work Best if ther row is also a comment row

§	1	2	3	4	5	6	WBS/CES Description	Approp	Unique ID	Point Estimate	Phasing Method	Equation / Throughput	Fiscal Year	Units	Summary Result Type	Start Date	Finish D
	1						** EXAMPLE FILE **										
	2						* General Summary Section		*Summary						Summary		
	3						Total			\$ 907,466,992 *							
	4						RDT&E			\$ 63,375,769 *							
	5						Air Force	EF,RDTEA		\$ 60,134,291 *	F	SUMIF(CAT("APPN"), "RDTEF", @RDTE\$)					
	6						Army	EF,RDTEA		\$ 3,241,479 *	F	SUMIF(CAT("APPN"), "RDTEA", @RDTE\$)					
	7						Procurement			\$ 402,552,968 *							
	8						Manufacturing (Air Force)	APF		\$ 267,696,867 *	F		AF_Proc\$				
	9						Manufacturing (Army)	APA		\$ 134,856,101 *	F		Army_Proc\$				
	10						Operations & Support			\$ 441,538,255 *							
	11						Air Force	OMF,OMA		\$ 128,332,275 *	F	SUMIF(CAT("APPN"), "OMF", @OSS)					
	12						Army	OMF,OMA		\$ 30,526,045 *	F	SUMIF(CAT("APPN"), "OMA", @OSS)					
	13						Air Force Personnel	OMF,OMA		\$ 111,610,427 *	F	SUMIF(CAT("APPN"), "MPF", @OSS)					
	14						Army Personnel	OMF,OMA		\$ 171,069,508 *	F	SUMIF(CAT("APPN"), "MPA", @OSS)					
	43																
	44						*Budget Information		*Budget								
	45						Procurement Budget		ProcBudget\$	\$ 424,530,448 *							
	46						Air Force Aircraft (APF) Budget	APF		\$ 281,935,131 *	TY	[Cost Throughput]		SK			
	47						Army Aircraft (APA) Budget	APA		\$ 142,595,317 *	TY	[Cost Throughput]		SK			
	48																
	63						*Estimate		*Estimate								
	64						Total		Total\$	\$ 907,466,992 (41%) *							
	65						RDT&E		RDTE\$	\$ 63,375,769 (14%) *							
	66						Concept Refinement		Refine\$	\$ 1,058,240 *							
	67						Contractor A	RDTEF		\$ 531,150 *	TY	[Cost Throughput]		SK			
	68						Contractor B	RDTEA		\$ 527,090 *	TY	[Cost Throughput]		SK			

Session Explorer - Estimate

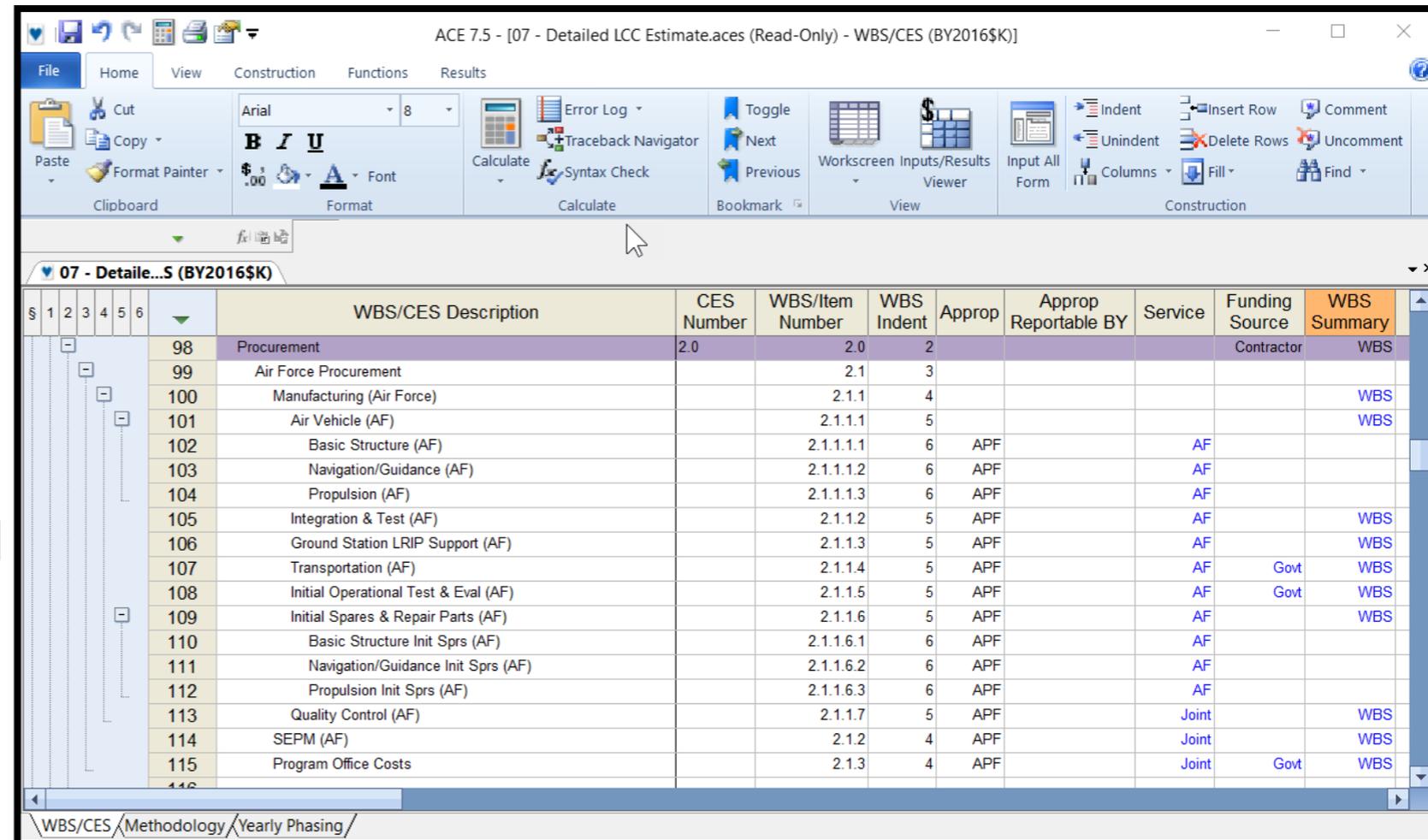
- WBS
 - 1: *EXAMPLE FILE*
 - 2: *General Summary Section
 - 16: *BY Summary Section
 - 30: *TY Procurement Summary Section
 - 44: *Budget Information
 - 49: *RISK Toggle and Metrics
 - 62: *Estimate
 - 63: Total
 - 64: RDT&E
 - 65: Concept Refinement
 - 66: Contractor A
 - 67: Contractor B
 - 68: Technology Development
 - 69: Contractor A
 - 70: Contractor B
 - 71: System Development and Demonst
 - 97:
 - 98: Procurement
 - 137:
 - 138: Operations & Support
 - 168:
 - Input Variables
 - Milestone Phasing Profiles
 - Data Tables
 - RISK CDFs

Estimate | Traceback

Examining the 7.5 Session: Category Columns and DEC's

- Does the session contain Category Columns or DEC's?
- Category Columns mainly support
 - Summary sections with SumIF functions
 - Report filter and summary options
- DEC's commonly support
 - Multiple equation columns
 - ACE Plug-ins
- In ACE 8.0 Category columns and DEC's are **automatically** combined into one column type called Custom Columns

More on Custom Columns later in this presentation



ACE 7.5 - [07 - Detailed LCC Estimate.aces (Read-Only) - WBS/CES (BY2016\$K)]

§	1	2	3	4	5	6	WBS/CES Description	CES Number	WBS/Item Number	WBS Indent	Approp	Approp Reportable BY	Service	Funding Source	WBS Summary
							98 Procurement	2.0	2.0	2				Contractor	WBS
							99 Air Force Procurement		2.1	3					
							100 Manufacturing (Air Force)		2.1.1	4					WBS
							101 Air Vehicle (AF)		2.1.1.1	5					WBS
							102 Basic Structure (AF)		2.1.1.1.1	6	APF		AF		
							103 Navigation/Guidance (AF)		2.1.1.1.2	6	APF		AF		
							104 Propulsion (AF)		2.1.1.1.3	6	APF		AF		
							105 Integration & Test (AF)		2.1.1.2	5	APF		AF		WBS
							106 Ground Station LRIP Support (AF)		2.1.1.3	5	APF		AF		WBS
							107 Transportation (AF)		2.1.1.4	5	APF		AF	Govt	WBS
							108 Initial Operational Test & Eval (AF)		2.1.1.5	5	APF		AF	Govt	WBS
							109 Initial Spares & Repair Parts (AF)		2.1.1.6	5	APF		AF		WBS
							110 Basic Structure Init Sprs (AF)		2.1.1.6.1	6	APF		AF		
							111 Navigation/Guidance Init Sprs (AF)		2.1.1.6.2	6	APF		AF		
							112 Propulsion Init Sprs (AF)		2.1.1.6.3	6	APF		AF		
							113 Quality Control (AF)		2.1.1.7	5	APF		Joint		WBS
							114 SEPM (AF)		2.1.2	4	APF		Joint		WBS
							115 Program Office Costs		2.1.3	4	APF		Joint	Govt	WBS

Examining the 7.5 Session: Inputs Stored in Yearly Phasing Columns

- Are there inputs on the Yearly Phasing workscreen that are not associated with the Fiscal Years?
- In ACE 7.5 the Yearly Phasing workscreen could store a matrix data table that was independent of the Fiscal Year
 - Example: Mission Schedule Inputs: # Missions per year and Avg Hours per Mission
 - Service data is stored in the first two fiscal years of the session but not associated with FY 2011 or 2012
- In ACE 8.0 FY independent data inputs are good candidates to transition to new Data Tables
 - FY data inputs like this are not automatically converted to ACE 8.0 Data Tables, it is up to the model builder to make the decision to make that modeling change and move the data to a Data Table

WBS/CES Description	Phasing Method	Approp	Lead/Lag	Sunk Cost Interpretati	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
230 *Buy Quantities												
231 Total Air Vehicle Buy Quantity												
232 Air Force Buy Quantities												
233 Low Rate Initial Production	IS							1	1	1	1	
234 Full Rate Production	IS											15
235 Army Buy Quantities												
236 Low Rate Initial Production	IS							0	0	1	1	
237 Full Rate Production	IS											10
238 Army Transportable Ground Station Quantity	IS									1	2	
239												
273 *Mission Schedule Inputs (see yearly Phasing workscreen)												
274 Mission Hours/Year												
275 Air Force	F											
276 Army	F											
277												

#Missions/yr	Avg Hrs/Mission
9	12
8	14

Final 7.5 Thoughts Before Moving to 8.0

- This is a good time to examine the overall session before transitioning to ACE 8.0
- Considering the following:
 - Are major sections of the model commented out?
 - Consider removing these rows before going forward
 - Do you no longer need the same level of detail on a section of the model?
 - Maybe a section can be trimmed before moving forward
 - Are all the summary sections still needed or can summary results be generate with a report?
 - Consider implementing a different modeling approach for results to improve the efficiency of the model
 - Has the original mission of the session changed?
 - Now might be a good time to make some model revisions
- ***Finally, after all updates are made calculate and save the file before closing 7.5***

Opening the Session in ACE 8.0

```
private=function(b,d,e){  
  .attr("aria-expanded",!1),  
  ("fade"),b.parent(".dropdown  
  -d.find("> .active"),h=e&&  
  ,f).emulateTransitionEnd  
  t=function(){return a.fn.t  
  },e).on("click.bs.tab.data  
  end,data("bs.offi")
```

Understanding File Extensions & Backwards Compatibility

- In ACE 7.5 the file name was session.aces
- In ACE 8.0 the file name is session.acex

ACE 8.0 files will be smaller than its 7.5 version

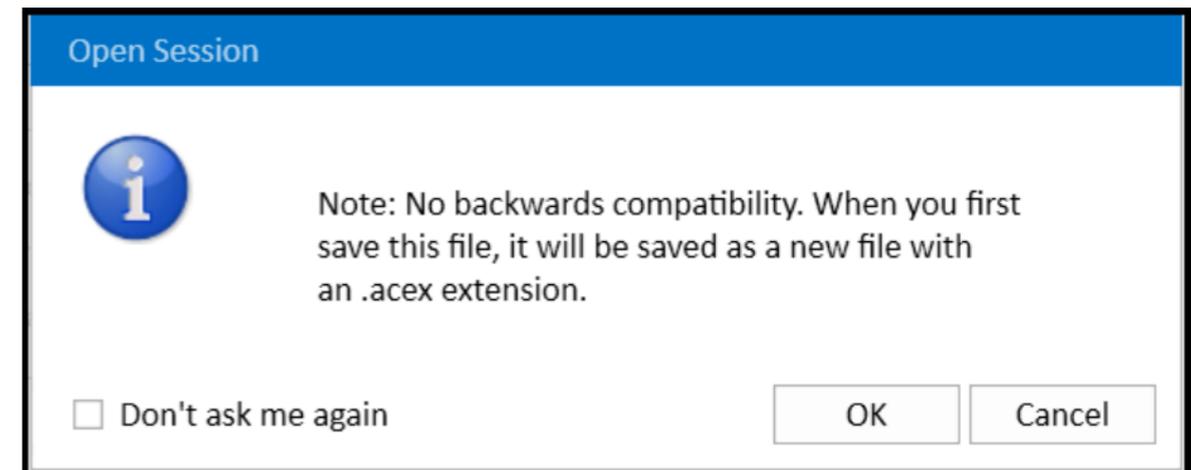
Name	Date modified	Type	Size
 07 - Detailed LCC Estimate - 7.5 Version	4/1/2020 9:51 AM	ACE Session	309 KB
 07 - Detailed LCC Estimate - 8.0 Version	4/1/2020 9:58 AM	ACE Session	175 KB

- ACE 7.5 and ACE 8.0 can be installed on the same computer
 - If you double click on a ACE 7.5 File, ACE 7.5 will open
 - If you double click on a ACE 8.0 File, ACE 8.0 will open
- ACE 8.0 files will not open in ACE 7.5; further 8.0 files cannot be saved in 7.5 format

Always save a backup copy of the session before transitioning versions

Starting the ACE 8.0 Transition

- Save a back up copy of your ACE 7.5 session
 - Save the back up file to a different folder prior to file transition
- Time for the transition
 1. Open ACE 8.0
 2. Go to File → Open
 3. Navigate to the 7.5 file and select “Open”
 4. ACE will prompt you if you want to transition the file to 8.0
 5. Select “OK”
 6. ACE will save the session as an ACE 8.0 file; .acex



Understanding Name Changes between 7.5 and 8.0

- Key ACE 8.0 name and term changes outlined in “Transitioning From 7.5 to 8.0”

ACE 7.5	ACE 8.0
Input All Form	Input Form
Worksceens	Input Sheets
DECs, Category Columns	Custom Columns
Inputs / Results Viewer	Results

TRANSITIONING FROM ACE 7.5 TO 8.0

****Transition visuals shown with ACE 7.5 and equivalent ACE 8.0 example files. All ACE 8.0 example files were updated to Base Year 2019 and a newer phasing schedule. Further, the new examples were modified to illustrate new features like the Weibull Phasing Method. In short, the point estimates values in the following images while similar are not the same.**

ACE 7.5 to 8.0 Comparison

ACE 7.5

DATA ENTRY

Workscreens

ACE 8.0

Input Sheets (Main Pane tab)

Session Explorer - Estimate

- 33:
 - 34: *Estimate
 - 35: Total
 - 36: RDT&E
 - 37: Concept Refinement
 - 38: Contractor A
 - 39: Contractor B
 - 40: Technology Development
 - 41: Contractor A
 - 42: Contractor B
 - 43: System Development and Demonstra
 - 44: Development Engineering
 - 45: Air Vehicle
 - 46: Basic Structure
 - 47: Navigation/Guidance
 - 48: Propulsion
 - 49: Ground Station

Input Form - Methodology

Row	WBS/CES Description	Approp	Unique ID	Point Estimate	Phasing Method	Equation / Throughput	Fiscal Year	Units
34	*Estimate		*Estimate					
35	Total		Total\$	\$ 909,863.284				
36	RDT&E		RDTE\$	\$ 63,508.912				
37	Concept Refinement			\$ 1,067.220				
38	Contractor A	RDTEF		\$ 536.734	TY	[Cost Throughput]		\$K
39	Contractor B	RDTEA		\$ 530.487	TY	[Cost Throughput]		\$K
40	Technology Development			\$ 4,678.474				
41	Contractor A	RDTEF		\$ 2,339.237	TC		2	\$M
42	Contractor B	RDTEA		\$ 2,339.237	TS		2	\$M
43	System Development and Demonstrati			\$ 57,763.217				
44	Development Engineering			\$ 19,681.254				
45	Air Vehicle		RDTEAVS	\$ 6,755.589				
46	Basic Structure	RDTEF		\$ 4,506.110	BE	Struc_T1\$*NRT1Ratio		
47	Navigation/Guidance	RDTEF		\$ 1,532.524	BE	425.555+25.555*NavWt	1997	\$K
48	Propulsion	RDTEF		\$ 716.954	BE	ropMnth\$*DevDuration*NRPropComplex		
49	Ground Station		RDTEGSS	\$ 7,503.106				

Checking the Session in ACE 8.0

- Save a copy of the new ACE 8.0 file
 - At this point you should have a backup 7.5 file, a backup 8.0 file and a new working 8.0 copy of the file (*this is recommended for any file upgrade project*)
- In the working copy, perform a Full Calculate and look at the Error Log
 - Did the session fully calculate?
 - Are the results the same as ACE 7.5?
- Review the documentation
- Review and update Custom Columns properties
- Consider transitioning FY independent inputs stored in Yearly Phasing Fiscal Years to Data Tables

Compare ACE 7.5 Calculated Result to ACE 8.0

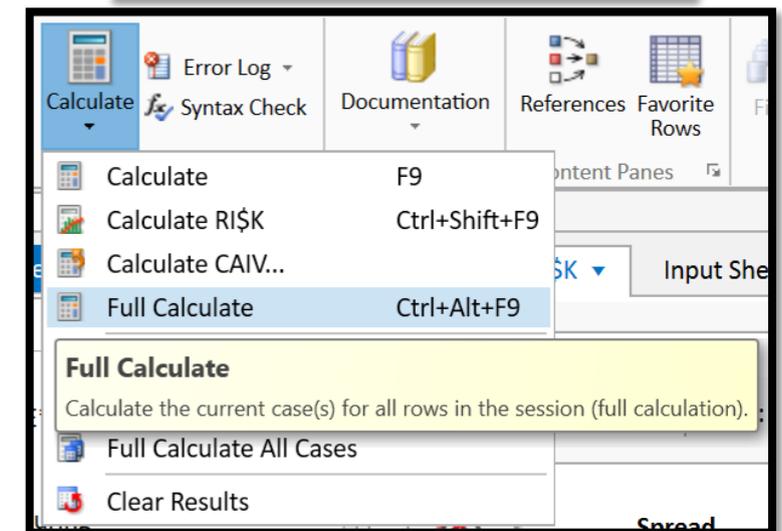
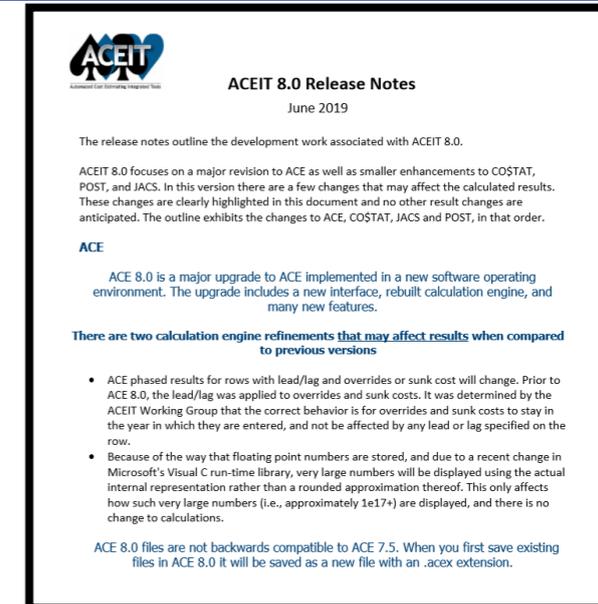
- Compare the 7.5 calculated result within 8.0 results both within the 8.0 interface
- ACE 8.0 offers multiple instances
 - Open the working copy and the back up copy of the session to begin to compare results
 - Multiple instances can be set up on dual monitors
 - Perform side by side comparison

Working Calculated in 8.0

Back Up Not Calculated in 8.0

Calculating the Session in ACE 8.0

- Compare the results of the working session to the back up copy
 - If the results are different consult the ACEIT 8.0 release notes: there are a few refinements that might affect the results of the session
- Calculate the working session
 - ACE now performs Incremental Calculations as the default calculate (F9).
 - This only calculates the rows that have changed since the last calculation for the default case
 - A Full Calculate (Cntrl+Alt+F9) will calculate all rows in the session for the default case
 - Recommend performing a full calculate after a series of changes are made to the session and before results presentations



Review the Documentation

- Documentation in ACE 8.0 is now associated with cells not rows
 - Documentation will automatically be converted on file conversion
 - WBS/CES/Variable definition converts to WBS/CES Description
 - Methodology definition converts to Equation/Throughput
 - Cells with documentation shown with red triangles
 - A row with documentation on any cell indicated with red triangles
 - View the definition text and attached documents in the Documentation Content Pane

The screenshot displays the ACE 8.0 software interface. The main window shows a table with columns: Row, WBS/CES Description, Comments, Approp, Unique ID, Point Estimate, Phasing Method, and Equation / Throughput. Row 66 is highlighted, and a red box highlights the 'Approp' cell containing 'RDTEF' and the 'Comments' cell containing 'Used Army Approp because Contractor A:'. A red box also highlights the 'Documentation - Contractor A' pane at the bottom, which shows the text 'Used Air Force Approp because Contractor A supports the Air Force Activity'.

Row	WBS/CES Description	Comments	Approp	Unique ID	Point Estimate	Phasing Method	Equation / Throughput
62	*Estimate						
63	Total			Total\$	\$ 909,863.284		
64	RT&E			RDTE\$	\$ 63,508.912		
65	Concept Refinement				\$ 1,067.220		
66	Contractor A		RDTEF		\$ 536.734	TY	[Cost Throughput]
67	Contractor B				\$ 530.487	TY	[Cost Throughput]
68	Technology Development				\$ 4,678.474		
69	Contractor A	Used Air Force Approp because Contracto	RDTEF		\$ 2,339.237	TC	2
70	Contractor B	Used Army Approp because Contractor A:	RDTEA		\$ 2,339.237	TS	2
71	System Development and Demonstrati				\$ 57,763.217		
72	Development Engineering				\$ 19,681.254		
73	Air Vehicle	Air Force is the lead on Air Vehicle		RDTEAV\$	\$ 6,755.589		

- Common 7.5 DEC comment technique for leaving notes in the session
 - Consider moving the comments to the associated column for better context about the information and to include more detailed descriptions
 - Ex: Comment provide notes about appropriation selection: moved to Approp Column

Updating Custom Columns in ACE 8.0

- DEC's and Category columns have been combined into one new column type called Custom Columns
- New Input Form for Custom Columns
 - Enter values for all columns with drop down selection
- There are five Custom Column types:
 - Non-Cost, Cost, Text, Date, and Comment
- A Tag can be used to label sets of Custom Columns associated with different applications
 - Ex: Custom Columns associated with Plug In data

06a - Creating Summary Sections.acex - Custom Columns (BY2019\$K) - ACE 8.0

FILE HOME LAYOUT CONSTRUCTION FUNCTIONS REPORTS

Session Explorer - Estimate

54: *Estimate

55: Total

56: RDT&E

57: Concept Refinement

58: Contractor A

59: Contractor B

60: Technology Developme

61: Contractor A

62: Contractor B

63: System Development a

64: Development Engin

65: Air Vehicle

66: Basic Structu

67: Navigation/G

68: Propulsion

69: Ground Station

70: Procure OTS I

71: Design New F

72: Software

73: Int & Assy

74: Prototype Manufac

Estimate Traceback

Input Form - Custom Columns

Title: Contractor A

Unique ID: CES#: WBS#: PE Value: \$ 536.734

Column Title	Column ID	Tag	Type	Value	Group by
Approp Reportable BY	AppnRBY		Text		None
Comments	Comments		Comment	Used Air Force Approp because Contract A supp	None
Funding Source	Funding		Text	Contractor	None
Service	Service		Text	Joint	None
WBS Summary	WBS		Text		None

Successors - Rows that use Contractor A

Row	WBS/CES Description	Unique ID	Equation	Located In	Result
5	Air Force		SumIf(Appn, "RDTEF", @RDTE\$)	Equation / Throughput	\$ 60,155.834
19	Air Force		SumIf(Appn, "RDTEF", @RDTE\$)	Equation / Throughput	\$ 58,976.308
33	Air Force		SumIf(Appn, "RDTEF", @RDTE\$)	Equation / Throughput	\$ 58,598.156
47	Contractor Funded		SumIf(Funding, "Contractor", @Total\$)	Equation / Throughput	\$ 436,047.367

References Favorite Rows Documentation Visualization Cases Successors Error Log

Ready

Updating Custom Columns in ACE 8.0

- The transition from DEC to Custom Column happens automatically at file conversion
- In ACE 7.5 DEC types that fed into Model Summary sections that used SumIf functions could be non-cost DEC types
- ACE 8.0 Custom Columns that feed SumIF functions must be set to “text”
 - Check the Column Properties to make sure they are setup up as “Text” not “Non-cost”

Input Form - Methodology | Input Sheet - WBS/CES

Title: Air Vehicle

Unique ID: | CES#: |

Equation/Value

SumIf(Cat("Summary"), "Air Vehicle", @Total\$)

Edit Column Properties

Column Title: Summary

Unique ID: Summary

Change all instances of old ID to new ID?

Column Description: |

Tag: |

Custom Column Type:

- Non-cost - Column holds non-cost data and/or equations
- Cost - Column holds cost data and/or equations
- Text - Column holds text that can be used for filtering
- Date - Column holds dates of the form DDMMYYYY
- Comment - Column holds comments and text that is not evaluated

Inheritance Behavior:

Text value only applies to rows explicitly labeled with text value (no inheritance)

OK | Cancel

Non-cost Custom Columns that are parameters of SumIf functions will generate Fatal Errors: change to Text Custom Columns

Transitioning Inputs Stored in Yearly Phasing Columns to Data Tables

- In ACE 7.5 inputs stored in Yearly Phasing columns that were not associated with the Fiscal Years were commonly referred to as Matrix Data Tables, in ACE 8.0 these are called FY independent inputs
- A main requirement for Matrix Data Tables in ACE 7.5 was that the data must be entered in the first Fiscal Year of the session
- To accommodate large data tables some sessions had to add Fiscal Years to the session to store the full table. Note: more Fiscal Years means that the session takes longer to calculate

WBS/CES Description	Phasing Method	Approp	Lead/Lag	Sunk Cost Interpretati	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
230 *Buy Quantities												
231 Total Air Vehicle Buy Quantity												
232 Air Force Buy Quantities												
233 Low Rate Initial Production	IS							1	1	1	1	
234 Full Rate Production	IS											15
235 Army Buy Quantities												
236 Low Rate Initial Production	IS							0	0	1	1	
237 Full Rate Production	IS											10
238 Army Transportable Ground Station Quantity	IS									1	2	
239												
273 *Mission Schedule Inputs (see yearly Phasing workscreen)												
274 Mission Hours/Year												
275 Air Force	F											
276 Army	F											
277												

#Missions/yr	Avg Hrs/Mission
9	12
8	14

Transitioning Inputs Stored in Yearly Phasing Columns to Data Tables

- For ACE 8.0 there is now an option to store FY Independent inputs in Data Tables rather than the Fiscal Year columns
- The New Data Tables offer an approach to set up your model differently
- Data Tables are not calculated with the session calculation, they are simply a place to store and draw on data to be used in other calculations
 - Using Data Tables can save model calculation effort
- On file conversion for ACE 7.5 to ACE 8.0 Matrix Data Tables *do not* automatically convert to Data Tables
 - Traditional Matrix Data Table set ups will calculate exactly as they did in ACE 7.5
- Changing the structure of the session to use the new Data Tables is an analyst modeling decision

Row	WBS/CES Description	Phasing Method	Approp	Lead/Lag	Sunk Cost Interpretation	FY 2011	FY 2012	FY 2013	FY 2014
212									
273	*Mission Schedule Inputs (see yearly Phasing workscreen)					#Missions/yr	Avg Hrs/Mission		
274	▲ Mission Hours/Year								
275	Air Force	F				9	12		
276	Army	F				8	14		

Transitioning Matrix Data into Data Tables

If you choose to transition to a new Data Table

1. Set up inputs in a FY Independent Data Table
2. Use MATVAL function to pull values out of the table and use them in equations

Data Table

Name: Unique ID:

Type:

Rows: Columns:

Is Cost

Enter a description and fill in values in the columns for each row in the data table. To label the columns, check "Include header row" and enter headers on the "*" row.

Include header row

Row	Description		
*		#Mission/yr	Avg Hrs/Mission
1	Air Force	9	12
2	Army	8	14

Input Form - Methodology ▾ **Input Sheet - Methodology** ▾ Results - Phased Costs ▾ Overrides - Phased ▾ Charts - Estimate ▾

Row	WBS/CES Description	Item ID	Point Estimate	Phasing Method	Equation / Throughput	Fiscal Year
268	Operational Life (years)	Life	10	C		10
269	▲ Total Fielding		1760			
270	AF Fielded Quantities	AFFieldQty	1190	F	OPFIELDEDUNITS(@AFBuyQty, Life, Lag)	
271	Army Fielded Quantities	ArmyFieldQty	570	F	OPFIELDEDUNITS(@ArmyBuyQty, Life, Lag)	
272						
273	*Mission Schedule Inputs					
274	▲ Mission Hours/Year	TotMsnHrs	192360			
275	Air Force	AFMsnHrs	128520	F	MATVAL(@Mission,1,1)*MATVAL(@Mission,1,2)*AFFieldQty	
276	Army	ArmyMsnHrs	63840	F	MATVAL(@Mission,2,1)*MATVAL(@Mission,2,2)*ArmyFieldQty	

Conclusion

- When transitioning a model from 7.5 to 8.0 be sure to:
 - Consult with all the session stake holders before transitioning the file to ACE 8.0
 - Review and prepare the session in 7.5 to ease the transition process, making some adjustments to the file in 7.5 can provide benefits in 8.0
 - Save a back up copy of the 7.5 file: ACE 8.0 sessions are not backwards compatible
 - Save a back up copy of the file in ACE 8.0 before making further changes to the session in 8.0
 - Familiarize yourself with new terminology and interface elements as you start working in 8.0
 - Familiarize yourself with new ACE 8.0 features to better understand new modeling approaches that can be applied in 8.0
 - Consider model enhancements to take advantage of ACE 8.0 capabilities and efficiencies