



Handling Sunk Costs in ACE

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- **Section 1: The Mechanics of Sunk Costs**
 - What are sunk costs?
 - Why would you want to incorporate sunk costs?
 - How do you enter Sunk Cost into ACEIT?

- **Section 2: Special Case Implementation**
 - Scenario 1 –Actuals are at Summary WBS level
 - Capturing Sunk Costs at Summary Level
 - Allocating Sunk Cost to Child Level
 - Scenario 2 – Building an Actual vs Plan Report
 - Using a What-If case to create Revised Plan
 - Implementing Actual vs Plan within an ACE Session



Section 1: The Mechanics





■ What are “Sunk” Costs?

- Society of Cost Estimating Analysts (SCEA) defines sunk costs as:
 - “The total of all past Expenditures, or **irrevocably committed funds**, related to a program or project. Sunk Costs are generally not relevant to decision making since they reflect previous choices rather than current choices. Sunk costs are often referred to as Prior Year Costs.” *(taken from CeBOK Glossary, ver. 2009)*
- Basic Economic Definition:
 - In economics and business decision-making, sunk costs are costs that **cannot be recovered** once they have been incurred.
- aka: “Actuals to Date”



Why are Sunk Costs Important?

- **As an estimator, or an analyst, why are we concerned with sunk costs?**
 - Considering the prior definitions...sunk costs are not even used in business decision making?!
- **Updating the Estimate**
 - Adding sunk costs to the estimate provides for a “complete answer” on total cost (i.e. sunk cost + future cost = total cost)
 - Including sunk costs adds credibility to the estimate (real data!)
- **Tracking and Measuring Progress and/or Performance**
 - Capturing and analyzing sunk costs allows the analyst to measure the difference between the program’s plan for expending funds, and the actual money spent



Entering Sunk Costs in ACE

- **Sunk Costs are easily entered in the ACE Fiscal Year (FY) Columns for any Child Row in an ACE Session**

- **Yearly Phasing Screen:**

Yearly Phasing

WBS/CES Description	Point Estimate	Equation / Throughput	Phasing Method	Approp	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
RDT&E FUNDED ELEMENTS	\$ 268.827 *									
DEVELOPMENT ENGINEERING	\$ 21.369 *	DevEngHwEm * DevEngHwLr\$	BE	RDTEA	{1}	{2}	{5}			
PROTOTYPE MANUFACTURING	\$ 234.335 *	AmpProtoUC\$ * AmpProtoQty	F	RDTEA	{10}	{11}	{12}			
SYSTEMS ENGINEERING/MGMT	\$ 13.124 *	[Cost Throughput]	TY	RDTEA	{1}	1{1}	2{2}	3	4	3

- **Input All Form:**

Input All Form

FY Inputs

Yearly Inputs

Year	Value	Sunk Cost
FY 2008		10
FY 2009		11
FY 2010		12
FY 2011		
FY 2012		
FY 2013		
FY 2014		
FY 2015		
FY 2016		
FY 2017		
Totals		0.000

Sunk Costs entered using “{ }” and Treated as TY overrides with same units as the session. Can be specified for any phasing method, except “%”.



How ACE Calculates Sunk Cost

- **Sunk Costs Act as a TY Override for the Specific Years that the Sunk Costs are entered.**
 - Similar to entering TY Overrides in an ACE Case
- **ACE Calculation Steps**
 - ACE first calculates the equation result and phases it over the year range specified by the phasing method.
 - ACE then overrides the results for years in which sunk costs are specified
 - Final ACE phased results are the values based on sunk costs and the phased estimate
 - Final ACE total results is the sum of the combination of sunk override costs and phased estimate remainder.



Behind the Scenes of ACE Sunk Calculation – Initial Estimate

■ Original Estimate

WBS/CES Description	Point Estimate	Equation / Throughput	Phasing Method	Approp	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
RDT&E FUNDED ELEMENTS	\$ 268.827 *									
DEVELOPMENT ENGINEERING	\$ 21.369 *	DevEngHwEm * DevEngHwLr\$	BE	RDTEA						
PROTOTYPE MANUFACTURING	\$ 234.335 *	AmpProtoUC\$ * AmpProtoQty	F	RDTEA						
SYSTEMS ENGINEERING/MGMT	\$ 13.124 *	[Cost Throughput]	TY	RDTEA		1	2	3	4	3

■ Original Estimate Phased Results – TY\$M

WBS/CES Description	Total	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
XYZ CES (ORDNANCE)	\$ 326.037	\$ 10.084	\$ 12.483	\$ 17.908	\$ 21.470	\$ 20.576	\$ 15.448
RDT&E FUNDED ELEMENTS	\$ 326.037	\$ 10.084	\$ 12.483	\$ 17.908	\$ 21.470	\$ 20.576	\$ 15.448
DEVELOPMENT ENGINEERING	\$ 21.186		\$ 1.176	\$ 5.382	\$ 7.731	\$ 5.622	\$ 1.275
PROTOTYPE MANUFACTURING	\$ 291.851	\$ 10.084	\$ 10.307	\$ 10.525	\$ 10.739	\$ 10.954	\$ 11.173
SYSTEMS ENGINEERING/MGMT	\$ 13.000		\$ 1.000	\$ 2.000	\$ 3.000	\$ 4.000	\$ 3.000



Behind the Scenes of ACE Sunk Calculation – Sunk Costs Added

■ Sunk Costs Specified

WBS/CES Description	Point Estimate	Equation / Throughput	Phasing Method	Approp	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
RDT&E FUNDED ELEMENTS	\$ 268.827 *									
DEVELOPMENT ENGINEERING	\$ 21.369 *	DevEngHwEm * DevEngHwLr\$	BE	RDTEA	{1}	{2}	{5}			
PROTOTYPE MANUFACTURING	\$ 234.335 *	AmpProtoUC\$ * AmpProtoQty	F	RDTEA	{10}	{11}	{12}			
SYSTEMS ENGINEERING/MGMT	\$ 13.124 *	[Cost Throughput]	TY	RDTEA	{1}	1{1}	2{2}	3	4	3

WBS/CES Description	Total	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
XYZ CES (ORDNANCE)	\$ 330.562	\$ 12.000	\$ 14.000	\$ 19.000	\$ 21.470	\$ 20.576	\$ 15.448
RDT&E FUNDED ELEMENTS	\$ 330.562	\$ 12.000	\$ 14.000	\$ 19.000	\$ 21.470	\$ 20.576	\$ 15.448
DEVELOPMENT ENGINEERING	\$ 22.628	\$ 1.000	\$ 2.000	\$ 5.000	\$ 7.731	\$ 5.622	\$ 1.275
PROTOTYPE MANUFACTURING	\$ 293.934	\$ 10.000	\$ 11.000	\$ 12.000	\$ 10.739	\$ 10.954	\$ 11.173
SYSTEMS ENGINEERING/MGMT	\$ 14.000	\$ 1.000	\$ 1.000	\$ 2.000	\$ 3.000	\$ 4.000	\$ 3.000

Sunk Costs Appear in Phased Results



Behind the Scenes of ACE Sunk Calculation - Estimate Impact

Original Results – TY\$M

WBS/CES Description	Total	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
XYZ CES (ORDNANCE)	\$ 326.037	\$ 10.084	\$ 12.483	\$ 17.908	\$ 21.470	\$ 20.576	\$ 15.448
RDT&E FUNDED ELEMENTS	\$ 326.037	\$ 10.084	\$ 12.483	\$ 17.908	\$ 21.470	\$ 20.576	\$ 15.448
DEVELOPMENT ENGINEERING	\$ 21.186		\$ 1.176	\$ 5.382	\$ 7.731	\$ 5.622	\$ 1.275
PROTOTYPE MANUFACTURING	\$ 291.851	\$ 10.084	\$ 10.307	\$ 10.525	\$ 10.739	\$ 10.954	\$ 11.173
SYSTEMS ENGINEERING/MGMT	\$ 13.000		\$ 1.000	\$ 2.000	\$ 3.000	\$ 4.000	\$ 3.000

Sunk Costs Override Original Phasing

Remaining Estimate Maintains Results

Revised Estimate with Sunk Costs Phased Results – TY\$M

WBS/CES Description	Total	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
XYZ CES (ORDNANCE)	\$ 330.562	\$ 12.000	\$ 14.000	\$ 19.000	\$ 21.470	\$ 20.576	\$ 15.448
RDT&E FUNDED ELEMENTS	\$ 330.562	\$ 12.000	\$ 14.000	\$ 19.000	\$ 21.470	\$ 20.576	\$ 15.448
DEVELOPMENT ENGINEERING	\$ 22.628	\$ 1.000	\$ 2.000	\$ 5.000	\$ 7.731	\$ 5.622	\$ 1.275
PROTOTYPE MANUFACTURING	\$ 293.934	\$ 10.000	\$ 11.000	\$ 12.000	\$ 10.739	\$ 10.954	\$ 11.173
SYSTEMS ENGINEERING/MGMT	\$ 14.000	\$ 1.000	\$ 1.000	\$ 2.000	\$ 3.000	\$ 4.000	\$ 3.000

Final Results are Combination of Sunk and Original Phasing

Section 2: Special Case Implementation





Original Phased Estimate

WBS/CES Description	Total	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
XYZ CES (MISSILE)	\$ 381.592		\$ 13.384	\$ 29.820	\$ 34.923	\$ 26.592	\$ 7.662
RDT&E FUNDED ELEMENTS	\$ 112.380		\$ 13.384	\$ 29.820	\$ 34.923	\$ 26.592	\$ 7.662
DEVELOPMENT ENGINEERING	\$ 40.763		\$ 3.998	\$ 11.127	\$ 13.419	\$ 9.559	\$ 2.658
AIR VEHICLE (Hardware)	\$ 21.186		\$ 1.176	\$ 5.382	\$ 7.731	\$ 5.622	\$ 1.275
AIR VEHICLE (Software)	\$ 19.576		\$ 2.823	\$ 5.745	\$ 5.688	\$ 3.937	\$ 1.384
PROTOTYPE MANUFACTURING	\$ 15.722		\$ 3.914	\$ 6.557	\$ 3.918	\$ 1.332	
PROCESSOR	\$ 2.288		\$ 0.445	\$ 0.910	\$ 0.696	\$ 0.237	
AMPLIFIERS	\$ 10.589		\$ 2.061	\$ 4.210	\$ 3.222	\$ 1.095	
COTS ANTENNA	\$ 2.845		\$ 1.408	\$ 1.437			
SYSTEMS ENGINEERING/MGMT	\$ 34.351		\$ 3.991	\$ 8.685	\$ 9.553	\$ 8.117	\$ 4.005
CONTRACTOR	\$ 21.351		\$ 2.991	\$ 6.685	\$ 6.553	\$ 4.117	\$ 1.005
GOVERNMENT	\$ 13.000		\$ 1.000	\$ 2.000	\$ 3.000	\$ 4.000	\$ 3.000
SYSTEMS TEST AND EVAL	\$ 11.915		\$ 0.153	\$ 0.470	\$ 5.089	\$ 5.704	\$ 0.499
CONTRACTOR	\$ 2.415		\$ 0.153	\$ 0.470	\$ 0.639	\$ 0.654	\$ 0.499
GOVERNMENT	\$ 9.500				\$ 4.450	\$ 5.050	
TRAINING							
OTHER RDT&E	\$ 9.630		\$ 1.327	\$ 2.981	\$ 2.944	\$ 1.879	\$ 0.499
RDT&E FEE	\$ 9.630		\$ 1.327	\$ 2.981	\$ 2.944	\$ 1.879	\$ 0.499

Actuals to Date

WBS #	Description	TY\$M		
		2008	2009	2010
1.00	Program XYZ	\$ 3.00	\$ 13.90	\$ -
1.01	Dev Engineering	\$ 1.00	\$ 4.20	
1.02	Protype Manufacturing		\$ 4.10	
1.03	SE/PM	\$ 2.00	\$ 4.30	
1.04	ST&E		\$ 0.10	
1.05	Training		\$ -	
1.06	Other		\$ 1.20	



Scenario 1 – Summary Actuals

■ Scenario

- Analyst has a model at a very detailed WBS level
- Actuals are tracked at a summary WBS level
- Analyst wants to incorporate sunk costs into their estimate to maintain funding history and to develop a revised estimate

■ Implementation Solutions

1. Track Actuals via a Summary WBS line Item
2. Prorate actuals to children



Scenario 1, Example 1 – Summary WBS item

■ Solution: Track Actuals via a Summary WBS line Item

1. Add a new child WBS line item to each major WBS item
2. Name the new item “WBS #x.x Actuals”
3. Enter the sunk costs on this row as TY phased inputs
4. Enter “{0}” as sunk costs for all other child items for the years that you’ve specified sunk costs

WBS/CES Description	Point Estimate	WBS/Item Number	Phasing Method	Approp	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
XYZ CES (MISSILE)	\$ 317.737 *									
RDT&E FUNDED ELEMENTS	\$ 104.452 *	01.00		RDTEA						
DEVELOPMENT ENGINEERING	\$ 34.519 *	01.01		RDTEA						
Actuals to Date - DEVELOPMENT	\$ 0.000 *		F	RDTEA	{1}	{4.2}				
AIR VEHICLE (Hardware)	\$ 18.774 *	01.01.01	BE	RDTEA	{0}	{0}				
AIR VEHICLE (Software)	\$ 15.745 *	01.01.02	BE	RDTEA	{0}	{0}				
PROTOTYPE MANUFACTURING	\$ 15.224 *	01.02		RDTEA						
Actuals to Date - Proto Manuf	\$ 4.018 *		TY	RDTEA	0	4.1				
PROCESSOR	\$ 1.746 *	01.02.01	F	RDTEA	{0}	{0}				
AMPLIFIERS	\$ 8.081 *	01.02.02	F	RDTEA	{0}	{0}				
COTS ANTENNA	\$ 1.379 *	01.02.03	F	RDTEA	{0}	{0}				
SYSTEMS ENGINEERING/MGMT	\$ 34.643 *	01.03		RDTEA						
Actuals to Date - SE/PM	\$ 6.217 *		TY	RDTEA	2	4.3				
CONTRACTOR	\$ 17.284 *	01.03.01	F	RDTEA	{0}	{0}				
GOVERNMENT	\$ 11.142 *	01.03.02	TY	RDTEA	{0}	1 {0}	2	3	4	3
SYSTEMS TEST AND EVAL	\$ 11.072 *	01.04		RDTEA						
Actuals to Date - ST&E	\$ 0.098 *		TY	RDTEA	0	0.1				
CONTRACTOR	\$ 2.132 *	01.04.01	TS	RDTEA	{0}	{0}				
GOVERNMENT	\$ 8.842 *	01.04.02	TY	RDTEA	{0}	{0}		4.45	5.05	
TRAINING	\$ 0.000 *	01.05								
Actuals to Date - Training	\$ 0.000 *		TY	RDTEA	0	0				
TRAINING	\$ 0.000 *		F	RDTEA	{0}	{0}				
OTHER RDT&E	\$ 8.993 *	01.06		RDTEA						
Actuals to Date - Other RDT&E	\$ 1.176 *		TY	RDTEA	0	1.2				
RDT&E FEE	\$ 7.817 *		F	RDTEA	{0}	{0}				



Scenario 1, Example 2 – Prorated Actuals

■ Solution: Prorate Actuals to Children

1. Save Original phased estimate plan
2. Develop annual percent factors of contribution of child to Parent
3. Prorate the total actual down to child elements based on allocation factor
4. For years with no baseline estimate – make assumption on allocation scheme

Original Estimate								
WBS/CES Description	Total	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
XYZ CES (MISSILE)	\$381.59		\$13.38	\$29.82	\$34.92	\$26.59	\$7.66	
RDT&E FUNDED ELEMENTS	\$112.38		\$13.38	\$29.82	\$34.92	\$26.59	\$7.66	
DEVELOPMENT ENGINEERING	\$40.76		\$4.00	\$11.13	\$13.42	\$9.56	\$2.66	
AIR VEHICLE (Hardware)	\$21.19		\$1.18	\$5.38	\$7.73	\$5.62	\$1.28	
AIR VEHICLE (Software)	\$19.58		\$2.82	\$5.75	\$5.69	\$3.94	\$1.38	
PROTOTYPE MANUFACTURING	\$15.72		\$3.91	\$6.56	\$3.92	\$1.33		
PROCESSOR	\$2.29		\$0.45	\$0.91	\$0.70	\$0.24		
AMPLIFIERS	\$10.59		\$2.06	\$4.21	\$3.22	\$1.10		
COTS ANTENNA	\$2.85		\$1.41	\$1.44				
SYSTEMS ENGINEERING/MGMT	\$34.35		\$3.99	\$8.69	\$9.55	\$8.12	\$4.01	
CONTRACTOR	\$21.35		\$2.99	\$6.69	\$6.55	\$4.12	\$1.01	
GOVERNMENT	\$13.00		\$1.00	\$2.00	\$3.00	\$4.00	\$3.00	
SYSTEMS TEST AND EVAL	\$11.92		\$0.15	\$0.47	\$5.09	\$5.70	\$0.50	
CONTRACTOR	\$2.42		\$0.15	\$0.47	\$0.64	\$0.65	\$0.50	
GOVERNMENT	\$9.50				\$4.45	\$5.05		
PRORation Percent			FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
XYZ CES (MISSILE)								
RDT&E FUNDED ELEMENTS								
DEVELOPMENT ENGINEERING								
AIR VEHICLE (Hardware)			29%	48%	58%	59%	48%	
AIR VEHICLE (Software)			71%	52%	42%	41%	52%	
PROTOTYPE MANUFACTURING								
PROCESSOR			11%	14%	18%	18%	0%	
AMPLIFIERS			53%	64%	82%	82%	0%	
COTS ANTENNA			36%	22%	0%	0%	0%	
SYSTEMS ENGINEERING/MGMT								
CONTRACTOR			75%	77%	69%	51%	25%	
GOVERNMENT			25%	23%	31%	49%	75%	
WBS/CES Description	Total	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
XYZ CES (MISSILE)								
RDT&E FUNDED ELEMENTS								
DEVELOPMENT ENGINEERING								
AIR VEHICLE (Hardware)			\$ 1,235	\$ -				
AIR VEHICLE (Software)		\$ 1,000	\$ 2,966	\$ -				
PROTOTYPE MANUFACTURING								
PROCESSOR			\$ 0,466	\$ -				
AMPLIFIERS			\$ 2,159	\$ -				
COTS ANTENNA			\$ 1,475	\$ -				
SYSTEMS ENGINEERING/MGMT								
CONTRACTOR		\$ 1,000	\$ 3,223	\$ -				
GOVERNMENT		\$ 1,000	\$ 1,077	\$ -				
SYSTEMS TEST AND EVAL								
CONTRACTOR			\$ 0,100	\$ -				
GOVERNMENT			\$ -	\$ -				
TRAINING			\$ -	\$ -				
OTHER RDT&E								
RDT&E FEE			\$ 1,200	\$ -				



Scenario 1, Example 2 – Prorated Actuals

- Caution must be exercised to ensure child sums will rollup to the summary actual per year.

WBS/CES Description	Point Estimate	WBS/Item Number	Phasing Method	Approp	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
XYZ CES (MISSILE)	\$ 322.945 *									
RDT&E FUNDED ELEMENTS	\$ 106.031 *	01.00		RDTEA						
DEVELOPMENT ENGINEERING	\$ 38.438 *	01.01		RDTEA						
AIR VEHICLE (Hardware)	\$ 19.926 *	01.01.01	BE	RDTEA	{0}	{1.235}				
AIR VEHICLE (Software)	\$ 18.511 *	01.01.02	BE	RDTEA	{1}	{2.966}				
PROTOTYPE MANUFACTURING	\$ 15.043 *	01.02		RDTEA						
PROCESSOR	\$ 2.183 *	01.02.01	F	RDTEA	{0}	{0.466}				
AMPLIFIERS	\$ 10.101 *	01.02.02	F	RDTEA	{0}	{2.159}				
COTS ANTENNA	\$ 2.759 *	01.02.03	F	RDTEA	{0}	{1.475}				
SYSTEMS ENGINEERING/MGMT	\$ 32.337 *	01.03		RDTEA						
CONTRACTOR	\$ 20.215 *	01.03.01	F	RDTEA	{1}	{3.223}				
GOVERNMENT	\$ 12.122 *	01.03.02	TY	RDTEA	{1}	1 {1.077}	2	3	4	3
SYSTEMS TEST AND EVAL	\$ 11.099 *	01.04		RDTEA						
CONTRACTOR	\$ 2.256 *	01.04.01	TS	RDTEA	{0}	{0.1}				
GOVERNMENT	\$ 8.842 *	01.04.02	TY	RDTEA	{0}	{0}		4.45	5.05	
TRAINING	\$ 0.000 *	01.05								
TRAINING	\$ 0.000 *		F	RDTEA	{0}	{0}				
OTHER RDT&E	\$ 9.114 *	01.06		RDTEA						
RDT&E FEE	\$ 9.114 *		F	RDTEA	{0}	{1.2}				



Scenario 2 – Tracking Actuals vs Baseline

■ Scenario

- Analyst has a model for the baseline plan
- Analysts obtain actuals for the project
- Analyst wants to incorporate sunk costs into their estimate to maintain funding history and to develop a revised estimate
- Analyst wants to compare latest revised estimate with prior plans

■ Implementation Solutions

1. Using a What-If case to create Revised Plan
2. Implementing Actual vs Plan within an ACE Session



Scenario 2, Example 1 – What If Case

■ Solution: Track Actuals via a What-If Case

1. Add a new case to your model referencing the Baseline Plan
2. Enter TY overrides on child WBS items for Sunk Costs

ACE 7.1a - [ACEIT Sunk Cost Scenario Two What-If Case.aceit - Inputs/Results Viewer (BY2009\$M)]

File Edit View Mode Calc Cases Reports Tools Window Help

Inputs Phased by Case

	WBS/CES Description	Cost Interpretation	Total	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
13	XYZ CES (MISSILE)		\$ 327.983 *	\$ 3.005 *	\$ 13.623 *	\$ 28.624 *	\$ 32.857 *	\$ 24.529 *	\$ 6.933 *
14	RDT&E FUNDED ELEMENTS		\$ 109.570 *	\$ 3.005 *	\$ 13.623 *	\$ 28.624 *	\$ 32.857 *	\$ 24.529 *	\$ 6.933 *
15	DEVELOPMENT ENGINEERING		\$ 39.638 *	\$ 1.002 *	\$ 4.117 *	\$ 10.679 *	\$ 12.622 *	\$ 8.815 *	\$ 2.403 *
16	AIR VEHICLE (Hardware)	TY\$M	\$ 19.984 *	0	1.235	\$ 5.165 *	\$ 7.272 *	\$ 5.184 *	\$ 1.152 *
17	AIR VEHICLE (Software)	TY\$M	\$ 19.653 *	1	2.966	\$ 5.513 *	\$ 5.350 *	\$ 3.631 *	\$ 1.251 *
18	PROTOTYPE MANUFACTURING		\$ 15.224 *		\$ 4.018 *	\$ 6.293 *	\$ 3.685 *	\$ 1.228 *	
19	PROCESSOR	TY\$M	\$ 2.203 *	0	0.466	\$ 0.873 *	\$ 0.655 *	\$ 0.218 *	
20	AMPLIFIERS	TY\$M	\$ 10.197 *	0	2.159	\$ 4.040 *	\$ 3.030 *	\$ 1.010 *	
21	COTS ANTENNA	TY\$M	\$ 2.825 *	0	1.475	\$ 1.379 *			
22	SYSTEMS ENGINEERING/MGMT		\$ 34.643 *	\$ 2.003 *	\$ 4.214 *	\$ 8.335 *	\$ 8.986 *	\$ 7.485 *	\$ 3.621 *
23	CONTRACTOR	TY\$M	\$ 21.444 *	1	3.223	\$ 6.415 *	\$ 6.164 *	\$ 3.796 *	\$ 0.908 *
24	GOVERNMENT	TY\$M	\$ 13.199 *	1	1.077	\$ 1.919 *	\$ 2.822 *	\$ 3.689 *	\$ 2.712 *
25	SYSTEMS TEST AND EVAL		\$ 11.072 *		\$ 0.098 *	\$ 0.456 *	\$ 4.794 *	\$ 5.267 *	\$ 0.456 *
26	CONTRACTOR	TY\$M	\$ 2.230 *	0	0.1	\$ 0.456 *	\$ 0.609 *	\$ 0.610 *	\$ 0.456 *
27	GOVERNMENT	TY\$M	\$ 8.842 *	0	0		\$ 4.186 *	\$ 4.657 *	
28	TRAINING								
29	TRAINING	TY\$M		0	0				
30	OTHER RDT&E		\$ 8.993 *		\$ 1.176 *	\$ 2.861 *	\$ 2.770 *	\$ 1.734 *	\$ 0.452 *
31	RDT&E FEE	TY\$M	\$ 8.993 *	0	1.2	\$ 2.861 *	\$ 2.770 *	\$ 1.734 *	\$ 0.452 *



Slight Variation

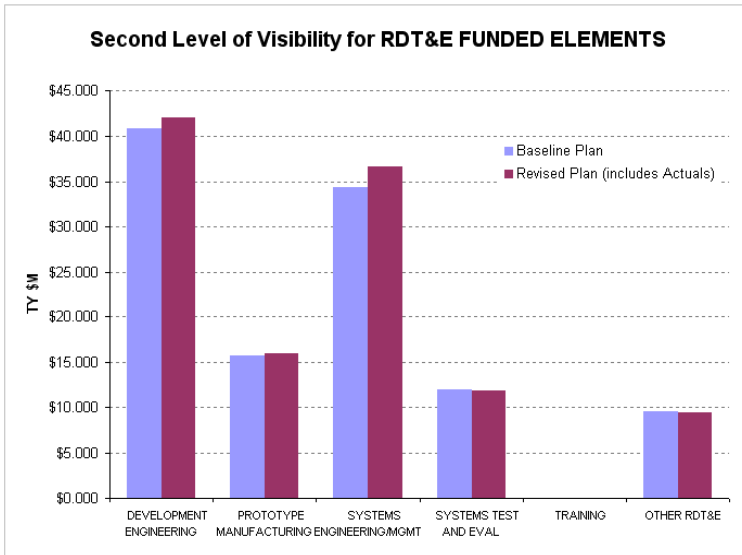
- Capturing sunk costs at the summary level
- Still using the Inputs/Results Viewer to place TY Overrides
- Adding Cases allows for the analyst to see the progression of actuals over time

	WBS/CES Description	Cost Interpretation	Total	FY 2008	FY 2009	FY 2010
13	XYZ CES (MISSILE)		\$ 330.483 *	\$ 8.013 *	\$ 12.170 *	\$ 28.719 *
14	RDT&E FUNDED ELEMENTS		\$ 113.569 *	\$ 8.013 *	\$ 12.170 *	\$ 28.719 *
15	DEVELOPMENT ENGINEERING		\$ 38.438 *		\$ 3.919 *	\$ 10.679 *
16	Actuals to Date - DEVELOPMENT	TY\$M		1		
17	AIR VEHICLE (Hardware)	TY\$M	\$ 19.926 *	0	\$ 1.152 *	\$ 5.165 *
18	AIR VEHICLE (Software)	TY\$M	\$ 18.511 *	0	\$ 2.766 *	\$ 5.513 *
19	PROTOTYPE MANUFACTURING		\$ 18.047 *	\$ 3.005 *	\$ 3.836 *	\$ 6.293 *
20	Actuals to Date - Proto Manuf	TY\$M	\$ 3.005 *	3		
21	PROCESSOR	TY\$M	\$ 2.183 *	0	\$ 0.437 *	\$ 0.873 *
22	AMPLIFIERS	TY\$M	\$ 10.101 *	0	\$ 2.020 *	\$ 4.040 *
23	COTS ANTENNA	TY\$M	\$ 2.759 *	0	\$ 1.379 *	\$ 1.379 *
24	SYSTEMS ENGINEERING/MGMT		\$ 33.361 *	\$ 2.003 *	\$ 2.931 *	\$ 8.335 *
25	Actuals to Date - SE/PM	TY\$M	\$ 2.003 *	2		
26	CONTRACTOR	TY\$M	\$ 20.215 *	0	\$ 2.931 *	\$ 6.415 *
27	GOVERNMENT	TY\$M	\$ 11.142 *	0		\$ 1.919 *
28	SYSTEMS TEST AND EVAL		\$ 12.551 *	\$ 1.002 *	\$ 0.180 *	\$ 0.541 *
29	Actuals to Date - ST&E	TY\$M	\$ 1.002 *	1		
30	CONTRACTOR	TY\$M	\$ 2.707 *	0	\$ 0.180 *	\$ 0.541 *
31	GOVERNMENT	TY\$M	\$ 8.842 *	0		
32	TRAINING		\$ 1.002 *	\$ 1.002 *		
33	Actuals to Date - Training	TY\$M	\$ 1.002 *	1		
34	TRAINING	TY\$M		0		
35	OTHER RDT&E		\$ 10.170 *	\$ 1.002 *	\$ 1.304 *	\$ 2.871 *
36	Actuals to Date - Other RDT&E	TY\$M	\$ 1.002 *	1		
37	RDT&E FEE	TY\$M	\$ 9.168 *	0	\$ 1.304 *	\$ 2.871 *



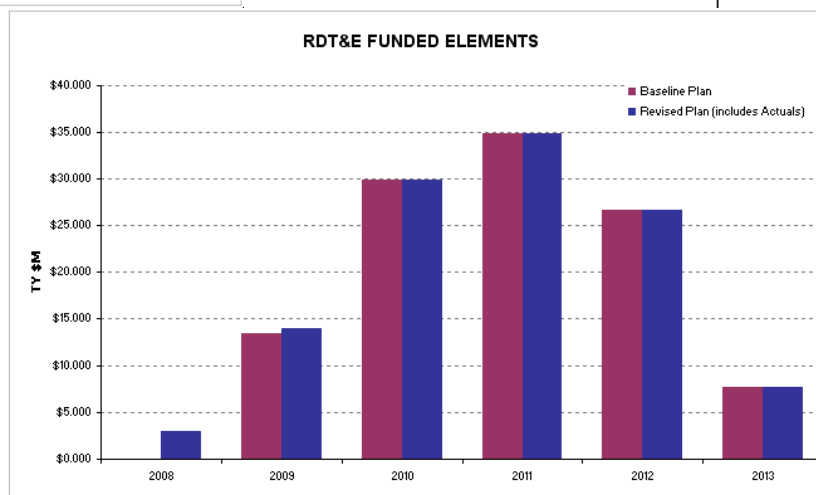
Scenario 2, Example 1 – Using POST

■ POST enables capability to track/compare Baseline vs Latest Plan



Delta Comparison

Funding in TY \$M	Baseline Plan	Revised Plan (includes Actuals)	Delta (Δ)	Percent Δ	Threshold
*XYZ ECU Program Estimate					
XYZ CES (MISSILE)	\$381,592	\$387,047	\$5,455	1.43%	Low
RDT&E FUNDED ELEMENTS	\$112,380	\$115,928	\$3,547	3.16%	Low
DEVELOPMENT ENGINEERING	\$40,763	\$41,965	\$1,203	2.95%	Low
AIR VEHICLE (Hardware)	\$21,186	\$21,245	\$0,059	0.28%	Low
AIR VEHICLE (Software)	\$19,576	\$20,720	\$1,143	5.84%	Medium
PROTOTYPE MANUFACTURING	\$15,722	\$15,907	\$0,186	1.18%	Low
PROCESSOR	\$2,288	\$2,309	\$0,021	0.90%	Low
AMPLIFIERS	\$10,589	\$10,686	\$0,098	0.92%	Low
COTS ANTENNA	\$2,845	\$2,912	\$0,067	2.37%	Low
SYSTEMS ENGINEERING/MGMT	\$34,351	\$36,660	\$2,309	6.72%	Medium
CONTRACTOR	\$21,351	\$22,583	\$1,232	5.77%	Medium
GOVERNMENT	\$13,000	\$14,077	\$1,077	8.28%	Medium
SYSTEMS TEST AND EVAL	\$11,915	\$11,889	(\$0,026)	(0.22%)	Low
CONTRACTOR	\$2,415	\$2,389	(\$0,026)	(1.08%)	Low
GOVERNMENT	\$9,500	\$9,500			
TRAINING					
OTHER RDT&E	\$9,630	\$9,506	(\$0,124)	(1.28%)	Low
RDT&E FEE	\$9,630	\$9,506	(\$0,124)	(1.28%)	Low





Scenario 2, Example 2 – Multi Section Model

■ Solution: Implementing Actual vs Plan within an ACE Session

1. Create a section in the model for the baseline plan
2. Create a section in the model to track actuals by WBS
3. Create a section in the model to estimate “costs-to-go”
 1. Can have costs-to-go be the remaining phased costs for the baseline plan
 2. Can have costs-to-go be a remaining estimate with revised phasing
 3. Can have costs-to-go be a revised estimate and revised phasing
4. Create a section in the model to develop latest plan by summing actuals plus “costs-to-go”

Revised Plan (Actuals + Cost-to-Go)

Cost-to-Go

Actuals to Date

Baseline Plan

THANK YOU!

