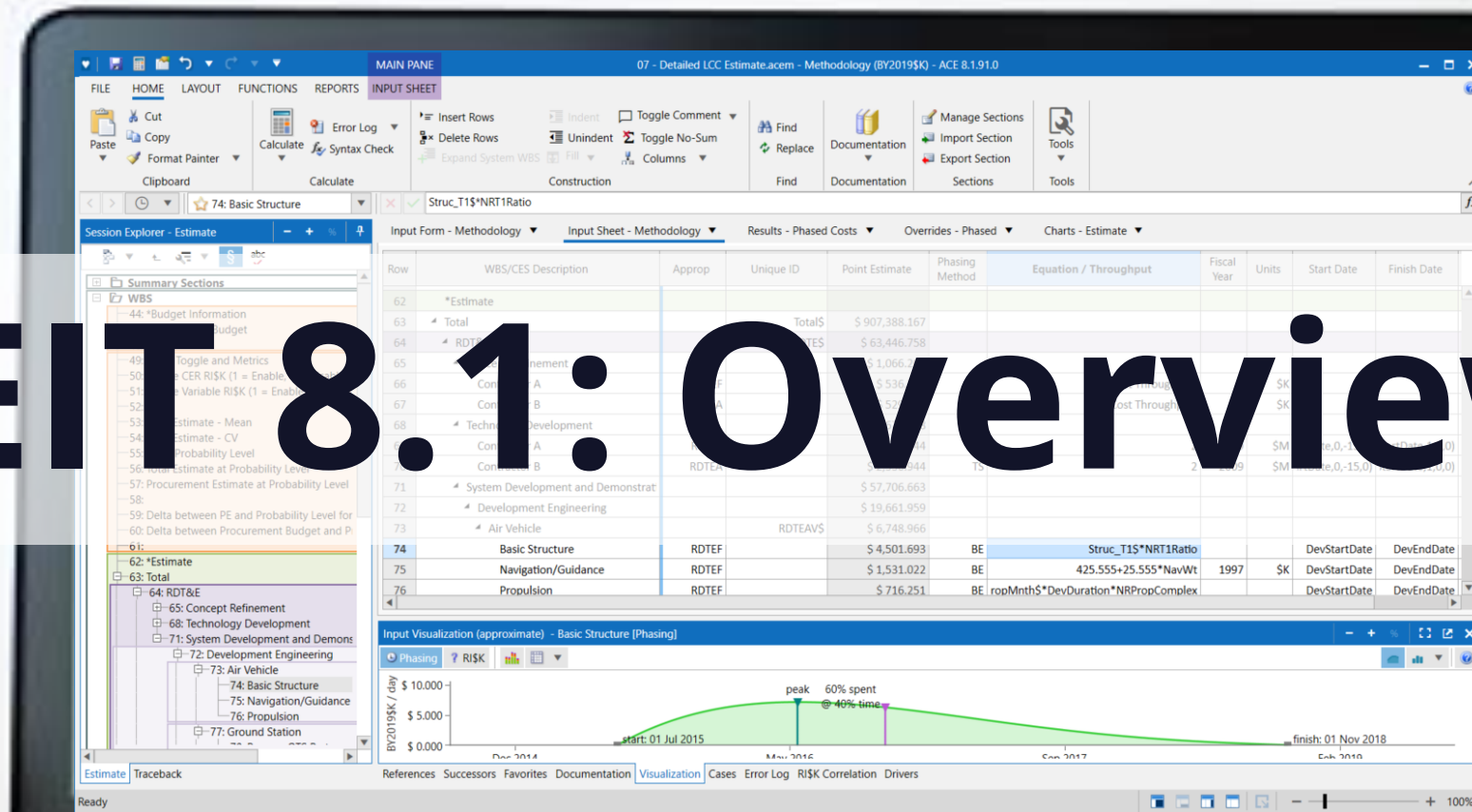


ACEIT 8.1: Overview



The ACEIT Concept

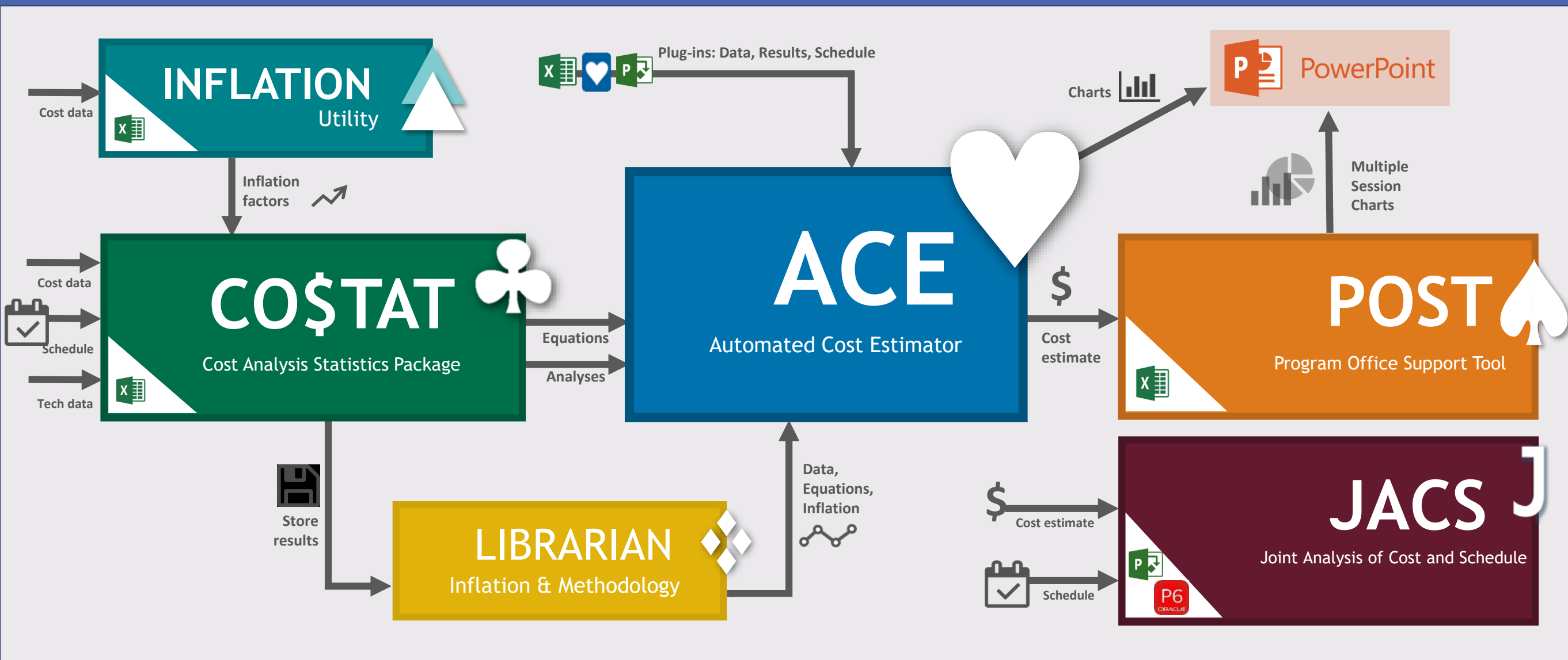
(Automated Cost Estimating Integrated Tools)

Allow analysts to focus on estimate methodology rather than spreadsheet mechanics

- Bring structure and consistency to the entire cost analysis process
- Implement a standardized process
- Increase Estimate Quality

Developed *by* cost analysts *for* cost analysts

ACEIT 8.1 Architecture



ACEIT Components



- ACE: Automated Cost Estimator – build a robust, accurate, and defensible cost model
- Includes inflation, learning, phasing, risk, documentation, and other essential cost estimating processes



- CO\$TAT – perform cost estimating statistics and regression analysis



- POST: Program Office Support Tool – automate what-if drills, charts/tables from Excel
- Includes automated transfer of results to PowerPoint and Word



- JACS: Joint Analysis of Cost and Schedule – perform cost and schedule analyses
- Utilizes the schedule logic and framework of MS Project or P6 with powerful ACEIT engine for processing



- Librarian – manage and share custom inflation indices and CER Libraries



- Inflation Utility – access latest ACEIT-provided government inflation indices in Excel

Benefits of Using ACEIT

- Provide Flexibility to Model Any System Type
 - **Life Cycle Cost Estimates (LCCE)**
Independent Cost Estimates (ICE) and Program Office Estimates (POE)
 - **Other Cost Estimates**
Budget Estimates, Rough Order or Magnitude (ROM), Independent Cost Assessments (ICA), Independent Government Cost Estimates (IGCE), and Estimate at Completion (EAC)
 - **Business Case Analysis**
Analysis of Alternatives (AoAs), Cost Effectiveness Analysis (CEA), Economic Analysis (EA), and Cost Benefit Analysis (CBA)
- Integrates with Other Applications Through an Open Platform
- Reduces Management Challenges of training and transferring projects to other team members



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

- An estimating platform
- A framework to build risk adjusted, integrated cost/schedule life cycle estimates for any project

ACE is an Estimating Platform

Structured framework to build consistent cost estimating models that span the entire analysis process

- Methodology
- Documentation
- Summary, WBS, and Inputs Sections
- Integrated Uncertainty Analysis
- What-If Results
- Reports
- Charts

Documentation - Row 6: Air Vehicle

WBS/CES Description

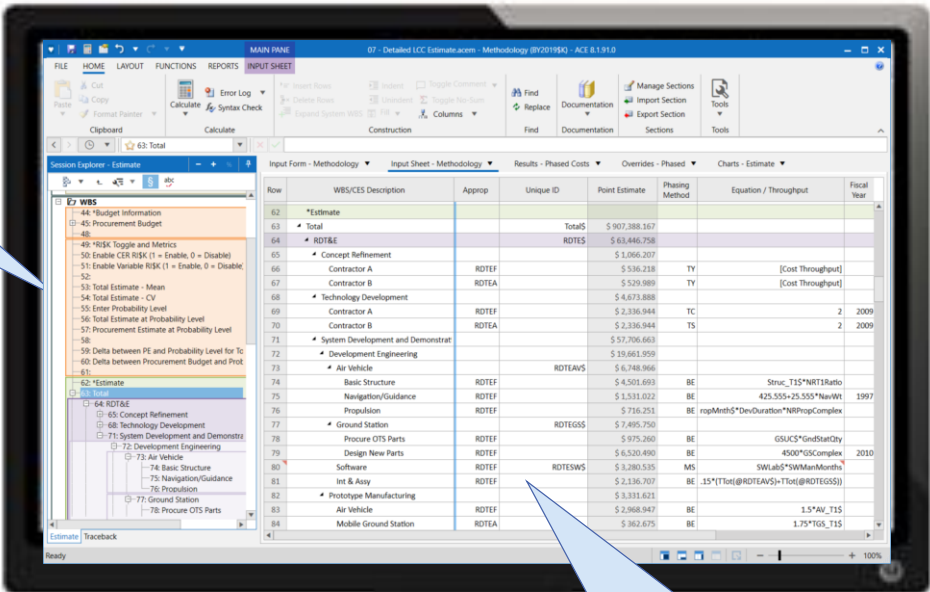
AIR VEHICLE - The air vehicle element refers to the complete flying aircraft, including airframe, propulsion, and all other installed equipment. It includes the design, development, and production of complete units. It also includes the integration, assembly, test and checkout of all remaining elements into the airframe to form the complete air vehicle.

Row	WBS/CES Description	Approp	Unique ID	Point Estimate	Phasing Method	Equation / Throughput	Fiscal Year	Units	Start Date	Finish Date
1	Summary Sections									
2	*EXAMPLE FILE*									
3	*Estimate									
4	Total			\$ 56,940.142						
5	Manufacturing		Mfg\$	\$ 40,221.271						
6	Air Vehicle	APF	AV\$	\$ 34,975.018	FP	AV_UC\$*BuyQty				
7	Integration & Test	APF		\$ 5,246.253	FP	0.15*AV\$				
8	SEPM	APF		\$ 14,881.870	FP	0.37*Mfg\$				
9	Program Office Costs	APF		\$ 1,837.000	TY	[Cost Throughput]		\$K		
10										
11	*Production Inputs									
12	*Cost Inputs									
13	Air Vehicle T1	APF	AV_UC\$	\$ 8,743.755	C	(959*TW^.243+189*RANGE^.652)/2	2015	\$K		

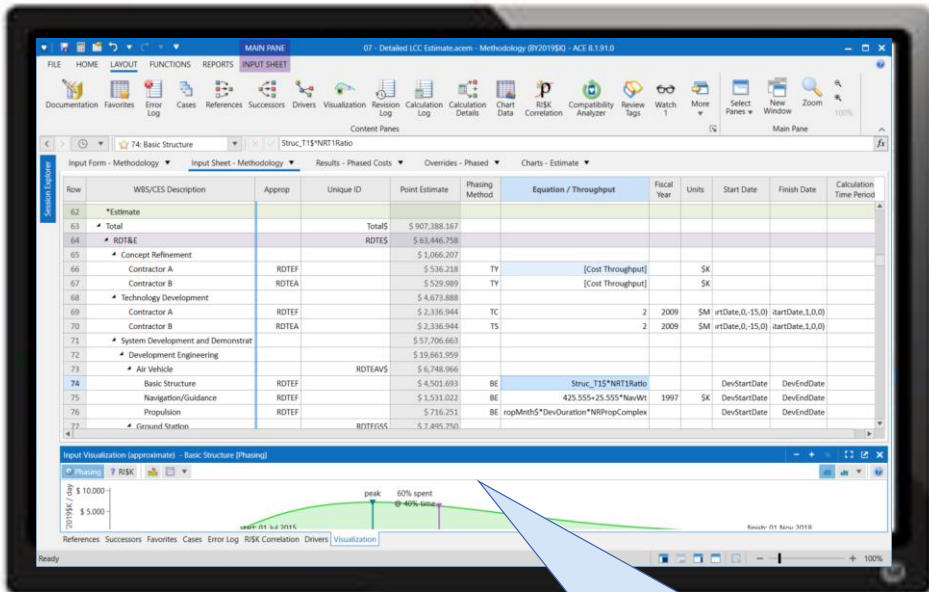
Configurable Workspace

Tailor Workspace to your needs: Arrange panes on multiple monitors

Session Explorer



Main Pane



Content Panes

Workspace: Session Explorer

The screenshot displays the Session Explorer interface, which is divided into two main sections: Estimate and Traceback. The Estimate section shows a hierarchical tree of session components, including Summary Sections and WBS (Work Breakdown Structure) items. The Traceback section shows a detailed view of the selected session component, including its input variables and data tables. A red arrow points from the Traceback section to the Estimate section, indicating the flow of data and logic.

Row	WBS/CES Description	Approp	Unique ID	Point Estimate	Phasing Method	Equation / Throughput	Fiscal Year
62	*Estimate			\$ 907,388,167			
63	Total		RDTE\$	\$ 63,446,758			
64	RDT&E			\$ 1,066,207			
65	Concept Refinement			\$ 536,218	TY	[Cost Throughput]	
66	Contractor A	RDTEF		\$ 529,989	TY	[Cost Throughput]	
67	Contractor B	RDTEA		\$ 4,673,888	TS		
68	Technology Development	RDTEF		\$ 2,336,944	TS		2009
69	Contractor A	RDTEF		\$ 2,336,944	TS		2009
70	Contractor B	RDTEA		\$ 57,706,663			
71	System Development and Demonstrat			\$ 19,861,959			
72	Development Engineering			\$ 6,748,966			
73	Air Vehicle			\$ 4,501,693	BE	Struc_TIS*NRTRatio	
74	Basic Structure	RDTEF		\$ 1,531,022	BE	425,555+25,555*NavWt	1997
75	Navigation/Guidance	RDTEF		\$ 716,251	BE	repMeth5*DevDuration*NRPropComplex	
76	Propulsion	RDTEF		\$ 7,495,750			
77	Ground Station	RDTEGSS		\$ 975,260	BE	GSUCS*GndStatQty	
78	Procure OTS Parts	RDTEF		\$ 6,520,490	BE	4500*GSCComplex	2010
79	Design New Parts	RDTEF		\$ 3,280,535	MS	SWLab5*SWManMonths	
80	Software	RDTEF		\$ 2,136,707	BE	15*TTot@RDTEAVS+TTot@RDTEGSS	
81	Air & Army	RDTEF		\$ 3,331,621			
82	Prototype Manufacturing			\$ 2,968,947	BE	1.5*AV_TIS	
83	Air Vehicle	RDTEF		\$ 362,675	BE	1.75*RGSS_TIS	
84	Mobile Ground Station	RDTEA					

Session Explorer

Displays Session row hierarchy

- Summary Sections
- WBS
- Input Variables

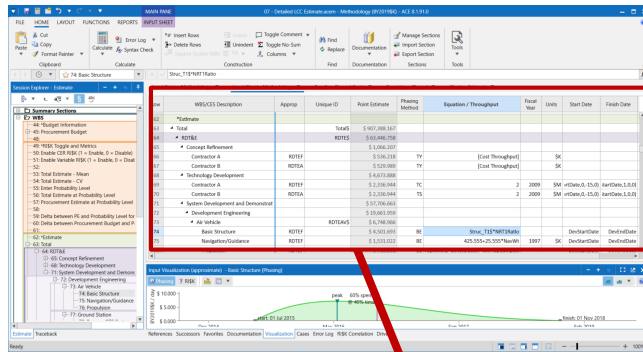
Offer two modes

- Estimate - View session WBS tree, input variables and data tables
- Traceback - Assist with tracing the logical row connections in the model

Workspace: Main Pane

Main pane provides data entry and results views

- Five views – Input Forms, Input Sheets, Results, Overrides, Charts

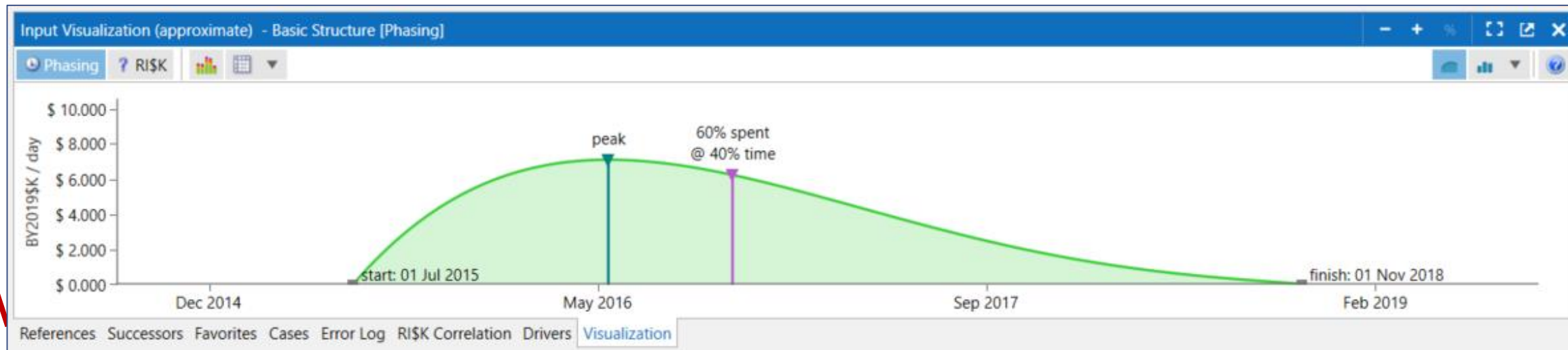
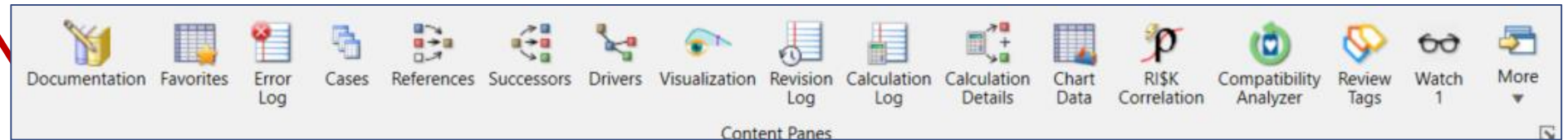
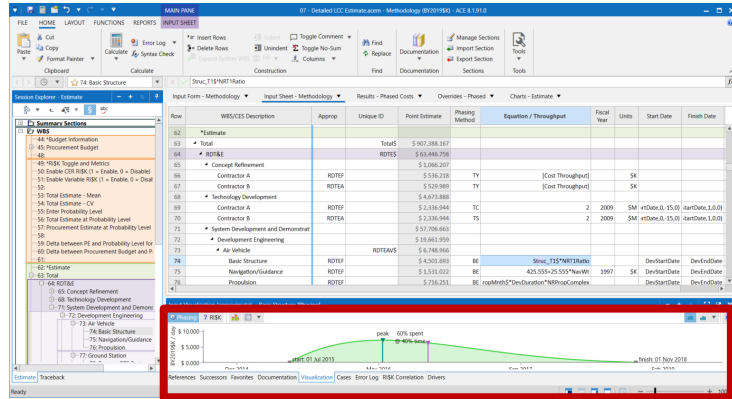


Input Form - Methodology ▾ Input Sheet - Methodology ▾ Results - Phased Costs ▾ Overrides - Phased ▾ Charts - Estimate ▾										
Row	WBS/CES Description	Approp	Unique ID	Point Estimate	Phasing Method	Equation / Throughput	Fiscal Year	Units	Start Date	Finish Date
62	*Estimate									
63	Total		Total\$	\$ 907,388.167						
64	RDT&E		RDTE\$	\$ 63,446.758						
65	Concept Refinement			\$ 1,066.207						
66	Contractor A	RDTEF		\$ 536.218	TY	[Cost Throughput]		\$K		
67	Contractor B	RDTEA		\$ 529.989	TY	[Cost Throughput]		\$K		
68	Technology Development			\$ 4,673.888						
69	Contractor A	RDTEF		\$ 2,336.944	TC		2	2009	\$M	irtDate,0,-15,0) itartDate,1,0,0)
70	Contractor B	RDTEA		\$ 2,336.944	TS		2	2009	\$M	irtDate,0,-15,0) itartDate,1,0,0)
71	System Development and Demonstrat			\$ 57,706.663						
72	Development Engineering			\$ 19,661.959						
73	Air Vehicle		RDTEAV\$	\$ 6,748.966						
74	Basic Structure	RDTEF		\$ 4,501.693	BE	Struc_T1\$*NRT1Ratio				DevStartDate DevEndDate
75	Navigation/Guidance	RDTEF		\$ 1,531.022	BE	425.555+25.555*NavWt	1997	\$K		DevStartDate DevEndDate
76	Propulsion	RDTEF		\$ 716.251	BE	ropMnth\$*DevDuration*NRPropComplex				DevStartDate DevEndDate
77	Ground Station		RDTEGSS\$	\$ 7,495.750						
78	Procure OTS Parts	RDTEF		\$ 975.260	BE	GSUC\$*GndStatQty				rtDate,0,0,120) StartDate,0,30)
79	Design New Parts	RDTEF		\$ 6,520.490	BE	4500*GSComplex	2010	\$K		rtDate,0,0,120) StartDate,0,30)

Workspace: Content Panes

Content panes add **insight** to the workspace

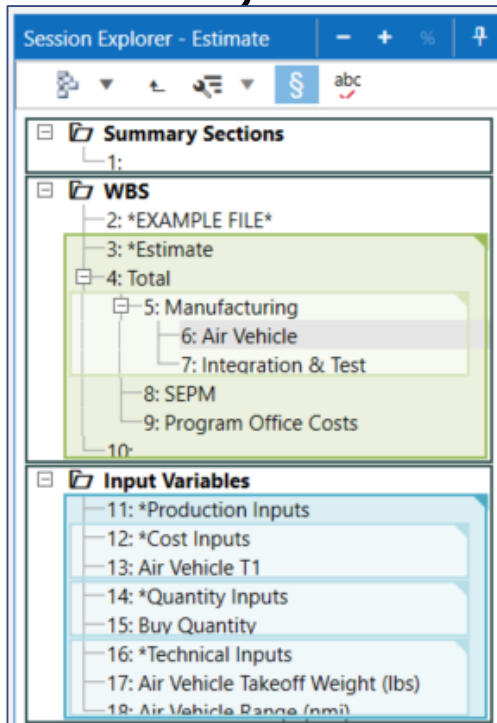
- Many views covering documentation, visualization, cases, error log, reference rows, driver rows, revision log, calculation details, and more



Built-In WBS Hierarchy

ACE uses an indenture structure to sum lower level elements ensuring **proper calculation** of parent rows at all times

- Tree-view allows for expansion and collapse of model rows
- Easily insert new WBS rows without updating parent levels



Row	WBS/CES Description	Point Estimate	Equation / Throughput
	WBS		
2	*EXAMPLE FILE*		
3	*Estimate		
4	Total	\$ 56,940.142	
5	Manufacturing	\$ 40,221.271	
6	Air Vehicle	\$ 34,975.018	AV_UC\$*BuyQty
7	Integration & Test	\$ 5,246.253	0.15*AV\$
8	SEPM	\$ 14,881.870	0.37*Mfg\$
9	Program Office Costs	\$ 1,837.000	[Cost Throughput]

Easily Enter Estimate Methodologies


Two ways to input data

- Input forms provide **guidance** to less experienced cost estimators
- Input sheets offer extensive data entry capability across rows; **build large models quickly**

Input Form - Methodology ▼ Input Sheet - Methodology ▼

Title: Air Vehicle

Unique ID: AV\$ CES#: WBS

 Periodic

Equation/Value

AV_UC\$*BuyQty

Input Form - Methodology ▼ Input Sheet - Methodology ▼ Results - Phased Costs ▼ Over

Row	WBS/CES Description	Approp	Unique ID	Point Estimate	Equation / Throughput
1	WBS				
2	*EXAMPLE FILE*				
3	*Estimate				
4	Total			\$ 56,940.142	
5	Manufacturing		Mfg\$	\$ 40,221.271	
6	Air Vehicle	APF	AV\$	\$ 34,975.018	AV_UC\$*BuyQty
7	Integration & Test	APF		\$ 5,246.253	0.15*AV\$
8	SEPM	APF		\$ 14,881.870	0.37*Mfg\$
9	Program Office Costs	APF		\$ 1,837.000	[Cost Throughput]

Create Estimates with Guidance from Input Forms

Use guidance on input forms to select from four methodology types

- Periodic
- Time Phased Inputs
- Spread Total
- Learning Curves

The screenshot displays the 'Input Form - Methodology' window. At the top, there are tabs for 'Input Form - Methodology', 'Input Sheet - Methodology', 'Results - Phased Costs', 'Overrides - Phased', and 'Charts - Estimate'. Below the tabs, there is a 'Title' field containing 'New Rows'. Below the title, there are four input fields: 'Unique ID:', 'CES#:', 'WBS#:', and 'PE Value:'. To the right of these fields are four icons: a circular arrow with 'a, x, b', a calendar, a bell curve, and a learning curve. Below these icons are four methodology options, each with an icon and a description:

- Periodic (Yearly/Monthly) Calculation or Constant**: Specify an Equation/Value to be calculated periodically or a Constant value (cost, non-cost, or date).
- Time Phased (Yearly/Monthly) Inputs**: Specify time phased cost (BY, TY, or SY) or non-cost values.
- Spread Total over Time Calculation**: Specify total value/equation, and how to spread it over time using Beta curve, Weibull, Rayleigh, Trapezoid, Percentages or Milestone phasing profile.
- Learning Curve Calculation**: Specify cost improvement curve parameters to calculate learning curve.

Enter Data Directly into Input Sheets

Use specific columns in spreadsheet view to enter equations and annual throughputs

Row	WBS/CES Description	Point Estimate	Phasing Method	Equation / Throughput	Fiscal Year	Units
63	▲ Total	\$ 904,459.331 (86%)				
64	▲ RDT&E	\$ 62,952.687 (13%)				
65	▲ Concept Refinement	\$ 1,058.427				
66	Contractor A	\$ 532.172	TY	[Cost Throughput]		\$K
67	Contractor B	\$ 526.255	TY	[Cost Throughput]		\$K
68	▲ Technology Development	\$ 4,637.328				
69	Contractor A	\$ 2,318.664	TC		2	2009 \$M
70	Contractor B	\$ 2,318.664	TS		2	2009 \$M
71	▲ System Development and Demonstration	\$ 57,256.932 (13%)				
72	▲ Development Engineering	\$ 19,508.162 (50%)				
73	▲ Air Vehicle	\$ 6,696.175 (48%)				
74	Basic Structure	\$ 4,466.480 (50%)	BE	Struc_T1\$*NRT1Ratio		
75	Navigation/Guidance	\$ 1,519.046 (50%)	BE	425.555+25.555*NavWt	1997	\$K

WBS Rows

Row Results

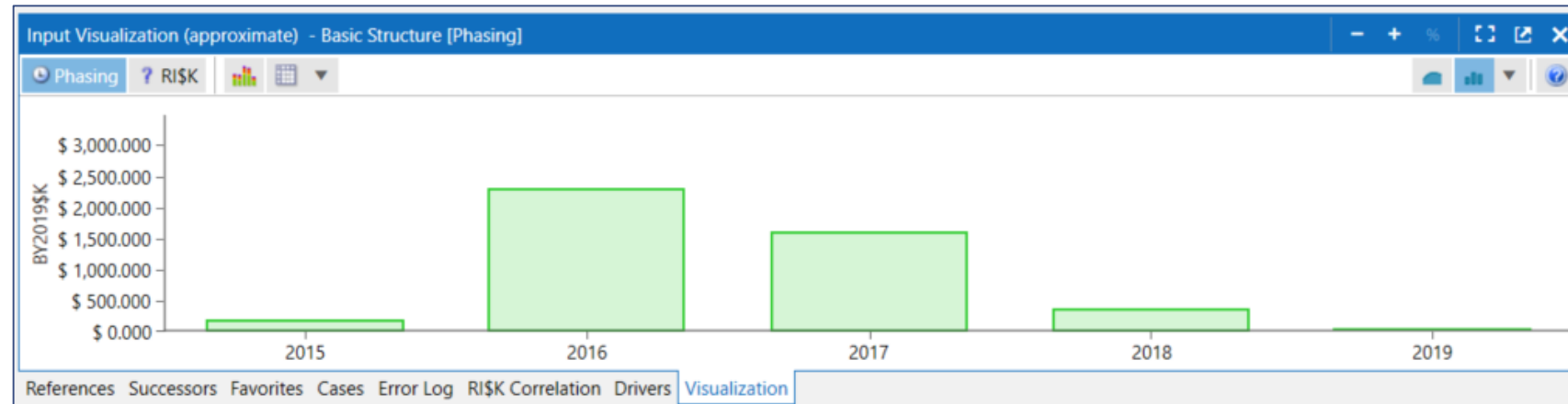
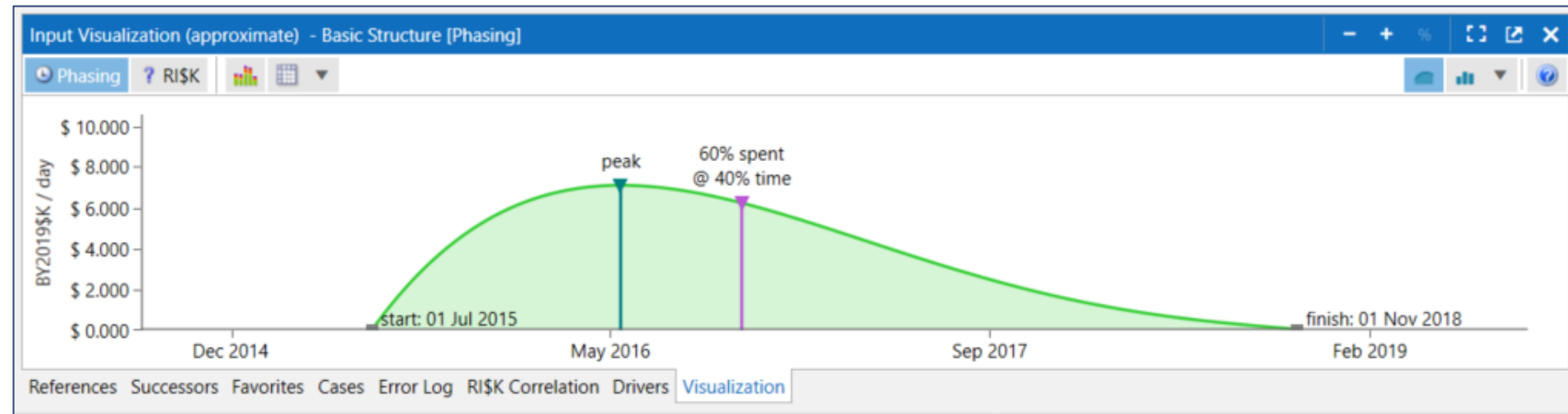
Throughputs

Equations

Visualize Phasing

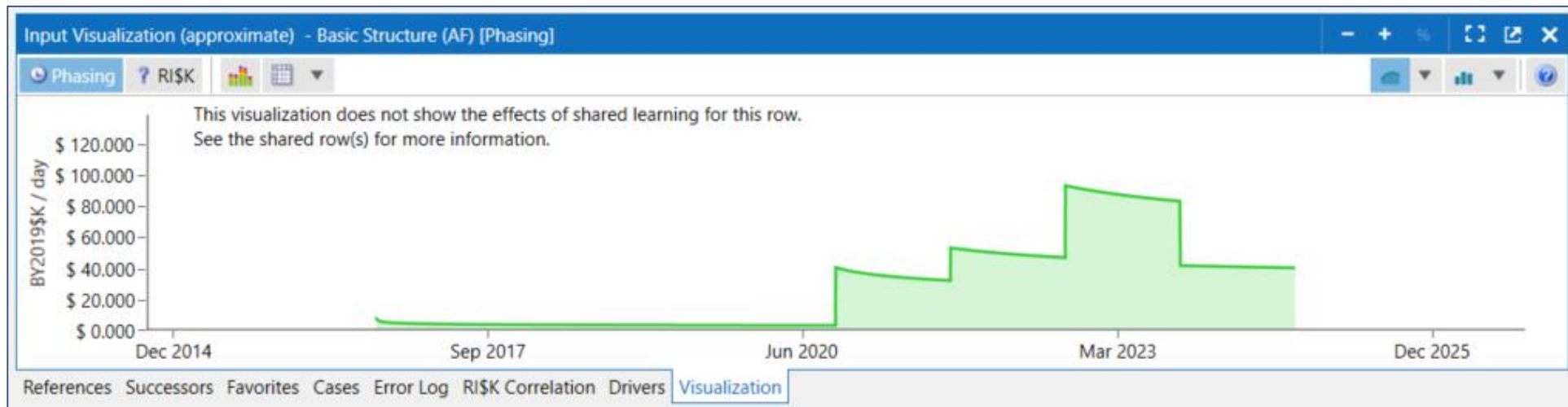
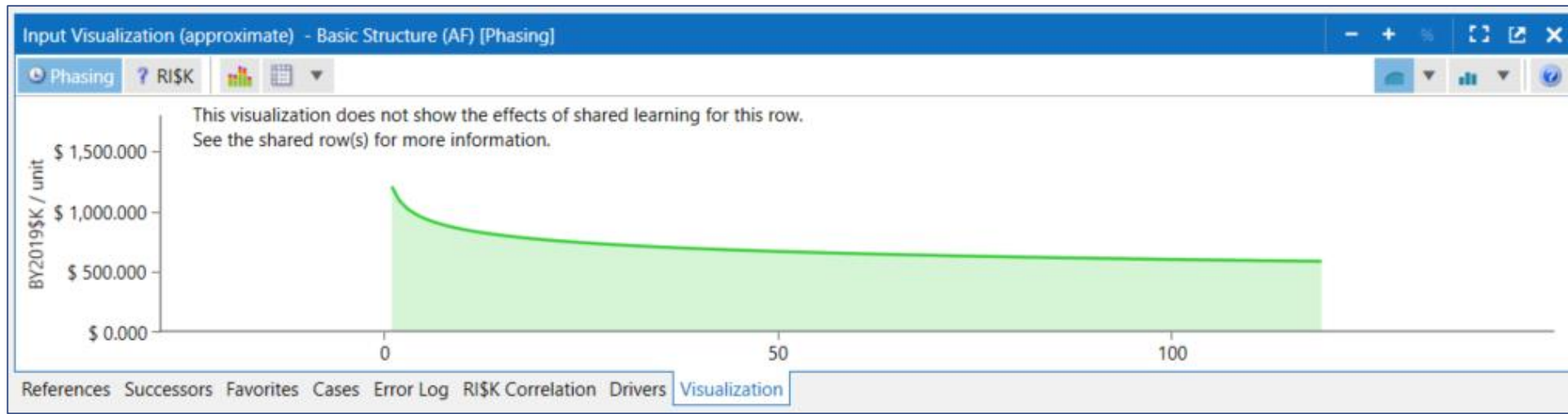
Improve your input **understanding** with data visualizations

- View the shape of the phasing
- Explore phasing adjustments by selecting and dragging parameters



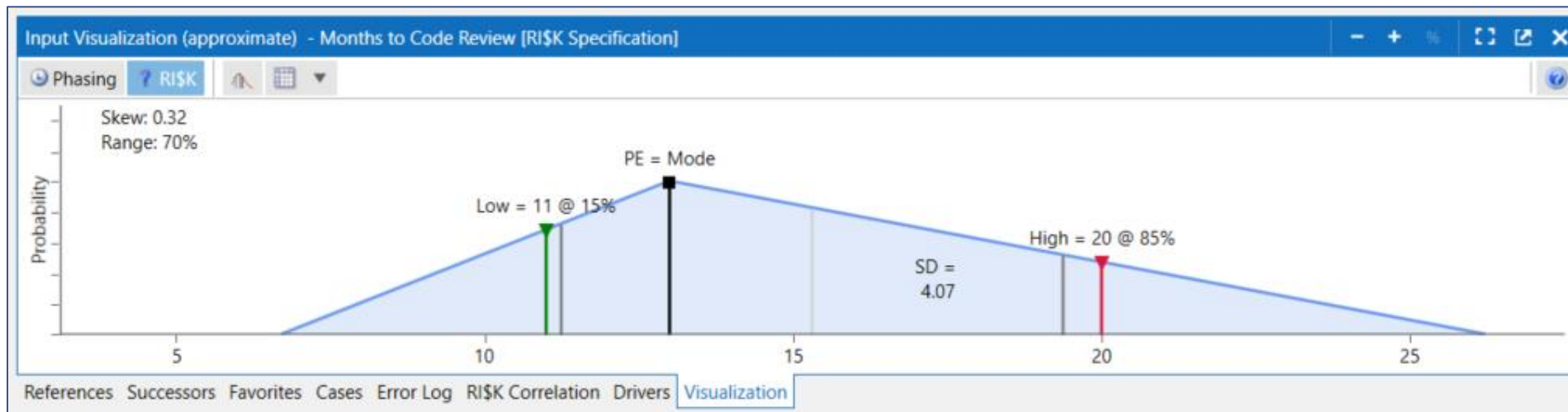
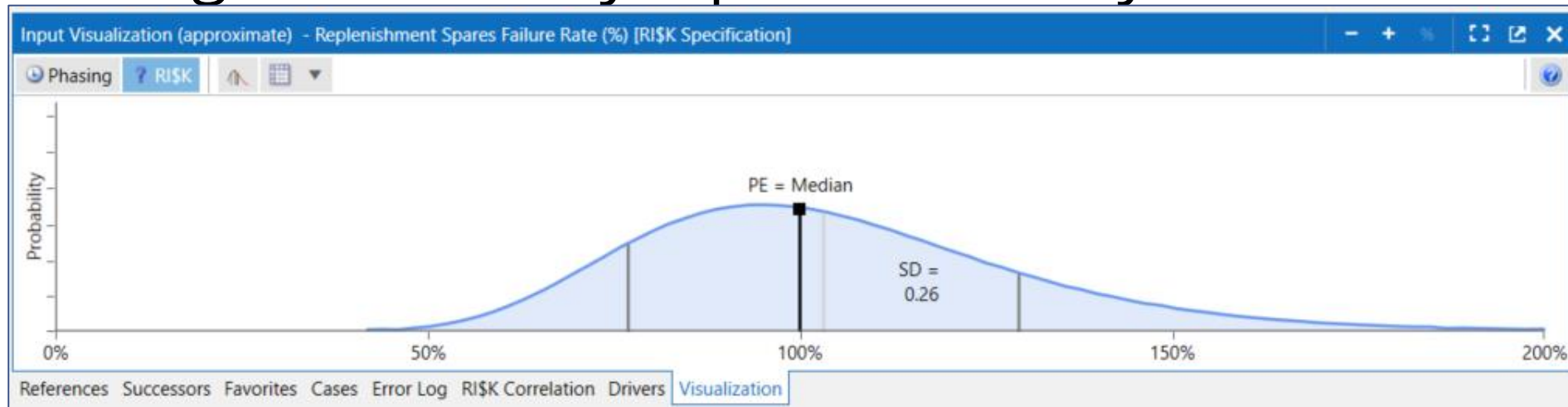
Visualize Learning

Understand Learning Inputs with Theoretical and Applied illustrations



Visualize RI\$K

View and change uncertainty inputs on the fly



Quickly Access a Variety of Result Views

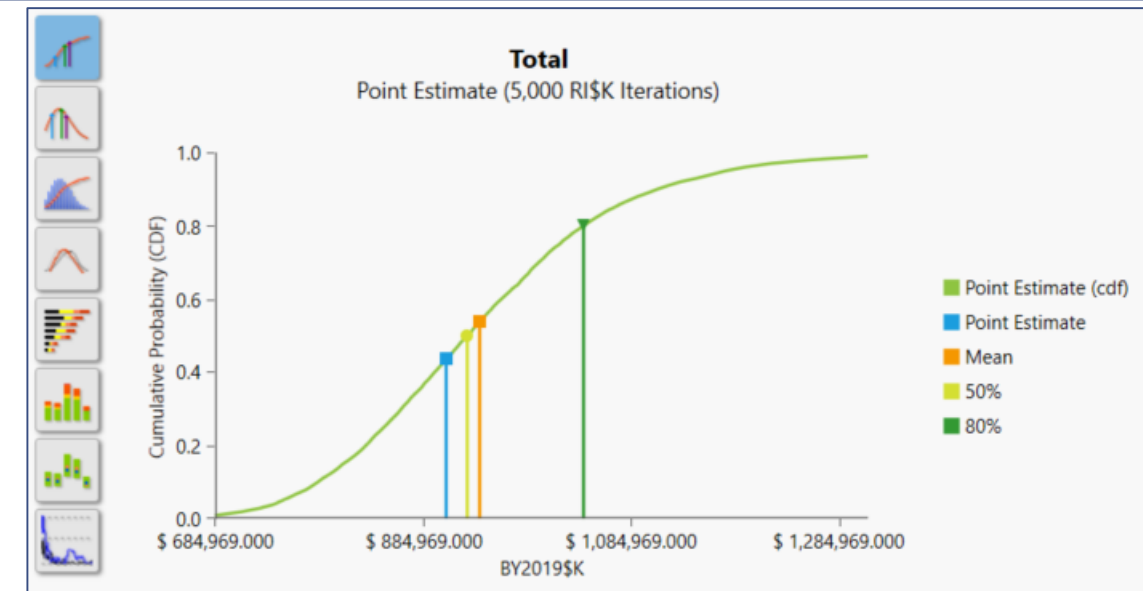
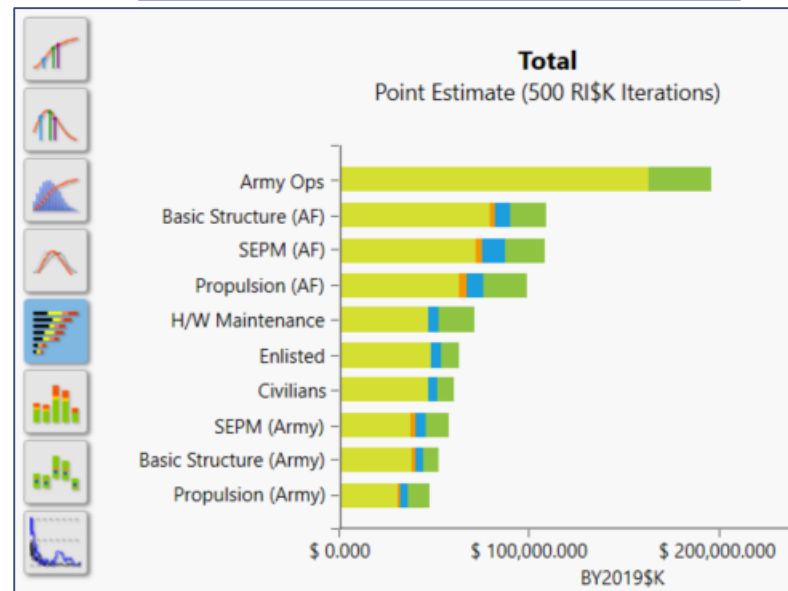
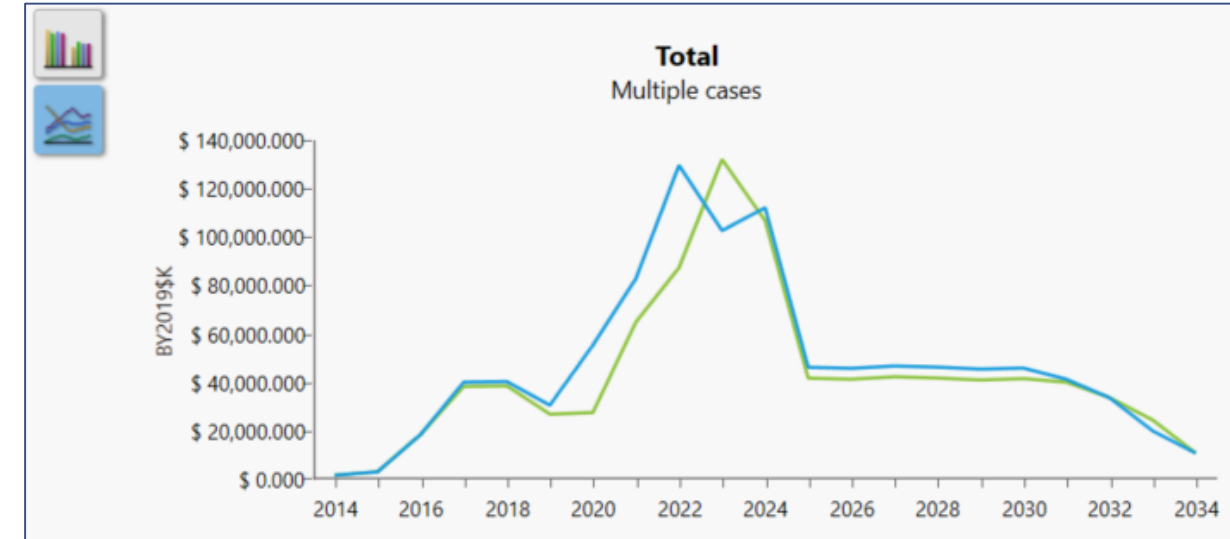
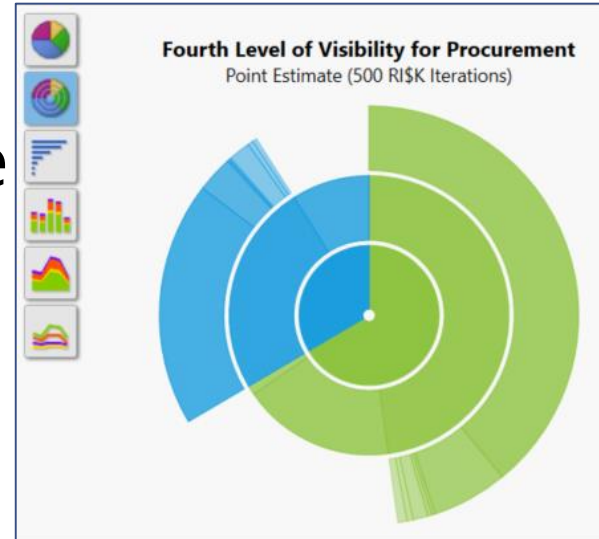
View phased, total, uncertainty, or allocated results in BY, TY, or SY \$

Input Form - Methodology ▼ Input Sheet - RISK Basic ▼ Results - Phased Costs ▼					
Row	WBS/CES Description	Total: Point Estimate	FY 2014	FY 2015	FY 2016
62	*Estimate				
63	▲ Total	\$ 907,388.167	\$ 1,888.489	\$ 3,269.489	18,676.482
64	▲ RDT&E	\$ 63,446.758	\$ 1,888.489	\$ 3,269.489	18,676.482
65	▲ Concept Refinement	\$ 1,066.207	\$ 1,066.207		
66	Contractor A	\$ 536.218	\$ 536.218		
67	Contractor B	\$ 529.989			
68	▲ Technology Development	\$ 4,673.888			
69	Contractor A	\$ 2,336.944			
70	Contractor B	\$ 2,336.944			
71	▲ System Development and De	\$ 57,706.663			
72	▲ Development Engineering	\$ 19,661.959			

Input Form - Methodology ▼ Input Sheet - RISK Basic ▼ Results - RISK Statistics ▼ Overrides - Phased ▼ Charts - Estimate ▼								
Row	WBS/CES Description	Point Estimate	Mean	Std Dev	CV	5%	10%	15%
62	*Estimate							
63	▲ Total	\$ 907,388.167 (43%)	\$ 939,232.230 (55%)	\$ 129,667.684	0.138057	\$ 749,740.516	\$ 786,060.629	\$ 809,153.979
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	▲ Concept Refinement	\$ 1,066.207	\$ 1,066.207			\$ 1,066.207	\$ 1,066.207	\$ 1,066.207
66	Contractor A	\$ 536.218	\$ 536.218			\$ 536.218	\$ 536.218	\$ 536.218
67	Contractor B	\$ 529.989	\$ 529.989			\$ 529.989	\$ 529.989	\$ 529.989
68	▲ Technology Development	\$ 4,673.888	\$ 4,673.888			\$ 4,673.888	\$ 4,673.888	\$ 4,673.888
69	Contractor A	\$ 2,336.944	\$ 2,336.944			\$ 2,336.944	\$ 2,336.944	\$ 2,336.944
70	Contractor B	\$ 2,336.944	\$ 2,336.944			\$ 2,336.944	\$ 2,336.944	\$ 2,336.944
71	▲ System Development and Demonstration	\$ 57,706.663 (13%)	\$ 65,006.991 (51%)	\$ 6,510.383	0.100149	\$ 54,366.074	\$ 56,856.378	\$ 58,099.851
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

Generate Robust Charts

- Estimates
 - One case - multiple views
- Case Comparative
 - Two or more cases
- Uncertainty
 - CDF
 - PDFs
 - Contributors
- Analysis



Store Documentation within your Estimate Files

- Enter documentation for any cell
- Create narrative reports from the embedded documentation
- Manage model-wide documentation for updates and review

The screenshot displays the 'Input Sheet - Methodology' tab with a table of inputs. Row 225, 'S/W Man Months', contains the equation $TAT = (-71.24) + 0.4181 * KLOC + 21.66 * NCSCI$. A red arrow points from this equation to the 'Documentation - Row 225: S/W Man Months' panel.

Documentation - Row 225: S/W Man Months

Equation / Throughput

1. Model Form and Equation Table

Model Form and Equation Table

Model Form:	Weighted Linear model
Number of Observations Used:	13
Equation in Unit Space:	$MM = (-71.24) + 0.4181 * KLOC + 21.66 * NCSCI$
Error Term:	MUPE (Minimum-Unbiased-Percentage Error)

2. Fit Measures (in Fit Space)

Coefficient Statistics Summary

References Successors Favorites Cases Error Log RI\$K Correlation Drivers Visualization **Documentation**

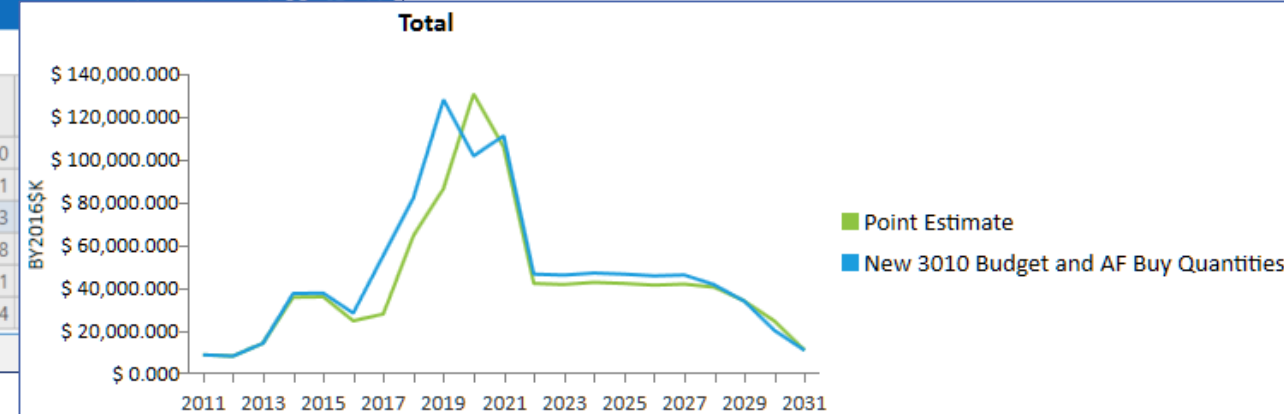
Create Unlimited What – if Cases

- Create unlimited number of cases saved in the **same** file
- Override inputs to view and compare results of alternate scenarios

Input Form - Methodology ▾ Input Sheet - Methodology ▾ Results - RI\$K Statistics ▾ Overrides - Phased ▾ Charts - RI\$K ▾												
Row	WBS/CES Description	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
236	*Production Quantity Inputs											
237	▾ Total Air Vehicle Buy Quantity				1	1	4	19	35	65	40	40
238	▾ Air Force Buy Quantities				1	1	2	16	25	50	25	25
239	Low Rate Initial Production		0	0	1	1	2	1				
240	Full Rate Production						0	15	25	50	25	25
241	▾ Army Buy Quantities						1	1	10	15	15	15
242	Low Rate Initial Production						1	1				
243	Full Rate Production								10	15	15	15

Can we buy more units?

Cases				
+ -				
Case Name	Compare	Time Last Calculated	Description	Overridden Rows
Point Estimate	<input checked="" type="checkbox"/>	11/4/2022 5:01:53 PM		0
Lower Cost Propulsion	<input type="checkbox"/>	11/4/2022 4:55:17 PM	Lower Propulsion T1 Cost	1
New APF Budget and AF Buy Quantities	<input checked="" type="checkbox"/>	11/4/2022 5:08:26 PM	Override APF Budget row to slip money to later years at	3
Propulsion and O&S Mods	<input type="checkbox"/>	11/4/2022 4:55:12 PM	Overrides to NREC complexity factor and Propulsion un	8
Propulsion, Ground Station, and O&S Mods	<input type="checkbox"/>	11/4/2022 4:55:17 PM	Overrides to NREC complexity factor and Propulsion un	11
Higher Uncertainty	<input type="checkbox"/>	11/4/2022 4:55:17 PM	Increased uncertainty on Production inputs	4



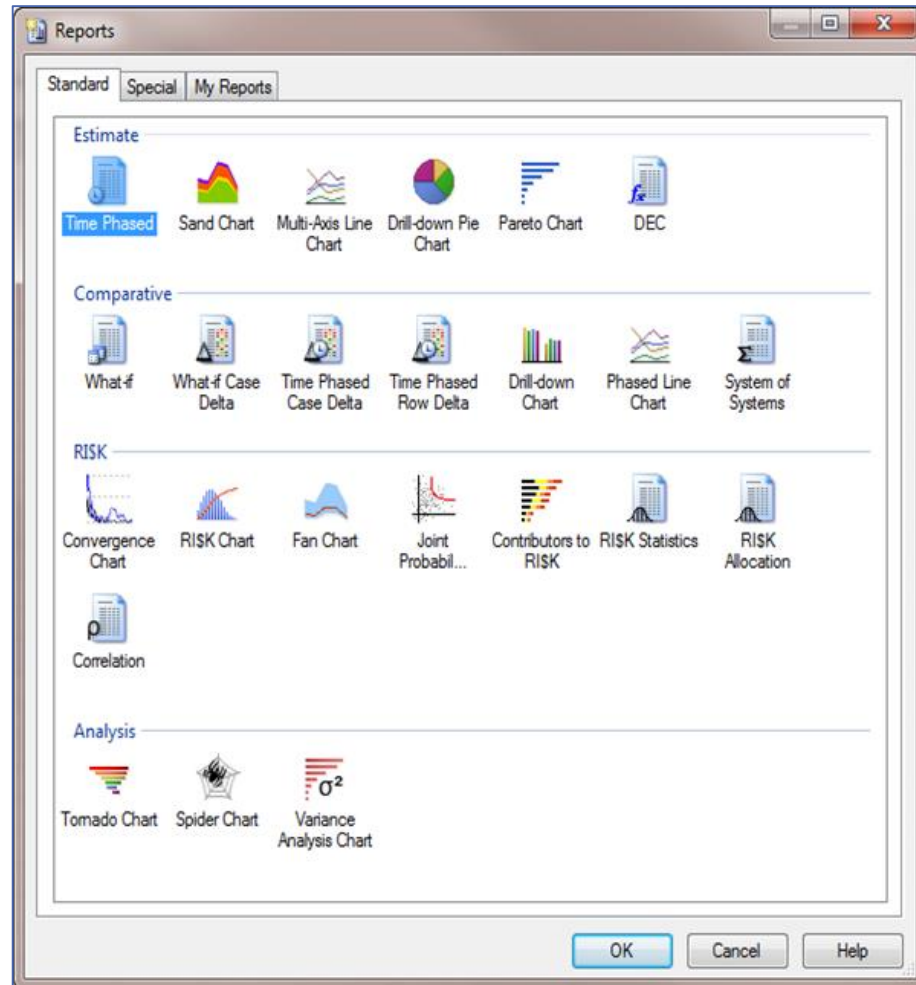


POST

- Excel add-in providing tabular and graphical reports linked to your ACE session
- Create alternative scenario (what-if) estimates
- Graphically identify cost and uncertainty drivers
- Populate and automatically update PowerPoint presentations

Use POST to Tell the Story of Your Project

Select from a large list of reports and charts



Tabular Reports

- **Estimate:**
 - Time Phased
 - DEC
- **Comparative:**
 - What If
 - What If Case Delta
 - Time Phased Case Delta
 - Time Phased Row Delta
 - System of Systems
- **RISK:**
 - Statistics
 - Allocation
 - Correlation

Graphical Charts

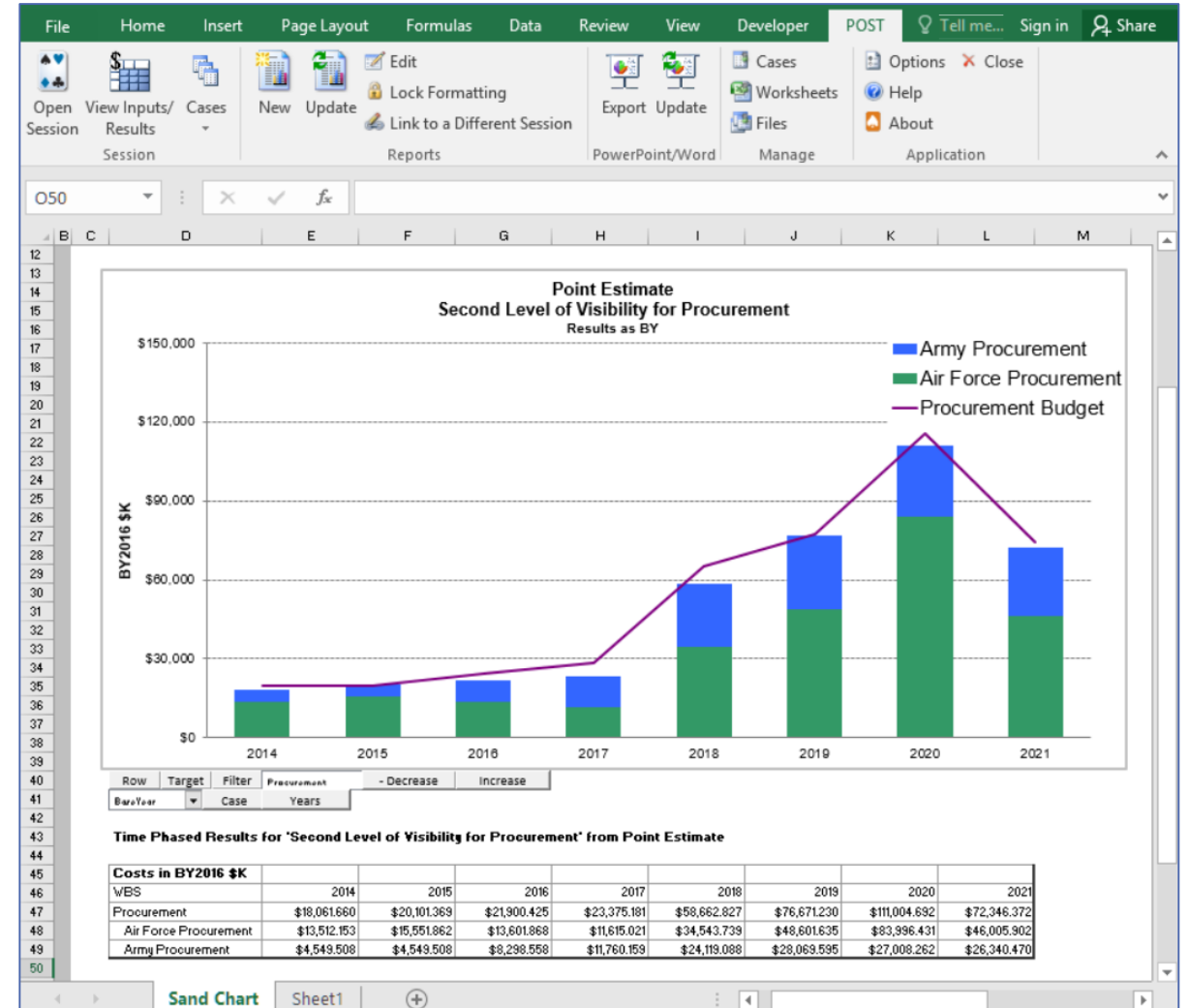
- **Estimate:**
 - Sand
 - Multi-Axis Line
 - Drill-Down Pie
 - Pareto
- **Comparative:**
 - Drill-Down
 - Phased Line
- **RISK:**
 - Histogram/CDF
 - Fan
 - Joint Probability
 - Convergence
 - Contributors
- **Analysis:**
 - Tornado
 - Spider
 - Variance Analysis

Manage Charts/Reports in Excel Workbooks

Create charts and reports for any ACE or POST case

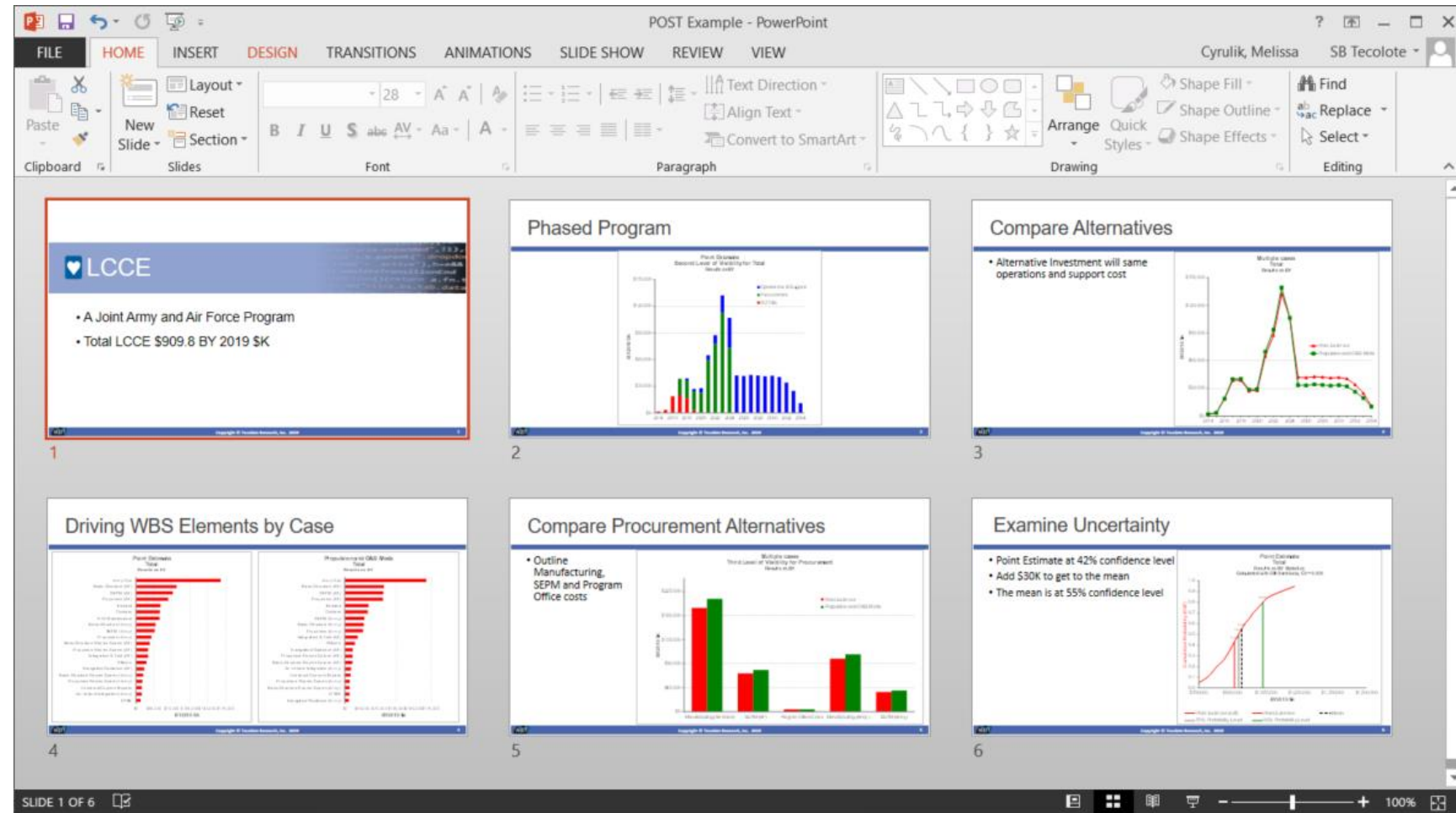
- Save charts and reports in individual worksheets
- Share workbook with other stakeholders

Note: Charts/reports can be viewed by all. ACEIT is required on the machine to manipulate them.



Create and Automatically-Update Presentations

- Manage and update estimate briefings
- Export all charts and reports to MS PowerPoint
- **Automate** presentation updates in easy, three-step process
 1. Modify ACE session
 2. Update POST charts
 3. Update PowerPoint



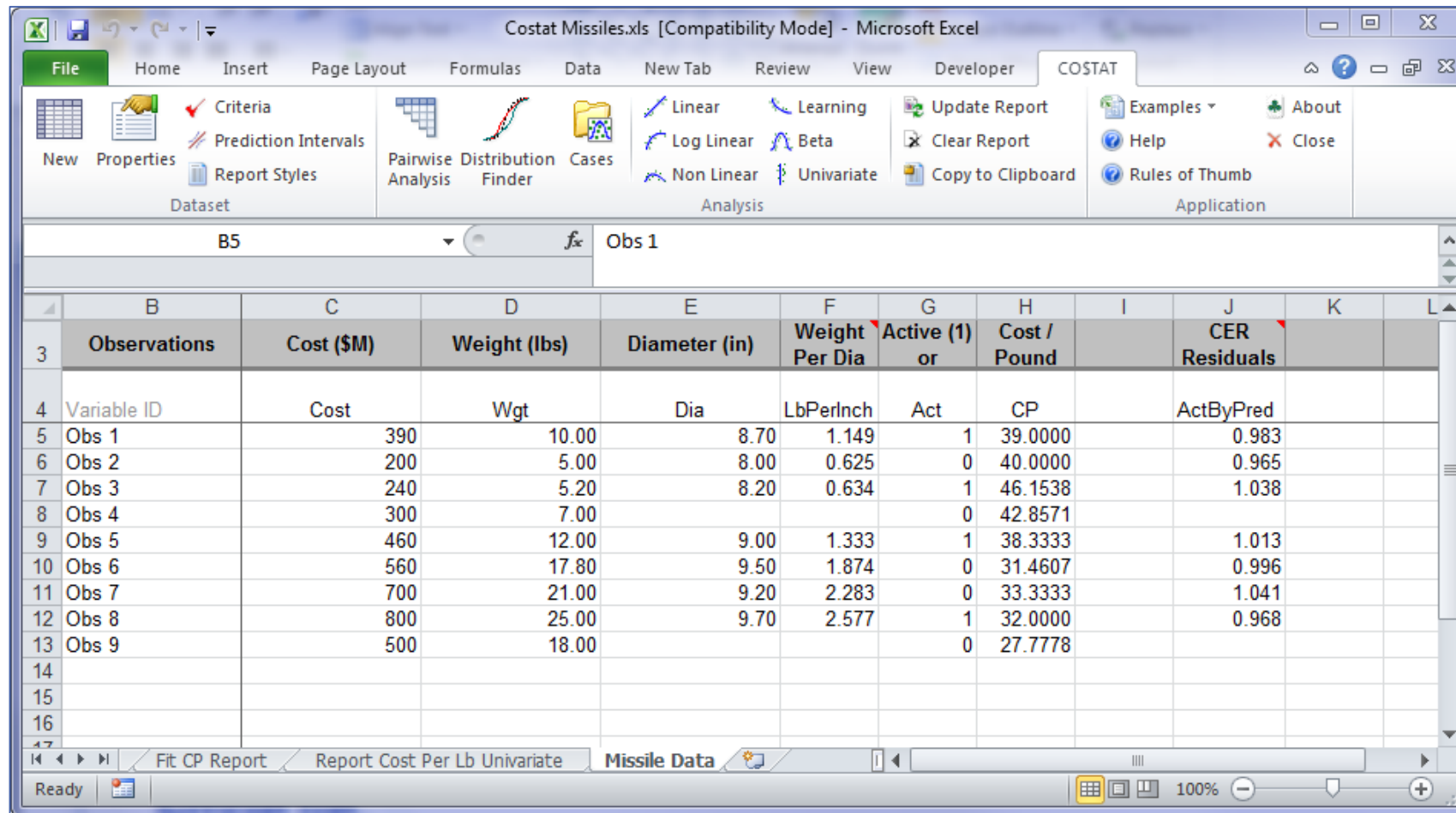


CO\$TAT

- Excel add-in statistical analysis tool designed specifically for cost analysis
- Conduct analysis
 - CER development: linear and nonlinear regression, univariate analysis
 - Learn Curves
 - Beta curve fitting
 - Uncertainty distribution fitting
- Easily export analyses results to ACE or Librarian

Manage Datasets

Easily create, update, and manage datasets in Excel workbooks

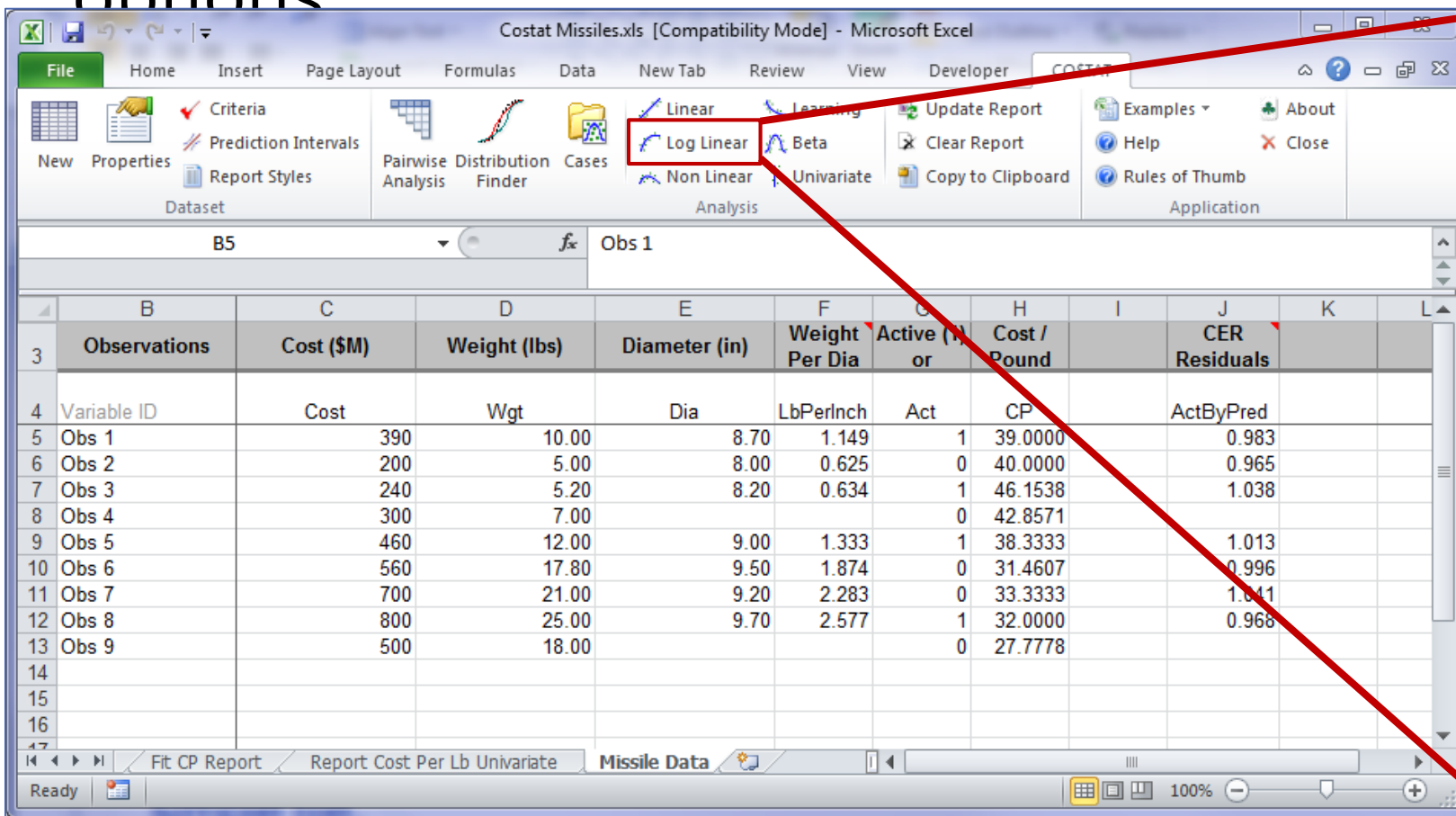


The screenshot displays the Microsoft Excel interface with the COSTAT add-in ribbon active. The ribbon includes sections for Dataset management (New, Properties, Prediction Intervals, Report Styles), Analysis (Pairwise Analysis, Distribution Finder, Cases, Linear, Log Linear, Non Linear, Learning, Beta, Univariate), and Application (Update Report, Clear Report, Copy to Clipboard, Examples, Help, Rules of Thumb, About, Close). The worksheet shows a dataset of missile data with columns for Observations, Cost (\$M), Weight (lbs), Diameter (in), Weight Per Dia, Active (1) or, Cost / Pound, and CER Residuals. The data is organized into rows for individual observations, with the first row (Obs 1) highlighted.

Observations	Cost (\$M)	Weight (lbs)	Diameter (in)	Weight Per Dia	Active (1) or	Cost / Pound	CER Residuals
Obs 1	390	10.00	8.70	1.149	1	39.0000	0.983
Obs 2	200	5.00	8.00	0.625	0	40.0000	0.965
Obs 3	240	5.20	8.20	0.634	1	46.1538	1.038
Obs 4	300	7.00			0	42.8571	
Obs 5	460	12.00	9.00	1.333	1	38.3333	1.013
Obs 6	560	17.80	9.50	1.874	0	31.4607	0.996
Obs 7	700	21.00	9.20	2.283	0	33.3333	1.041
Obs 8	800	25.00	9.70	2.577	1	32.0000	0.968
Obs 9	500	18.00			0	27.7778	

Run Analysis

Select dependent and independent variables as well as analysis options



Costat Missiles.xls [Compatibility Mode] - Microsoft Excel

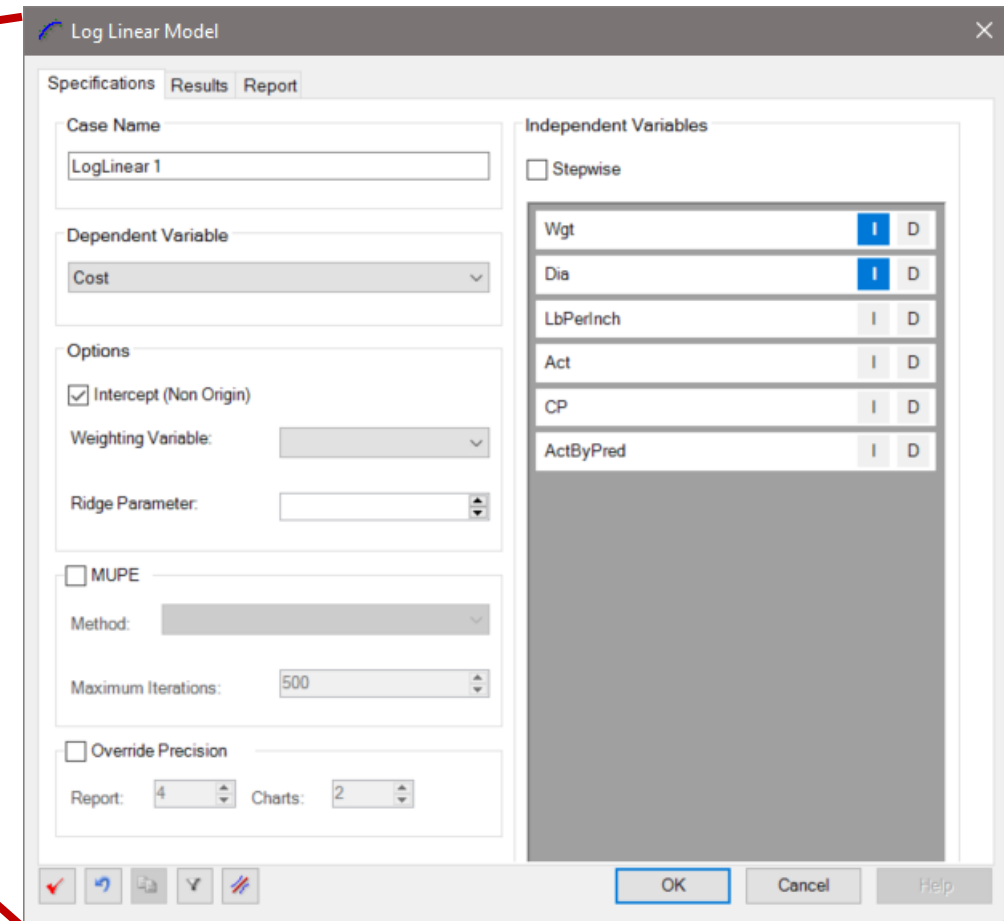
File Home Insert Page Layout Formulas Data New Tab Review View Developer

Criteria Prediction Intervals Pairwise Analysis Distribution Finder Cases Linear Log Linear Beta Non Linear Univariate Update Report Clear Report Copy to Clipboard Examples Help Rules of Thumb About Close

B5 f_x Obs 1

	B	C	D	E	F	G	H	I	J	K	L
	Observations	Cost (\$M)	Weight (lbs)	Diameter (in)	Weight Per Dia	Active (1 or 0)	Cost / Pound		CER Residuals		
4	Variable ID	Cost	Wgt	Dia	LbPerInch	Act	CP		ActByPred		
5	Obs 1	390	10.00	8.70	1.149	1	39.0000		0.983		
6	Obs 2	200	5.00	8.00	0.625	0	40.0000		0.965		
7	Obs 3	240	5.20	8.20	0.634	1	46.1538		1.038		
8	Obs 4	300	7.00			0	42.8571				
9	Obs 5	460	12.00	9.00	1.333	1	38.3333		1.013		
10	Obs 6	560	17.80	9.50	1.874	0	31.4607		0.996		
11	Obs 7	700	21.00	9.20	2.283	0	33.3333		1.041		
12	Obs 8	800	25.00	9.70	2.577	1	32.0000		0.968		
13	Obs 9	500	18.00			0	27.7778				
14											
15											
16											
17											

Ready Fit CP Report Report Cost Per Lb Univariate Missile Data



Log Linear Model

Specifications Results Report

Case Name: LogLinear 1

Dependent Variable: Cost

Independent Variables: Wgt, Dia, LbPerInch, Act, CP, ActByPred

Options:

- ☒ Intercept (Non Origin)
- Weighting Variable: None
- Ridge Parameter: None
- ☐ MUPE
- Method: Least Squares
- Maximum Iterations: 500
- ☐ Override Precision
- Report: 4 Charts: 2

OK Cancel Help

View Comprehensive Statistics

Quickly view statistical results and charts in a detailed report stored in the Excel workbook

LogLinear 1

Wednesday, 09 April 2014, 1:59 PM

I. Model Form and Equation Table

Model Form:	Unweighted Log-Linear model
Number of Observations Used:	7
Equation in Unit Space:	$LbPerInch = 0.9975 * Wgt^{1.1} * Dia^{(-0.9987)} * 0.9996^{Act}$

II. Fit Measures (in Fit Space)

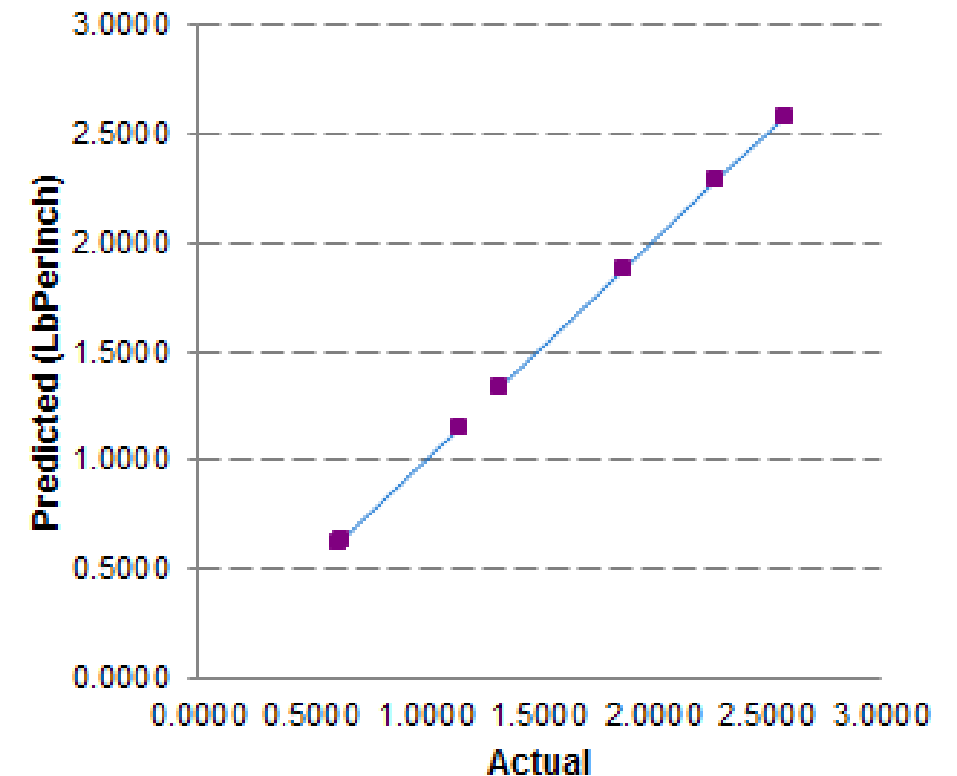
Coefficient Statistics Summary

Variable	Coefficient	Std Dev of Coef	Beta Value	T-Statistic (Coef/SD)	P-Value	Prob Not Zero
Intercept	-0.0025	0.0043		-0.5879	0.5979	0.4021
Wgt	1.0000	0.0003	1.1219	3935.9014	0.0000	1.0000
Dia	-0.9987	0.0023	-0.1257	-442.2979	0.0000	1.0000
EXP_Act	-0.0004	0.0000	-0.0003	-5.1540	0.0142	0.9858

Goodness-of-Fit Statistics

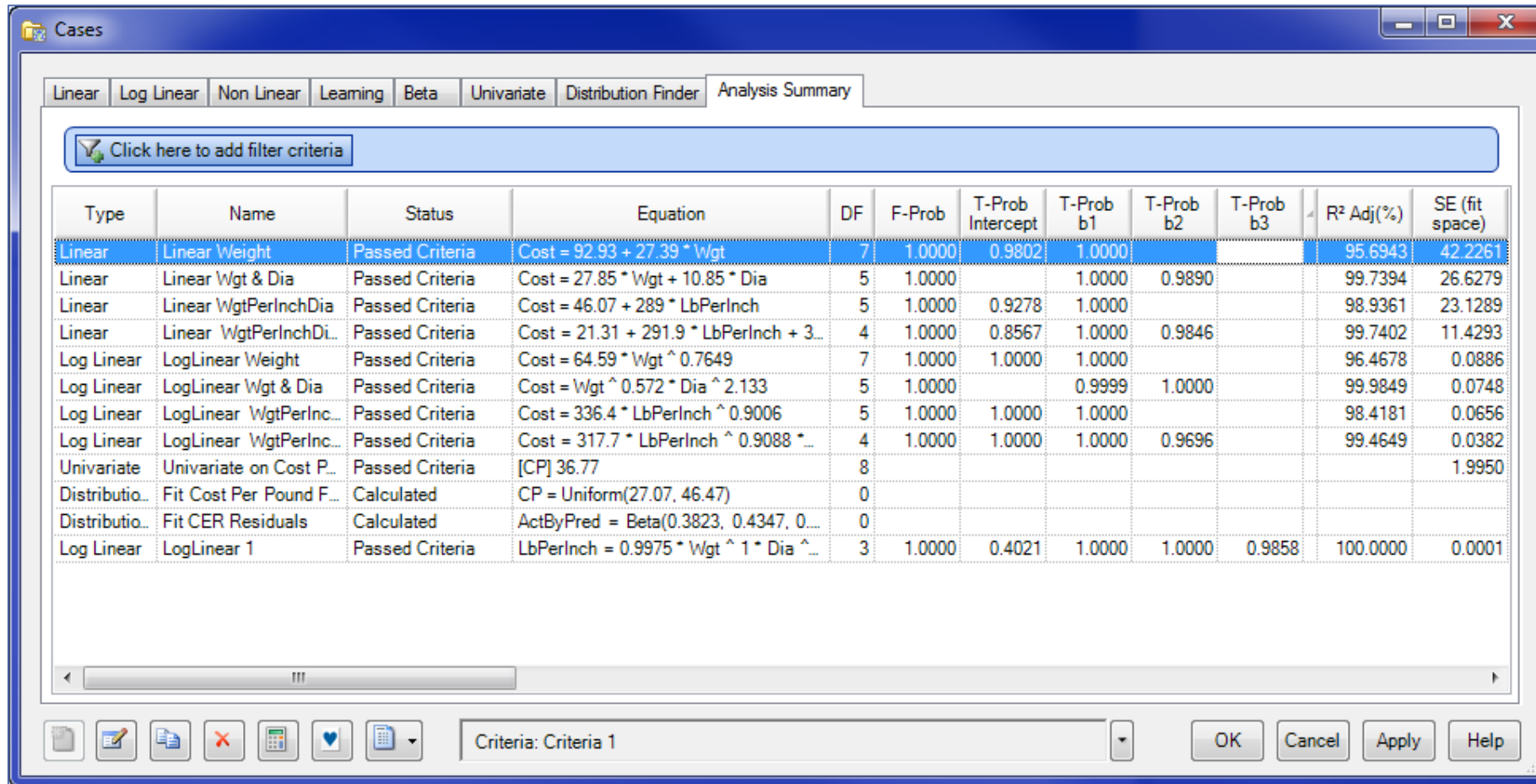
Std Error (SE)	R-Squared	R-Squared (Adj)	Pearson's Corr Coef
0.0000	100.00%	100.00%	1.0000

Actual vs. Predicted (Unit Space)



Compare Metrics for Different Equation Attempts

View, compare, analyze and export all results from a simple interface

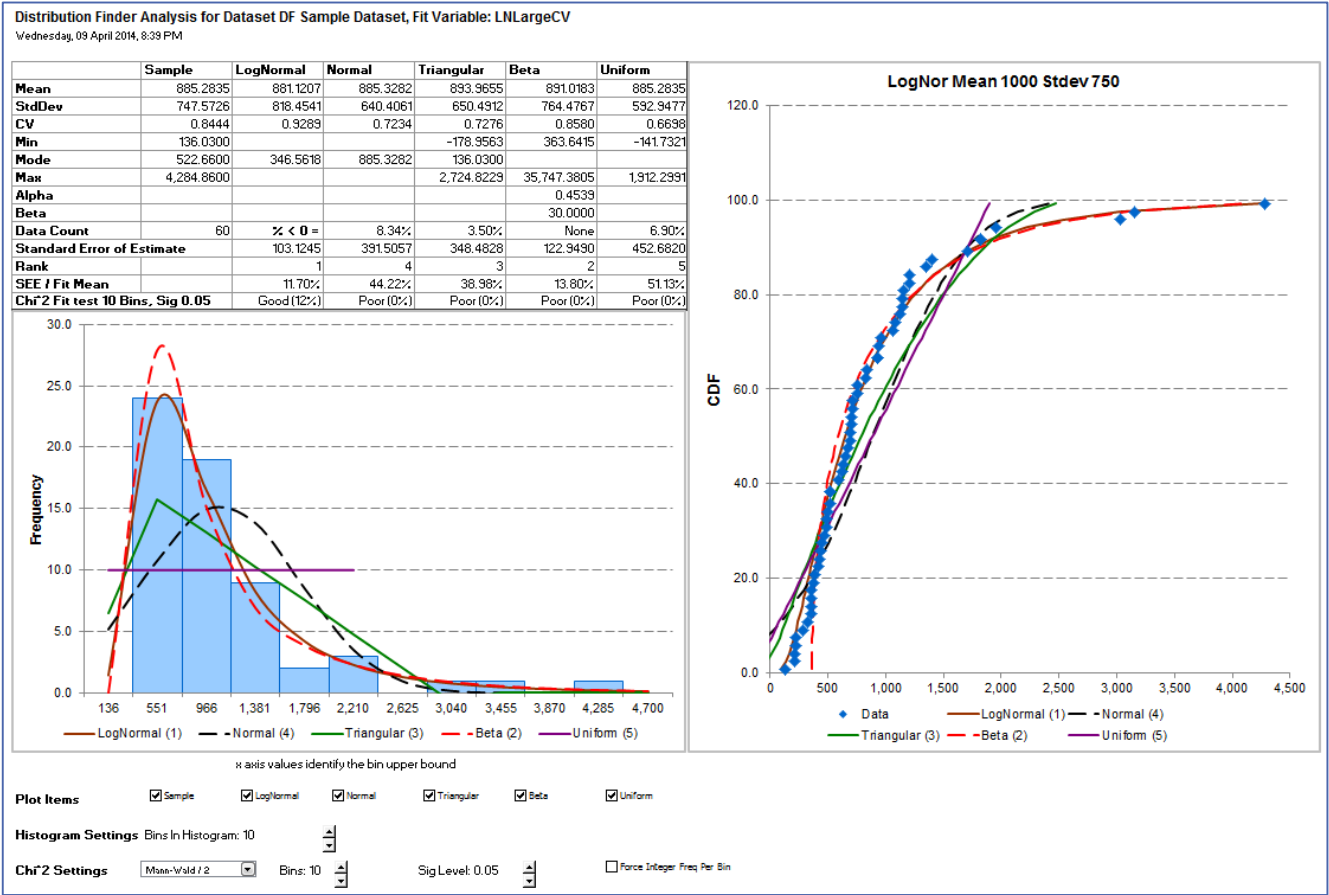


Type	Name	Status	Equation	DF	F-Prob	T-Prob Intercept	T-Prob b1	T-Prob b2	T-Prob b3	R² Adj(%)	SE (fit space)
Linear	Linear Weight	Passed Criteria	Cost = 92.93 + 27.39 * Wgt	7	1.0000	0.9802	1.0000			95.6943	42.2261
Linear	Linear Wgt & Dia	Passed Criteria	Cost = 27.85 * Wgt + 10.85 * Dia	5	1.0000		1.0000	0.9890		99.7394	26.6279
Linear	Linear WgtPerInchDia	Passed Criteria	Cost = 46.07 + 289 * LbPerInch	5	1.0000	0.9278	1.0000			98.9361	23.1289
Linear	Linear WgtPerInchDi..	Passed Criteria	Cost = 21.31 + 291.9 * LbPerInch + 3...	4	1.0000	0.8567	1.0000	0.9846		99.7402	11.4293
Log Linear	LogLinear Weight	Passed Criteria	Cost = 64.59 * Wgt ^ 0.7649	7	1.0000	1.0000	1.0000			96.4678	0.0886
Log Linear	LogLinear Wgt & Dia	Passed Criteria	Cost = Wgt ^ 0.572 * Dia ^ 2.133	5	1.0000		0.9999	1.0000		99.9849	0.0748
Log Linear	LogLinear WgtPerInch...	Passed Criteria	Cost = 336.4 * LbPerInch ^ 0.9006	5	1.0000	1.0000	1.0000			98.4181	0.0656
Log Linear	LogLinear WgtPerInch...	Passed Criteria	Cost = 317.7 * LbPerInch ^ 0.9088 *	4	1.0000	1.0000	1.0000	0.9696		99.4649	0.0382
Univariate	Univariate on Cost P..	Passed Criteria	[CP] 36.77	8							1.9950
Distributio..	Fit Cost Per Pound F..	Calculated	CP = Uniform(27.07, 46.47)	0							
Distributio..	Fit CER Residuals	Calculated	ActByPred = Beta(0.3823, 0.4347, 0...	0							
Log Linear	LogLinear 1	Passed Criteria	LbPerInch = 0.9975 * Wgt ^ 1 * Dia ^ ..	3	1.0000	0.4021	1.0000	1.0000	0.9858	100.0000	0.0001

Understand Distributions: Distribution Finder

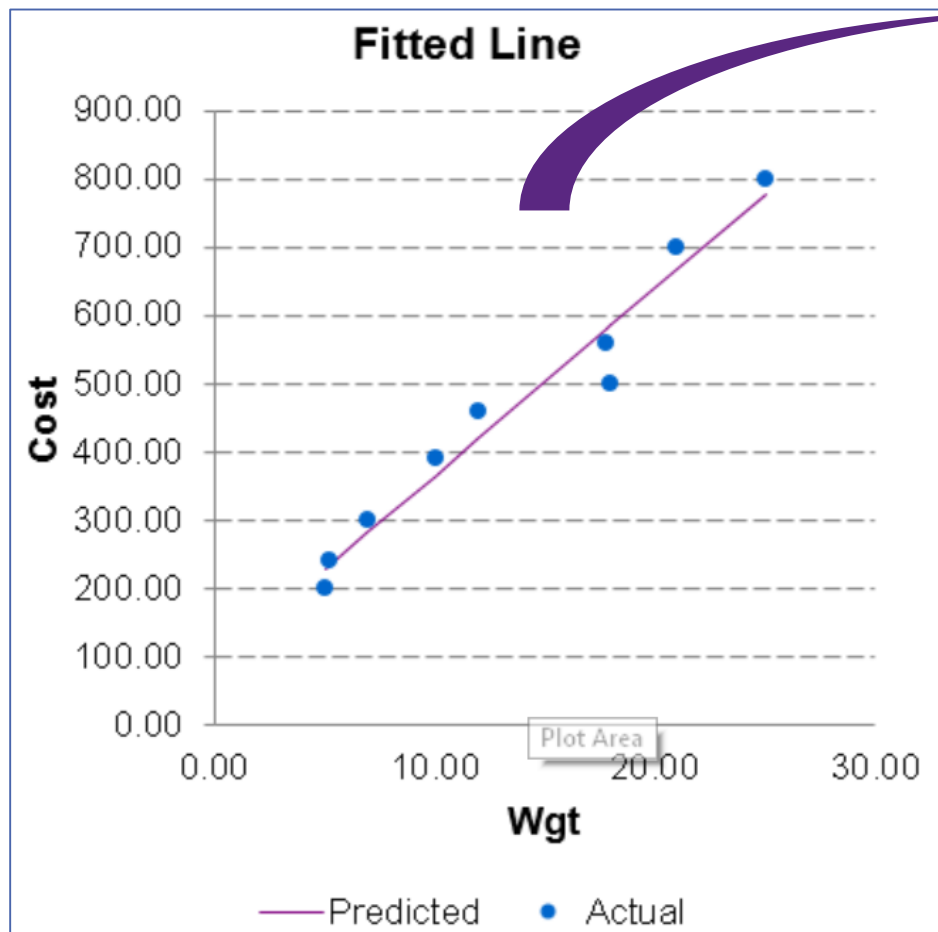
Analyze the distribution shape of a data set to inform uncertainty analysis

	B	C
	Observations	LogNor Mean 1000 Stdev 750
3		
4	Variable ID	LNLargeCV
5	Project 1	353.82
6	Project 2	438.44
7	Project 3	424.04
8	Project 4	934.55
9	Project 5	754.40
10	Project 6	415.07
11	Project 7	473.28
12	Project 8	225.47
13	Project 9	1,129.11
14	Project 10	3,154.59
15	Project 11	1,821.75
16	Project 12	1,959.22
17	Project 13	1,148.85
18	Project 14	
19	Project 15	4,284.86
20	Project 16	492.64
21	Project 17	758.22
22	Project 18	708.66
23	Project 19	714.72
24	Project 20	1,081.27
25	Project 21	210.94
26	Project 22	1,059.59
27	Project 23	1,160.09
28	Project 24	1,714.10
29	Project 25	289.40
30	Project 26	499.08
31	Project 27	936.16
32	Project 28	387.57
33	Project 29	489.42
34	Project 30	



Export Directly into ACE

Export CER and uncertainty bounds directly into ACE



Session Explorer - Estimate

- WBS
 - 1: *EXAMPLE FILE*
 - 2: *Estimate
 - 3: Total
 - 4: Manufacturing
 - 5: Air Vehicle
 - 6: Integration &
 - 7: SEPM
 - 8: Program Office C
 - 9:
- Input Variables
 - 10: *INPUT VARIABLES
 - 11: **Production Inputs
 - 12: *Cost Inputs
 - 13: Air Vehicle T1
 - 14: *Quantity Inputs

Estimate Traceback

Row	WBS/CES Description	Point Estimate	Phasing Method	Equation / Throughput	Fiscal Year
2	*Estimate				
3	Total	\$ 56,509.678			
4	Manufacturing	\$ 39,906.659			
5	Air Vehicle	\$ 34,701.443	F	AV_UCS*BuyQty	
6	Integration & Test	\$ 5,205.216	F	0.15*AVS	
7	SEPM	\$ 14,765.464	F	0.37*MfgS	
8	Program Office Costs	\$ 1,837.555	TY	[Cost Throughput]	
9					
10	*INPUT VARIABLES				
11	**Production Inputs				
12	*Cost Inputs				
13	Air Vehicle T1	\$ 8,675.361	C	(959*TW^*.243+189*RANGE^*.652)/2	201
14	*Quantity Inputs				
15	Buy Quantity	4.000	IS	[Input Throughput]	
16	*Technical Inputs				
17	Air Vehicle Takeoff Weight	12,000.000	C		12000



- A robust risk analysis add-in tool for MS Project (standalone for Primavera P6 also available)
- A vital program management tool to help keep a program on track and under budget

Answer Management Questions

Empower analysts to answer key project management questions

- Are there enough funds to complete the effort by target date?
- What is the likelihood of completing the effort by target date?
- What can be done to increase the likelihood of being on-time?
- If the program slips beyond target end date, what is the potential cost overrun and schedule slip?

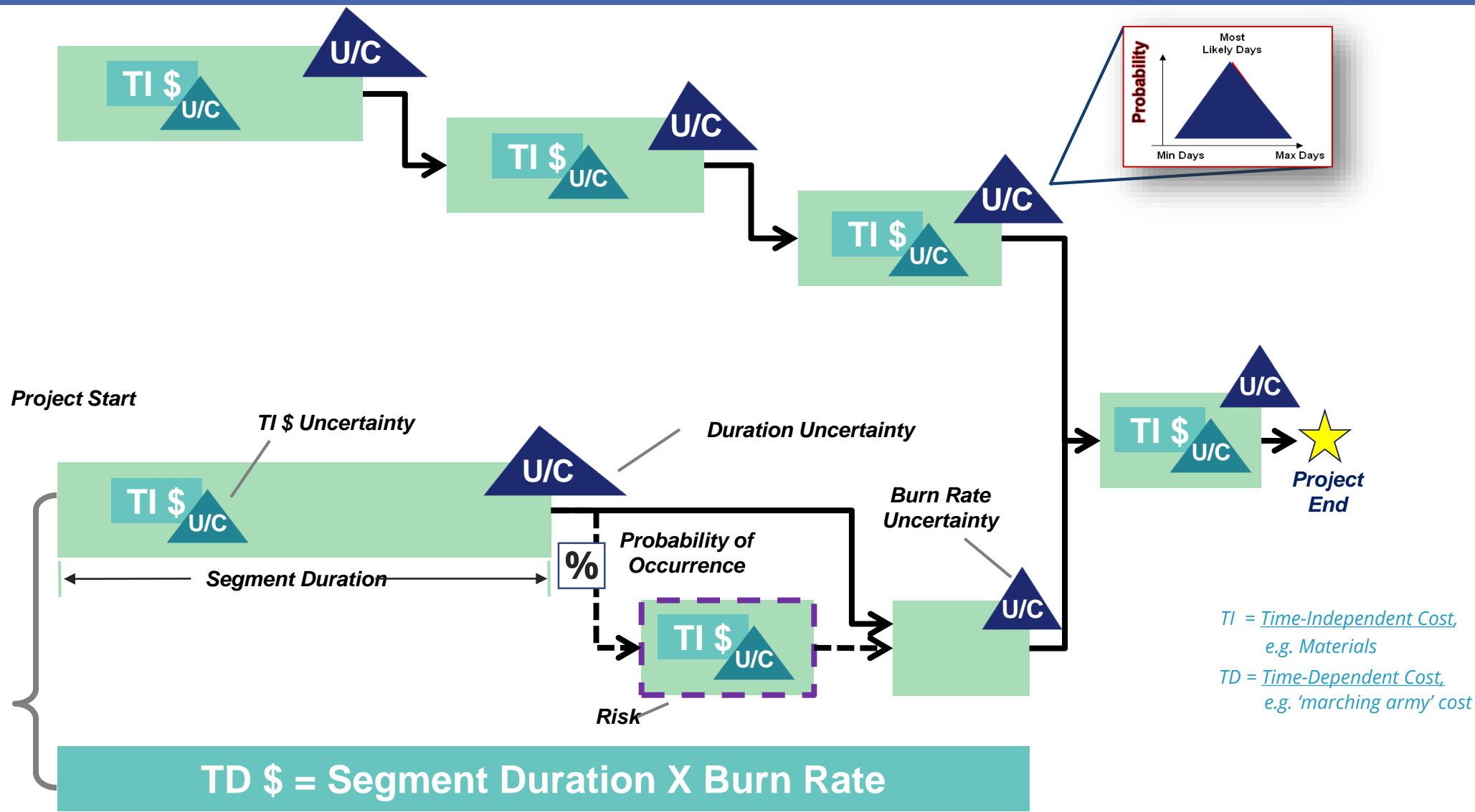
Duration		TI and TD Costs								Risk Events			
Name	Duration	JACS Duration Uncertainty	Cost	JACS Baseline Cost	JACS TI Task Cost	JACS TI Cost Uncertainty	JACS TI Spending Contour	JACS TD Task Cost	JACS TD Cost Uncertainty	JACS Threat ID	JACS Is Threat	JACS Threat % Likelihood	JACS Is Threat Active
☐ Air Vehicle Project	490 days		\$30,920,000.00	\$0.00	\$0.00			\$0.00			No	0	No
☐ Manufacturing	490 days		\$22,000,000.00	\$0.00	\$0.00			\$0.00			No	0	No
Air Vehicle (T1)	180 days	!(Manu=0.75)	\$9,900,000.00	\$9,900,000.00	\$4,400,000.00		Early Peak	\$5,500,000.00			No	0	No
Integration (T1)	90 days	!(Manu=0.75)	\$1,480,000.00	\$1,480,000.00	\$900,000.00		Turtle	\$580,000.00			No	0	No
Air Vehicle (T2)	180 days	!(Manu=0.75)	\$9,200,000.00	\$9,200,000.00	\$5,500,000.00		Early Peak	\$3,700,000.00			No	0	No
Integration (T2)	90 days	!(Manu=0.75)	\$1,420,000.00	\$1,420,000.00	\$860,000.00		Turtle	\$560,000.00			No	0	No
☐ SEPM (Hammock)	490 days		\$8,400,000.00	\$8,400,000.00	\$0.00			\$8,400,000.00	LN*(100,20)		No	0	No
SEPM Start	0 days		\$8,400,000.00	\$0.00	\$0.00			\$0.00			No	0	No
SEPM Finish	0 days		\$0.00	\$0.00	\$0.00			\$0.00			No	0	No
Other	160 days	LN*(95,15)	\$520,000.00	\$520,000.00	\$0.00			\$520,000.00			No	0	No

Provide Three Levels of Integration and Analysis

1. Conduct a schedule risk analysis
2. Integrate cost into the schedule risk analysis
3. Perform joint confidence level analysis (uncertain cost/schedule and risk events)

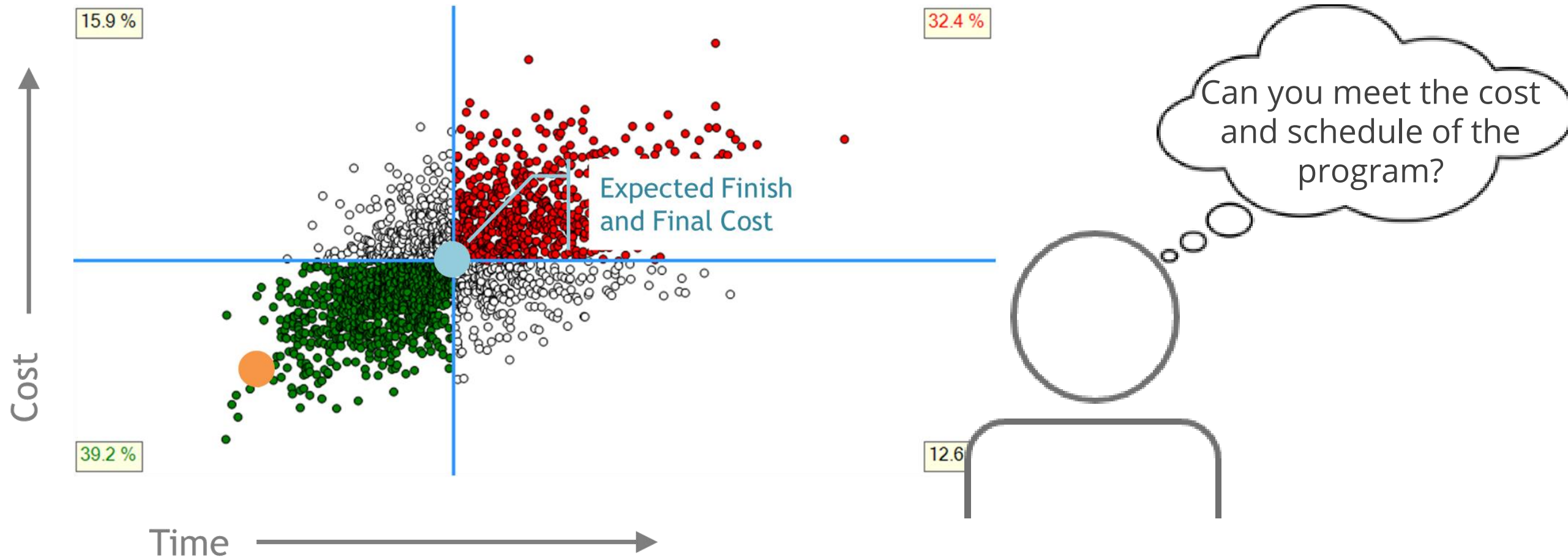


Integrate Risk and Uncertainty



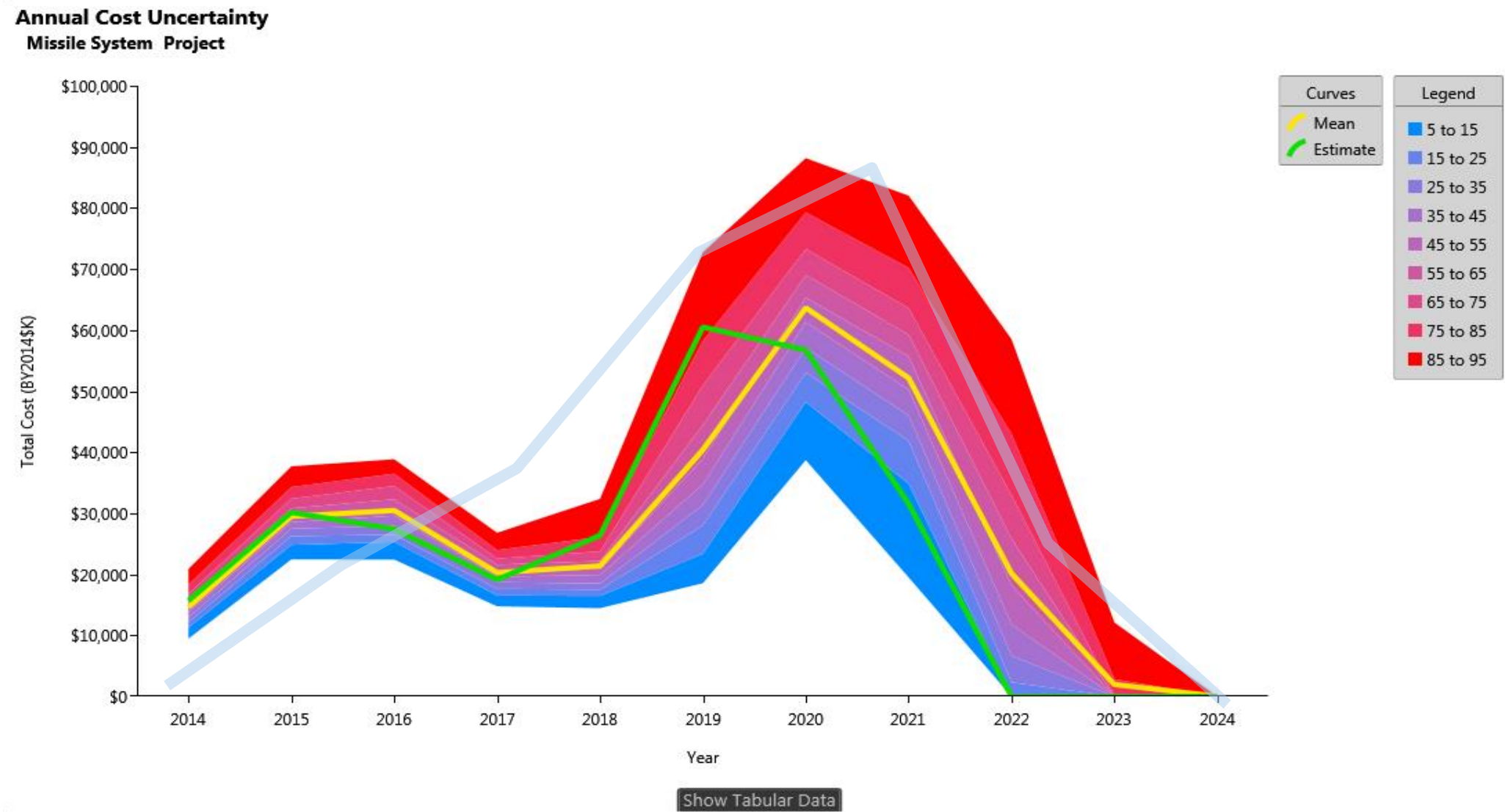
Identify Cost and Schedule Range

Understand the confidence level of combine cost and schedule



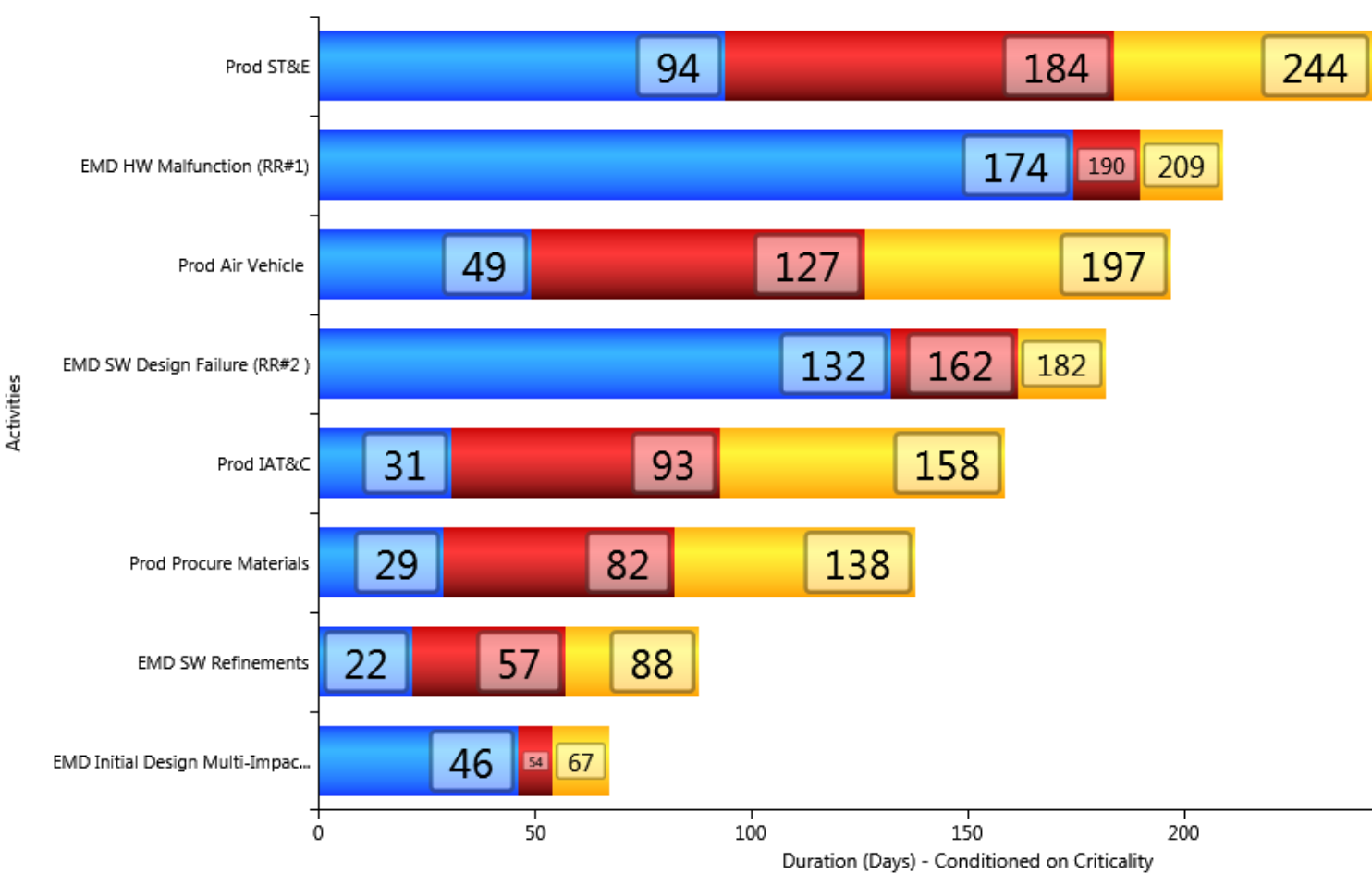
Assess Required Funds Over Time

Graphs assist analysts and managers with understanding funding

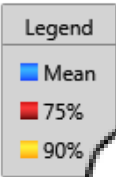


Identify Areas with Highest Potential Impact

Duration Tail Contingency Delta from Estimate
Missile System Project



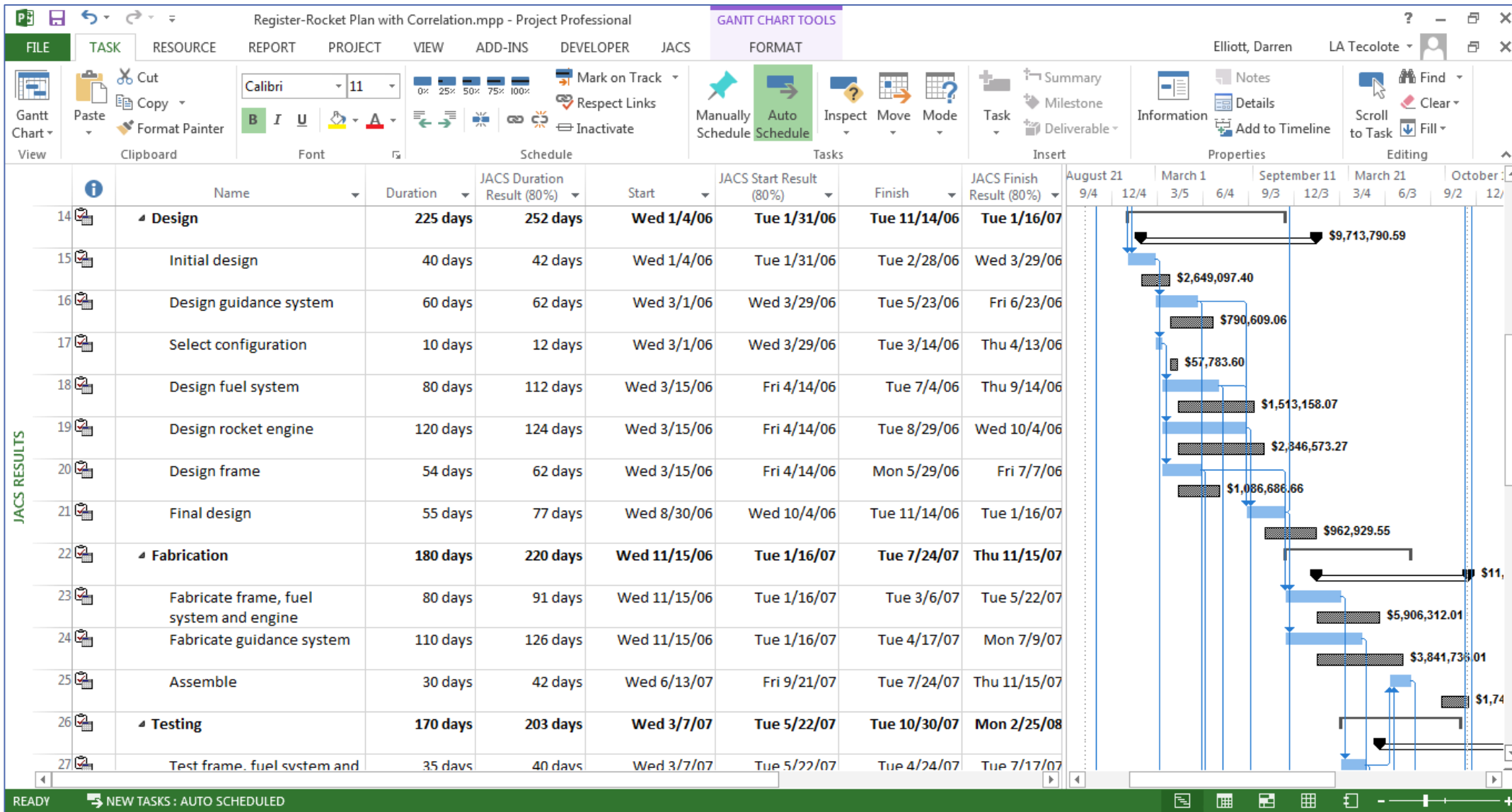
Show Tabular Data



What items have the most uncertainty or opportunity to mitigate risk?

View Risk Adjusted Schedules

Generate updated schedules with higher confidence of completion



Gain **Insight**: Dashboard Charting Tool

- Quickly view JACS top-level results in dashboard format
- Customize the dashboard to your areas of interest



ACEIT 8.0 Training

Instructors, possessing real-world experience with ACEIT, provide hands-on training



ACEIT Training Approach

Tell me and I forget.

Teach me and I remember.

Involve me and I learn.

-Benjamin Franklin

ACEIT 8.0 Training

Open Courses	
ACEIT for Model Builders	4 days
ACEIT for Reviewers	2 days
ACEIT for Advanced Model Builders	4 days
ACEIT for CER Developers: CO\$TAT	2 days
ACEIT for Schedules: JACS	2 days

Onsite courses available upon request

More Information

- Visit www.ACEIT.com
- Please contact ACEIT Sales
Email: aceit_sales@tecolote.com
Phone: (805) 964-6963