EVM Requirement without the FAR/DFAR Clause

Alicia Anderson, PMP, PMI-SP, EVMP

Learning Objectives

- Understand why an organization may not follow Federal Acquisition Regulations/Defense Federal Acquisition Regulations (FAR/DFAR).
- Understand the fundamentals of project management & scheduling that is required in order to measure performance.
- Understand how performance can be measured without the use of the Contract Performance Report Formats 1-5.
- Understand how Earned Value and Earned Schedule data can be visually presented in manner that laypersons can easily interpret.

Why no FAR/DFAR clause?

- Does not fall under Department of Defense
- Weak Matrix Environment
- Immature Project Management & Scheduling Discipline
- Culture Resistant to Change
- Lack of Accountability & Transparency
- Poor Communication

Tools Used to Perform EV

- Microsoft Project Server (automated)
  - SharePoint environment
- Microsoft Project Professional
- Microsoft Excel
- WBS Chart Pro (COTS)

How we measure up to FAR/DFAR?

EVM Guidelines	Gap Analysis	How it's met?
Organization	Yes	Integration of Program and Schedule Work Breakdown Structure Policies &Procedures
Planning, Scheduling & Budgeting	Yes	Scheduling Discipline, Time & Cost Management Baseline Requirements
Accounting Considerations	No	EVM data is not reconciled with accounting system
Analysis & Management Reports	Yes	EV data updated on a weekly basis Produce Weekly Status Reports EV data is used to populate Portfolio Dashboard
Revisions & Data Maintenance	Yes	Established Change Control Policy

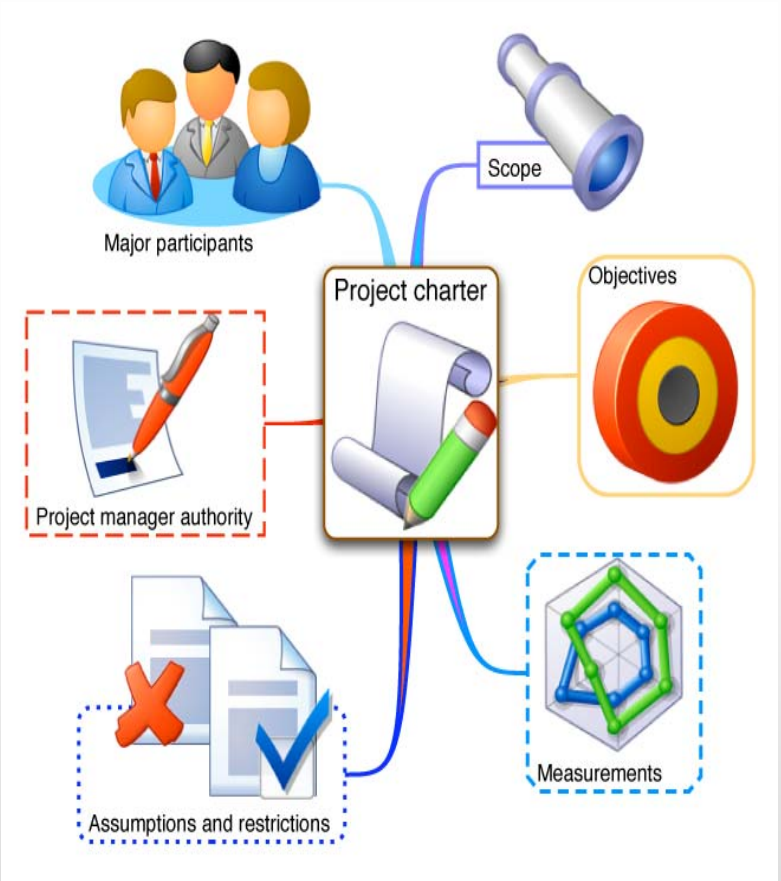
Ixqgdp hqwdcv

What is required?

- Statement of Work/Project Charter
- Work Breakdown Structure
- Define EV Methods
- Baseline Schedule
- Schedule Updates
- EV Worksheet
- Weekly Status Report Template

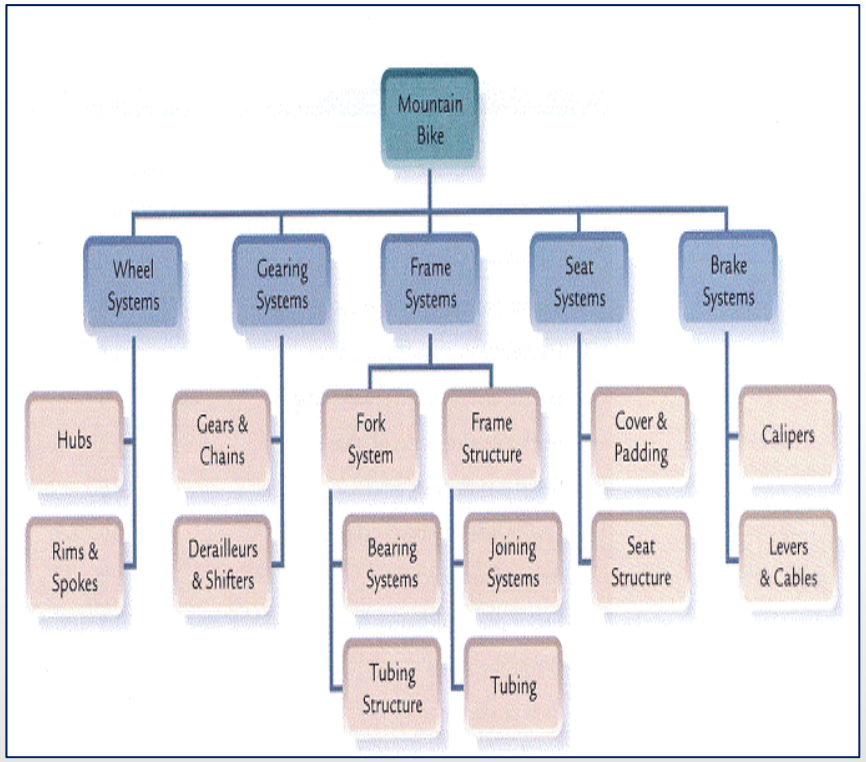
Statement of Work/Project Charter

- PM Authority
- Scope
- Deliverable
- Milestones
- Budget
- Start & Finish Dates
- Resources



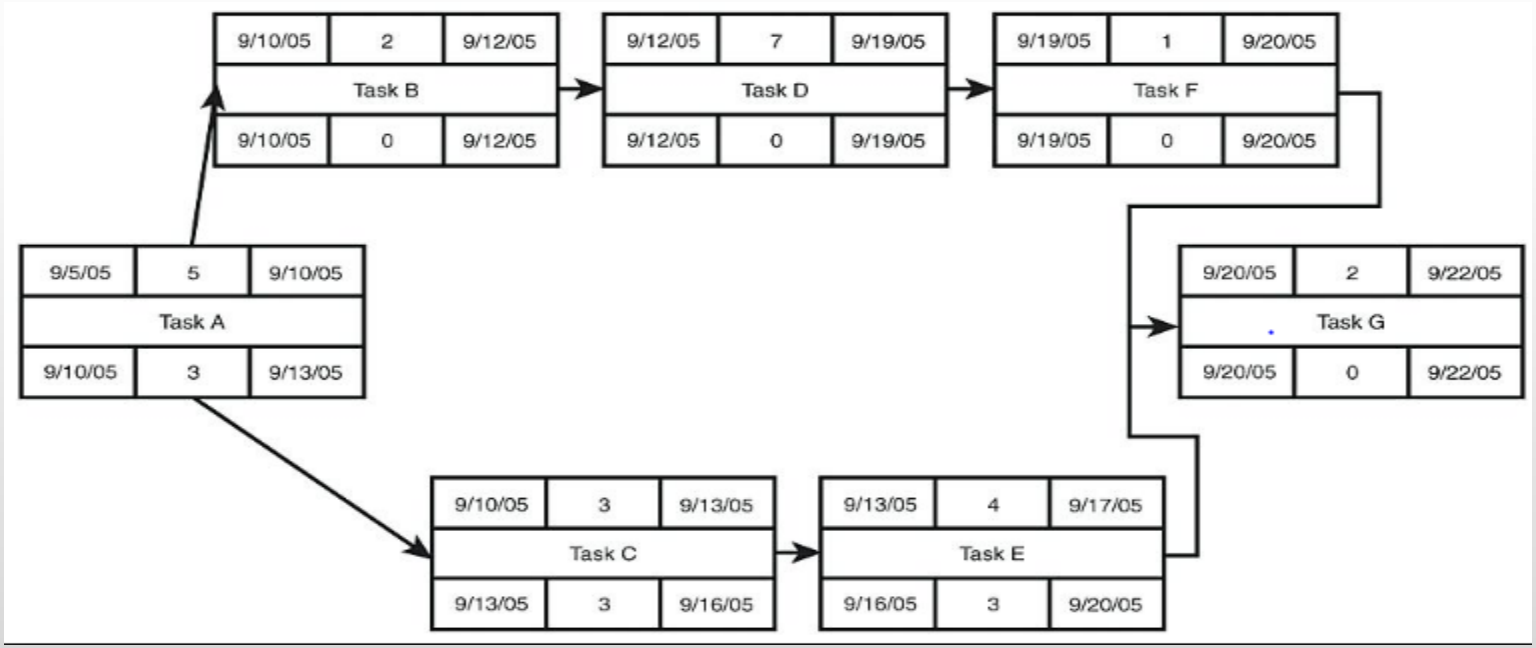
Work Breakdown Structure

- A Work Breakdown Structure (WBS) is a decomposition of all the work necessary to complete a project
- The WBS should represent the work identified in the approved Project Scope Statement and serves as a foundation for effective schedule development and cost estimating
- WBS Types
  - Deliverable-Oriented WBS
  - Process-Centered WBS



Work Breakdown Structure cont.

- Sequence activities
- Assign resources
- Define duration/hours



EV Calculation Options

- % Complete

  (Actual Duration/Duration)*100

- %Work Complete

  (Actual Work/Work)*100

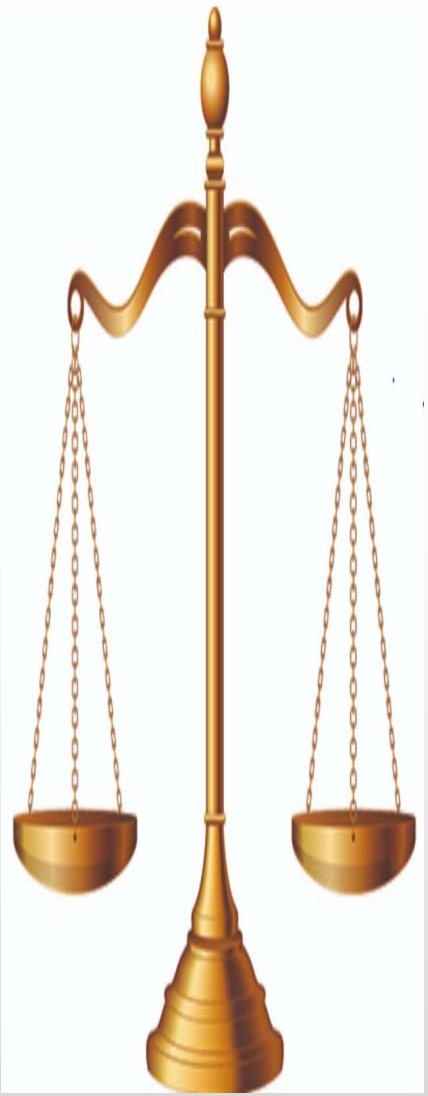
- Physical % Complete

  Baseline Cost/Physical % Complete

	WBS	Task Name	% Complete	% Work Complete	Physical % Complete
0	EDMM1 -	Enterprise Document Management Migration Phase1 - EDMM1	61%	59%	65%
1	EDMM1 - 3	Planning Phase - EDMM1	100%	100%	100%
2	EDMM1 - 3.1	Standards Working Group Formulated - EDMM1	100%	100%	100%

Define EV Method

- Methods
  - 0/100 – 10 days or less
  - 50/100 – 11 to 30 days
  - Weighted Milestone – 31 or more



Integrated Baseline Review (IBR)/ Baseline Checklist

- Some of the things to look for:
  - Resource Assignment/Allocation
  - EV Method Assignments
  - Deliverables
  - Milestones
  - Budget

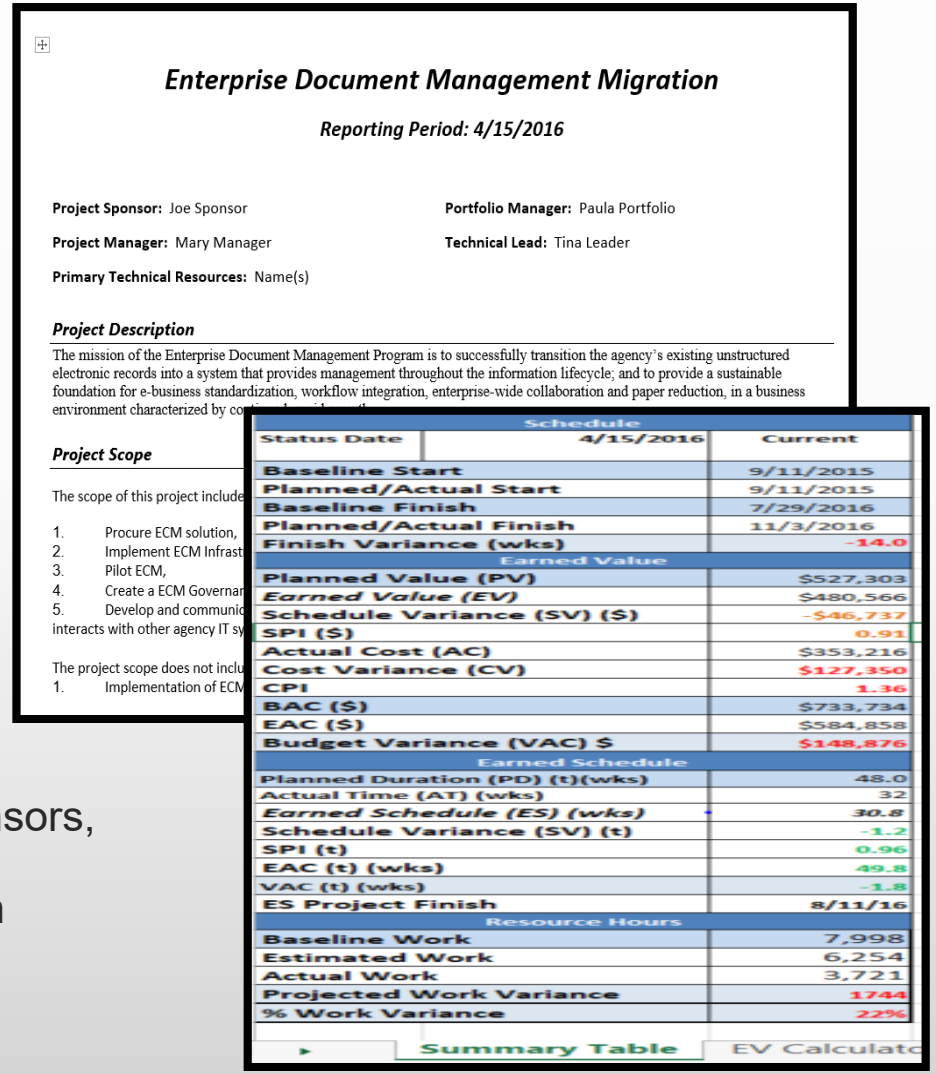
Project: Enterprise Document Migration Management Phase 1

The mission of the Enterprise Content Management Program is to successfully transition the agencies existing unstructured electronic records into a system that provides management throughout the information lifecycle; and to provide a sustainable foundation for e-business standardization, workflow integration, enterprise-wide collaboration and paper reduction, in a business environment characterized by continued, rapid growth.

Baseline Start Date	9/11/15
Baseline Finish Date	7/26/16
Actual Start	9/11/15
Actual Finish	Ongoing
Budget	$1.5M
BAC	$733,734

Earned Value Management

- Inputs
  - SOW/Charter
  - Baselined Schedule
  - Status Update Sheet
  - Updated Project Schedule
  - EV Worksheet
- Output
  - Weekly Status Report
    - Governances Boards, Sponsors, Portfolio Managers, Stakeholders, Project Team



Enterprise Document Management Migration

Reporting Period: 4/15/2016

Project Sponsor: Joe Sponsor

Portfolio Manager: Paula Portfolio

Project Manager: Mary Manager

Technical Lead: Tina Leader

Primary Technical Resources: Name(s)

Project Description

The mission of the Enterprise Document Management Program is to successfully transition the agency's existing unstructured electronic records into a system that provides management throughout the information lifecycle; and to provide a sustainable foundation for e-business standardization, workflow integration, enterprise-wide collaboration and paper reduction, in a business environment characterized by co

Project Scope

The scope of this project include

1. Procure ECM solution,
2. Implement ECM Infrast
3. Pilot ECM,
4. Create a ECM Governar
5. Develop and communic

interacts with other agency IT sy

The project scope does not inclu

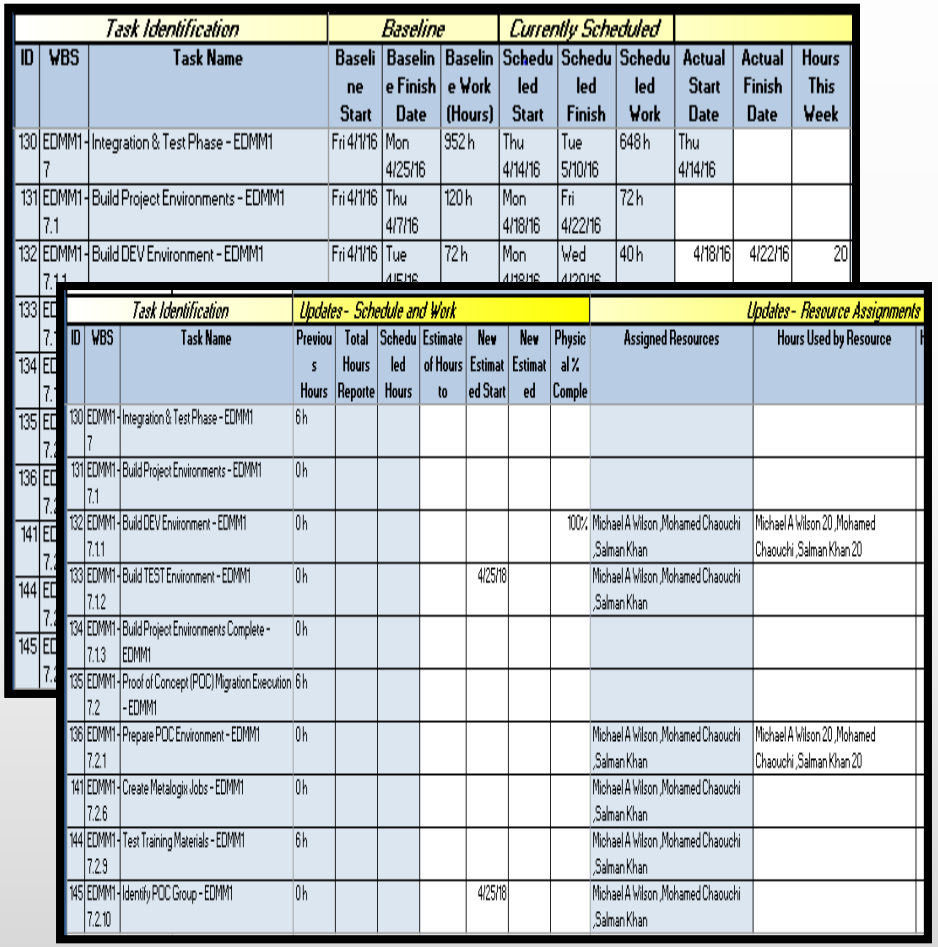
1. Implementation of ECM

Schedule		
Status Date	4/15/2016	Current
Baseline Start		9/11/2015
Planned/Actual Start		9/11/2015
Baseline Finish		7/29/2016
Planned/Actual Finish		11/3/2016
Finish Variance (wks)		-14.0
Earned Value		
Planned Value (PV)		$527,303
Earned Value (EV)		$480,566
Schedule Variance (SV) ($)		-$46,737
SPI ($)		0.91
Actual Cost (AC)		$353,216
Cost Variance (CV)		$127,350
CPI		1.36
BAC ($)		$733,734
EAC ($)		$584,858
Budget Variance (VAC) $		$148,876
Earned Schedule		
Planned Duration (PD) (t)(wks)		48.0
Actual Time (AT) (wks)		32
Earned Schedule (ES) (wks)		30.8
Schedule Variance (SV) (t)		-1.2
SPI (t)		0.96
EAC (t) (wks)		49.8
VAC (t) (wks)		-1.8
ES Project Finish		8/11/16
Resource Hours		
Baseline Work		7,998
Estimated Work		6,254
Actual Work		3,721
Projected Work Variance		1744
% Work Variance		22%

Summary Table | EV Calculato

Schedule Updates: Status Update Sheet (SUS)

- Weekly basis
- Updates to the schedule
  - Actual Start/Finish Dates
  - Scheduled Start/Finish Date
  - Actual/Estimated Hours
  - Actual/Estimated Costs
  - Physical % Complete
  - Other Requested Changes
    - Adding work & etc.



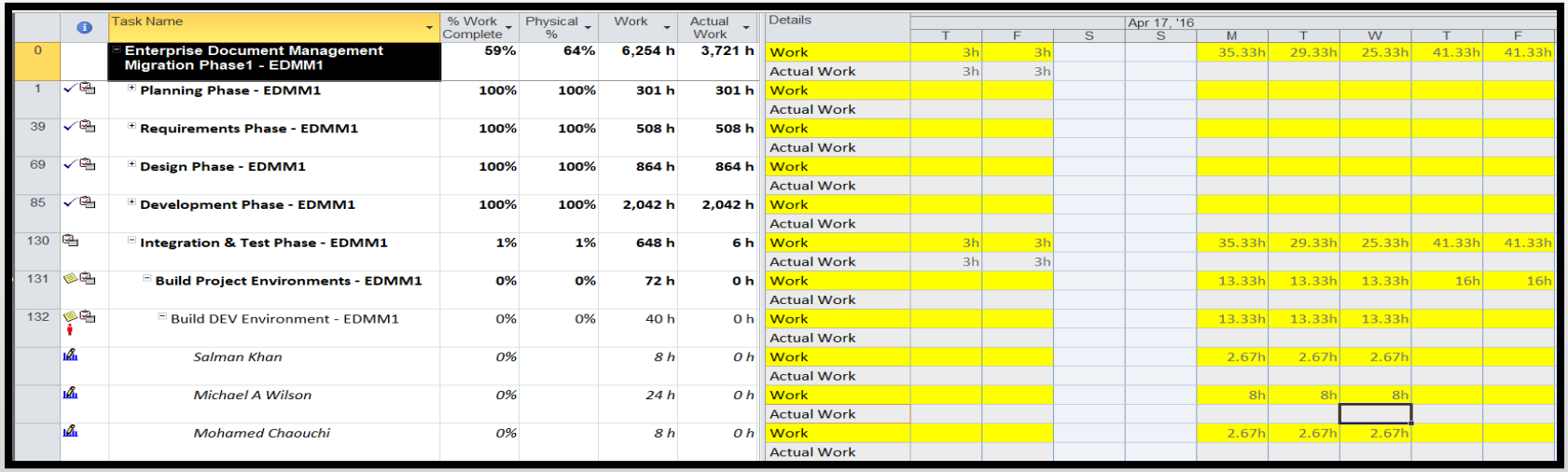
	Task Identification		Baseline			Currently Scheduled					
ID	WBS	Task Name	Baseline Start	Baseline Finish Date	Baseline Work (Hours)	Scheduled Start	Scheduled Finish	Scheduled Work	Actual Start Date	Actual Finish Date	Hours This Week
130	EDMM1-7	Integration & Test Phase - EDMM1	Fri 4/1/16	Mon 4/25/16	952 h	Thu 4/14/16	Tue 5/10/16	648 h	Thu 4/14/16		
131	EDMM1-7.1	Build Project Environments - EDMM1	Fri 4/1/16	Thu 4/7/16	120 h	Mon 4/18/16	Fri 4/22/16	72 h			
132	EDMM1-7.1.1	Build DEV Environment - EDMM1	Fri 4/1/16	Tue 4/5/16	72 h	Mon 4/18/16	Wed 4/20/16	40 h	4/18/16	4/22/16	20

	Task Identification		Updates - Schedule and Work						Updates - Resource Assignments	
ID	WBS	Task Name	Previous Hours	Total Hours Reported	Scheduled Hours	Estimate of Hours to	New Estimated Start	New Estimated	Physical % Complete	Assigned Resources	Hours Used by Resource
130	EDMM1-7	Integration & Test Phase - EDMM1	6 h								
131	EDMM1-7.1	Build Project Environments - EDMM1	0 h								
132	EDMM1-7.1.1	Build DEV Environment - EDMM1	0 h						100%	Michael A Wilson ,Mohamed Chaouchi ,Salman Khan	Michael A Wilson 20 ,Mohamed Chaouchi ,Salman Khan 20
133	EDMM1-7.1.2	Build TEST Environment - EDMM1	0 h				4/25/18			Michael A Wilson ,Mohamed Chaouchi ,Salman Khan	
134	EDMM1-7.1.3	Build Project Environments Complete - EDMM1	0 h								
135	EDMM1-7.2	Proof of Concept (POC) Migration Execution - EDMM1	6 h								
136	EDMM1-7.2.1	Prepare POC Environment - EDMM1	0 h							Michael A Wilson ,Mohamed Chaouchi ,Salman Khan	Michael A Wilson 20 ,Mohamed Chaouchi ,Salman Khan 20
141	EDMM1-7.2.6	Create Metalogix Jobs - EDMM1	0 h							Michael A Wilson ,Mohamed Chaouchi ,Salman Khan	
144	EDMM1-7.2.9	Test Training Materials - EDMM1	6 h							Michael A Wilson ,Mohamed Chaouchi ,Salman Khan	
145	EDMM1-7.2.10	Identify POC Group - EDMM1	0 h				4/25/18			Michael A Wilson ,Mohamed Chaouchi ,Salman Khan	

Schedule Updates: Status Update Sheet (SUS)

- Update project schedule with data from SUS
  - NO remaining work/hours in the past
  - NO actual work in the future

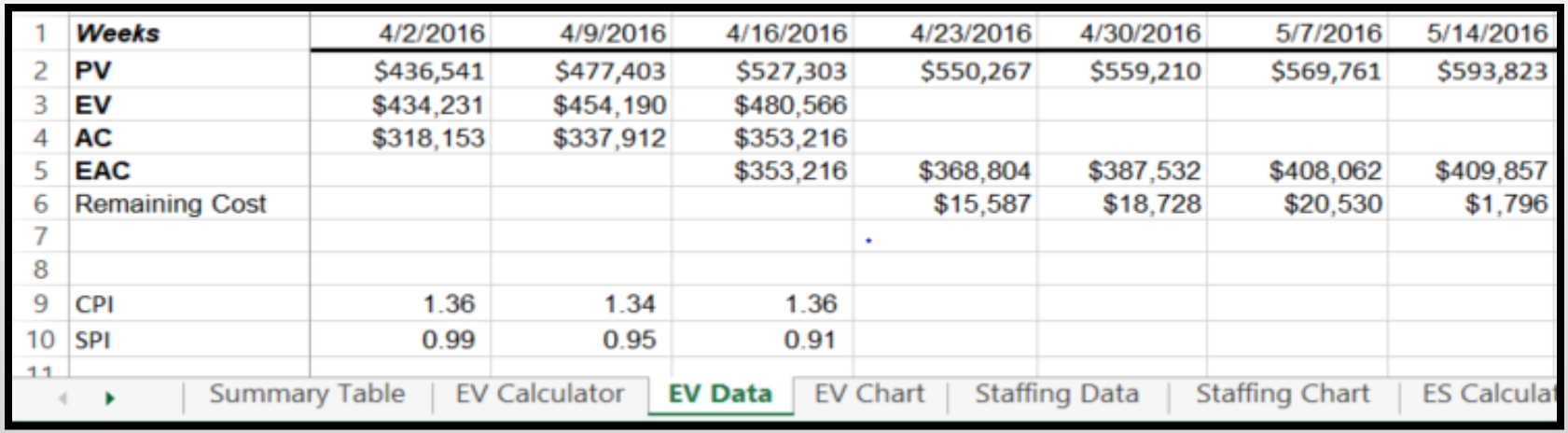
Work = Actual Work



	Task Name	% Work Complete	Physical %	Work	Actual Work	Details	Apr 17, '16 T	F	S	S	M	T	W	T	F
0	Enterprise Document Management Migration Phase1 - EDMM1	59%	64%	6,254 h	3,721 h	Work	3h	3h			35.33h	29.33h	25.33h	41.33h	41.33h
						Actual Work	3h	3h							
1	Planning Phase - EDMM1	100%	100%	301 h	301 h	Work									
						Actual Work									
39	Requirements Phase - EDMM1	100%	100%	508 h	508 h	Work									
						Actual Work									
69	Design Phase - EDMM1	100%	100%	864 h	864 h	Work									
						Actual Work									
85	Development Phase - EDMM1	100%	100%	2,042 h	2,042 h	Work									
						Actual Work									
130	Integration & Test Phase - EDMM1	1%	1%	648 h	6 h	Work	3h	3h			35.33h	29.33h	25.33h	41.33h	41.33h
						Actual Work	3h	3h							
131	Build Project Environments - EDMM1	0%	0%	72 h	0 h	Work					13.33h	13.33h	13.33h	16h	16h
						Actual Work									
132	Build DEV Environment - EDMM1	0%	0%	40 h	0 h	Work					13.33h	13.33h	13.33h		
						Actual Work									
	Salman Khan	*0%*		*8 h*	*0 h*	Work					2.67h	2.67h	2.67h		
						Actual Work									
	Michael A Wilson	*0%*		*24 h*	*0 h*	Work					8h	8h	8h		
						Actual Work									
	Mohamed Chaouchi	*0%*		*8 h*	*0 h*	Work					2.67h	2.67h	2.67h		
						Actual Work									

EV Worksheet

- In lieu of the Contract Performance Report (CPR) Formats 1-5
- Uses information from the Project Schedule to populate the EV Worksheet
  - EV Calculator
  - EV Data
  - Earned Schedule (ES)
  - Staffing
  - Charts
  - Summary



	Weeks	4/2/2016	4/9/2016	4/16/2016	4/23/2016	4/30/2016	5/7/2016	5/14/2016
2	PV	$436,541	$477,403	$527,303	$550,267	$559,210	$569,761	$593,823
3	EV	$434,231	$454,190	$480,566				
4	AC	$318,153	$337,912	$353,216				
5	EAC			$353,216	$368,804	$387,532	$408,062	$409,857
6	Remaining Cost				$15,587	$18,728	$20,530	$1,796
7								
8								
9	CPI	1.36	1.34	1.36				
10	SPI	0.99	0.95	0.91				

Summary Table | EV Calculator | EV Data | EV Chart | Staffing Data | Staffing Chart | ES Calculat

EV Date: Planned Value (PV)

- Updated Weekly
- Status Date
- PV = BCWS (Task Usage EV)

A	AE	AF	AG	AH	AI	AJ	AK	AL	AM
Weeks	4/2/2016	4/9/2016	4/16/2016	4/23/2016	4/30/2016	5/7/2016	5/14/2016	5/21/2016	5/28/
PV	$436,541	$477,403	$527,303	$550,267	$559,210	$569,761	$593,823	$617,884	$63
EV	$434,231	$454,190	$480,566						
AC	$318,153	$337,912	$35 ,216						
EAC			$35 ,216	$368,804	$387,532	$408,062	$409,857	$415,867	$427
Remaining Cost				$15,587	$18,728	$20,530	$1,796	$6,010	$11
CPI	1.36	1.34	1.36						
SPI	0.99	0.9	0.91						

Summary Table | EV Calculator | **EV Data** | EV Chart | Staffing Data | Staffing Chart | ES Calculator | ES Data Sheet

	Task Name	Planned Value - PV (BCWS)	Details	April		
				3/27	4/3	4/10
0	**Enterprise Document Management Migration Phase1 - EDMM1**	**$527,303.04**	Baseline Work	228h	368h	512h
			BCWS	$436,541.20	$477,402.64	$527,303.04
			BCWP	$439,641.50	$460,035.57	$476,298.24
			ACWP	$318,152.74	$337,911.78	$353,216.46

EV Worksheet: Calculator

- Used to validate EV for the current reporting period
  - Calculates the EV for each detail task
  - Totals the outputs
  - Used to verify the accuracy of the EV

Baseline Cost x Physical % Complete

WBS	Task Name	Summary	Baseline Cost	Physical % Complete	BCWP	4/16/2016
EDMM1 -	***Enterprise Document Management Migration Phase1 - EDMM1***	***Yes***	***$733,733.8(***	***65%***	***$480,566.03***	
EDMM1 - 3	*Planning Phase - EDMM1*	*Yes*	*$60,216.40*	*100%*	*$0.00*	
EDMM1 - 3.1	*Standards Working Group Formulated - EDMM1*	*Yes*	*$7,749.04*	*100%*	*$0.00*	
EDMM1 - 3.1.1	Send Email Requests for Participation - EDMM1	No	$1,004.16	100%	=IF(C5 ="YES",0, E5 * D5)	
EDMM1 - 3.1.2	Attend SWG - EDMM1	No	$1,849.60	100%		
EDMM1 - 3.1.3	Identify & Target Directorates missing SME - EDMM1	No	$4,016.64	100%		
EDMM1 - 3.1.4	Host Project Kickoff Meeting - EDMM1	No	$878.64	100%	*$878.64*	
EDMM1 - 3.1.5	Standards Working Group Formulated Complete - EDMM1	No	$0.00	100%	*$0.00*	

Summary Table | EV Calculator | EV Data | EV Chart | Staffing Data | Staffing Chart | ES Calculator | ES Data Sheet | ES Gra

Task Name	Earned Value - EV (BCWP)
Enterprise Document Management Migration Phase1 - EDMM1	**$480,566.03**

Details	April		
	3/27	4/3	4/10
Baseline Work	228h	368h	**ERROR**
BCWS	$436,541.20	$477,402.64	
BCWP	$439,641.50	$460,035.57	$476,298.24
ACWP	$318,152.74	$337,911.78	$353,216.46

EV Data: Earned Value (EV)

- Update the EV for the current reporting period

Weeks	4/2/2016	4/9/201	4/16/2016	4/23/2016	4/30/2016	5/7/2016
PV	$436,541	$477,40	$527,303	$550,267	$559,210	$569,761
EV	$434,231	$454,19	$480,566			
AC	$318,153	$337,91	$353,216			
EAC			$353,216	$368,804	$387,532	$408,062
Remaining Cost				$15,587	$18,728	$20,530
CPI	1.36	1.34	1.36			
SPI	0.99	0.95	0.91			

Summary Table | EV Calculator | **EV Data** | EV Chart | Staffing Data | Staffing Chart

WBS	Task Name	Summary	Baseline Cost	Physical % Complete	BCWP	/16/2016
EDMM1 -	***Enterprise Document Management Migration Phase1 - EDMM1***	***Yes***	***$733,733.80***	***65%***	***$480,566.03***	
EDMM1 - 3	*Planning Phase - EDMM1*	*Yes*	*$60,216.40*	*100%*	*$0.00*	
EDMM1 - 3.1	*Standards Working Group Formulated - EDMM1*	*Yes*	*$7,749.04*	*100%*	*$0.00*	
EDMM1 - 3.1.1	Send Email Requests for Participation - EDMM1	No	$1,004.16	100%		
EDMM1 - 3.1.2	Attend SWG - EDMM1	No	$1,849.60	100%	E5 * D5)	
EDMM1 - 3.1.3	Identify & Target Directorates missing SME - EDMM1	No	$4,016.64	100%		
EDMM1 - 3.1.4	Host Project Kickoff Meeting - EDMM1	No	$878.64	100%	$878.64	
EDMM1 - 3.1.5	Standards Working Group Formulated Complete - EDMM1	No	$0.00	100%	$0.00	

Summary Table | **EV Calculator** | EV Data | EV Chart | Staffing Data | Staffing Chart | ES Calculator | ES Data Sheet | ES Gra

EV Data: Actual Cost (AC)

- Update the EV for the current reporting period
- Ensure that Actual Cost & ACWP match in the schedule

Weeks	4/2/2016	4/9/2016	4/16/2016	4/23/2016	4/30/2016	5/7/2016	5/14/2016	5/21/2016	5/28/2016
PV	$436,541	$477,403	$527,303	$550,267	$559,210	$569,761	$593,823	$617,884	$633,461
EV	$434,231	$454,190	$480,566						
AC	$318,153	$337,912	$353,216						
EAC			$353,216	$368,804	$387,532	$408,062	$409,857	$415,867	$427,769
Remaining Cost				$15,587	$18,728	$20,530	$1,796	$6,010	$11,902
CPI	1.36	1.34	1.36						
SPI	0.99	0.95	0.91						

Summary Table | EV Calculator | **EV Data** | EV Chart | Staffing Data | Staffing Chart | ES Calculator | ES Data Sheet | ES

	Task Name	AC (ACWP)
0	Enterprise Document Management Migration Phase1 - EDMM1	$353,216.46

Details	April 3/27	4/3	4/10	4/17
Baseline Work	228h	368h	512h	272h
BCWS		$477,402.64	$527,303.04	$527,303.04
BCWP	$439,641.38	35.57	$476,298.24	$476,298.24
ACWP	$318,152.74	$337,9	53,216.46	$353,216.46
CV	$121,488.76	$122,123.79	$1	$123,081.78
SV	$3,100.30	($17,367.07)	($51,004.80)	1.80)
CPI	1.38	1.36	1.35	1.3
SPI	1.01	0.96	0.9	0.
Cost	$22,104.32	$19,759.04	$15,304.68	$15,587.27
Actual Work	166h	128h	110h	
Work	166h	128h	110h	172.67h

Project Statistics for 'EDMM SAMPLE'

	Start	Finish
Current	Fri 9/11/15	Thu 11/3/16
Baseline	Fri 9/11/15	Fri 7/29/16
Actual	Fri 9/11/15	NA
Variance	0d	66d

	Duration	Work	Cost
Current	288d	6,254h	$584,857.71
Baseline	222d	7,998h	$733,733.80
Actual	174.99d	3,721h	$353,216.46
Remaining	113.01d	2,533h	$231,041.25

Percent complete:
Duration: 61% Work: 59%
Close

EV Data: Estimate at Completion (EAC)

- Add Remaining Cost until the end of the project

A	AE	AF	AG	AH	AI	AJ	AK	AL	AM
Weeks	4/2/2016	4/9/2016	4/16/2016	4/23/2016	4/30/2016	5/7/2016	5/14/2016	5/21/2016	5/28/2016
PV	$436,541	$477,403	$527,303	$550,267	$559,210	$569,761	$593,823	$617,884	$633,461
EV	$434,231	$454,190	$480,566						
AC	$318,153	$337,912	$353,216						
EAC			$353,216	$368,804	$387,532	$408,062	$409,857	$415,867	$427,769
Remaining Cost				$15,587	$18,728	$20,530	$1,796	$6,010	$11,902
CPI	1.36	1.34	1.36						
SPI	0.99	0.95	0.91						

Summary Table | EV Calculator | **EV Data** | EV Chart | Staffing Data | Staffing Chart | ES Calculator | ES Data Sheet | ES

Details	April					May		
	3/27	4/3	4/10	4/17	4/24	5/1	5/8	5/15
Baseline Work	228h	368h	512h					
BCWS	$436,541.20	$477,402.64	$527,303.04					
BCWP	$439,641.50	$460,035.57	$476,298.24					
ACWP	$318,152.74	$337,911.78	$353,216.46					
CV	$121,488.76	$122,123.79	$123,081.78					
SV	$3,100.30	($17,367.07)	($51,004.80)					
CPI	1.38	1.36	1.35					
SPI	1.01	0.96	0.9					
Cost	$22,104.32	$19,759.04	$15,304.68	$15,587.27	$18,728.45	$20,529.52	$1,795.50	$6,009.70

EV Data: Estimate at Completion (EAC) cont.

AC + Remaining Cost = EAC

- Use Project Statistics to verify EAC & Remaining Costs

	A	AE	AF	AG	AH	AI	AJ
1	**Weeks**	4/3/2016	4/10/2016	4/17/2016	4/24/2016	5/1/2016	5/8/2016
2	**PV**	$436,541	$477,403	$527,303	$550,267	$559,210	$569,761
3	**EV**	$434,231	$454,190	$480,566			
4	**AC**	$318,153	$337,912	$353,216			
5	**EAC**			$353,216	=AG5+AH6	$387,532	$408,062
6	Remaining Cost				$15,587	$18,728	$20,530
7							
8							
9	CPI	1.36	1.34	1.			
10	SPI	0.99	0.95	0.			

Summary Table | EV Calculator | EV Data

BG	BH	BI	BJ
10/16/2016	10/23/2016	10/30/2016	11/6/2016
$733,733.80	$733,733.80	$733,733.80	$733,733.80
$577,107	$579,962	$583,351	$584,858
$2,812	$2,856	$3,389	$1,506

Project Statistics for 'EDMM SAMPLE'

	Start	Finish
Current	Fri 9/11/15	Thu 11/3/16
Baseline	Fri 9/11/15	Fri 7/29/16
Actual	Fri 9/11/15	NA
Variance	0d	66d

	Duration	Work	Cost
Current	288d	6,254h	$584,857.71
Baseline	222d	7,998h	$733,733.80
Actual	174.99d	3,721h	$353,216.46
Remaining	113.01d	2,533h	$231,641.25

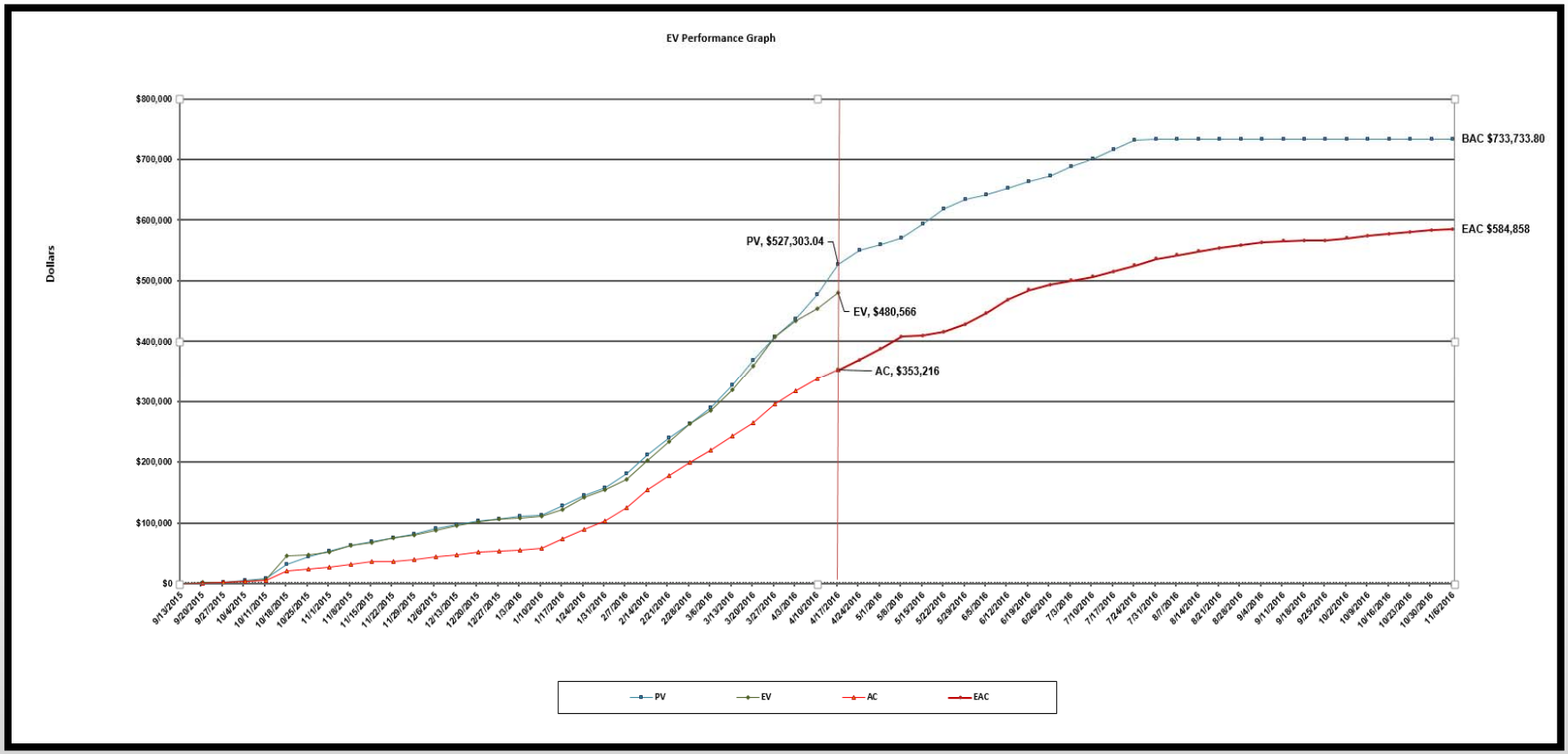
Percent complete:
Duration: 61% Work: 59%

Close

EAC

Weekly Status Report: EV Chart

- Visual output of the EV Data tab
- Supports the analysis in the Weekly Status Report



Staffing Data

- Supports the analysis from the EV Data
- Hours = Cost

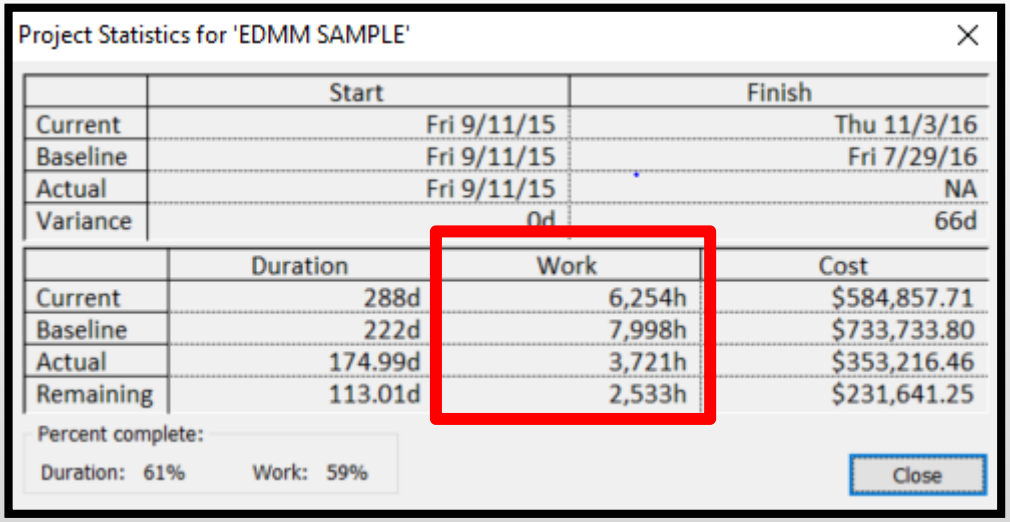
Weeks	3/27/2016	4/3/2016	4/10/2016	4/17/2016	4/24/2016	5/1/2016	5/8/2016	5/15/2016	5/22/2016
Baseline	354	228	368	512	272	104	120	200	200
Actual	273	166	128	110					
Remaining				110	173	213	240	25	67

Details	April					May			
	3/27	4/3	4/10	4/17	4/24	5/1	5/8	5/15	5/22
Baseline Work	228h	368h	512h	272h	104h	120h	200h	200h	120h
BCWS	[illegible]	[illegible]	[illegible]						
BCWP	$439,641.50	$460,035.57	$470,298.24						
ACWP	$318,152.74	$337,911.78	$353,216.46						
Cost	[illegible]	[illegible]	[illegible]	$15,587.27	$18,728.45	$20,529.52	$1,795.50	$6,009.70	$11,902.23
Actual Work	166h	128h	110h						
Work	166h	128h	110h	172.67h	213.33h	240h	25h	67h	128h

Staffing Data cont.

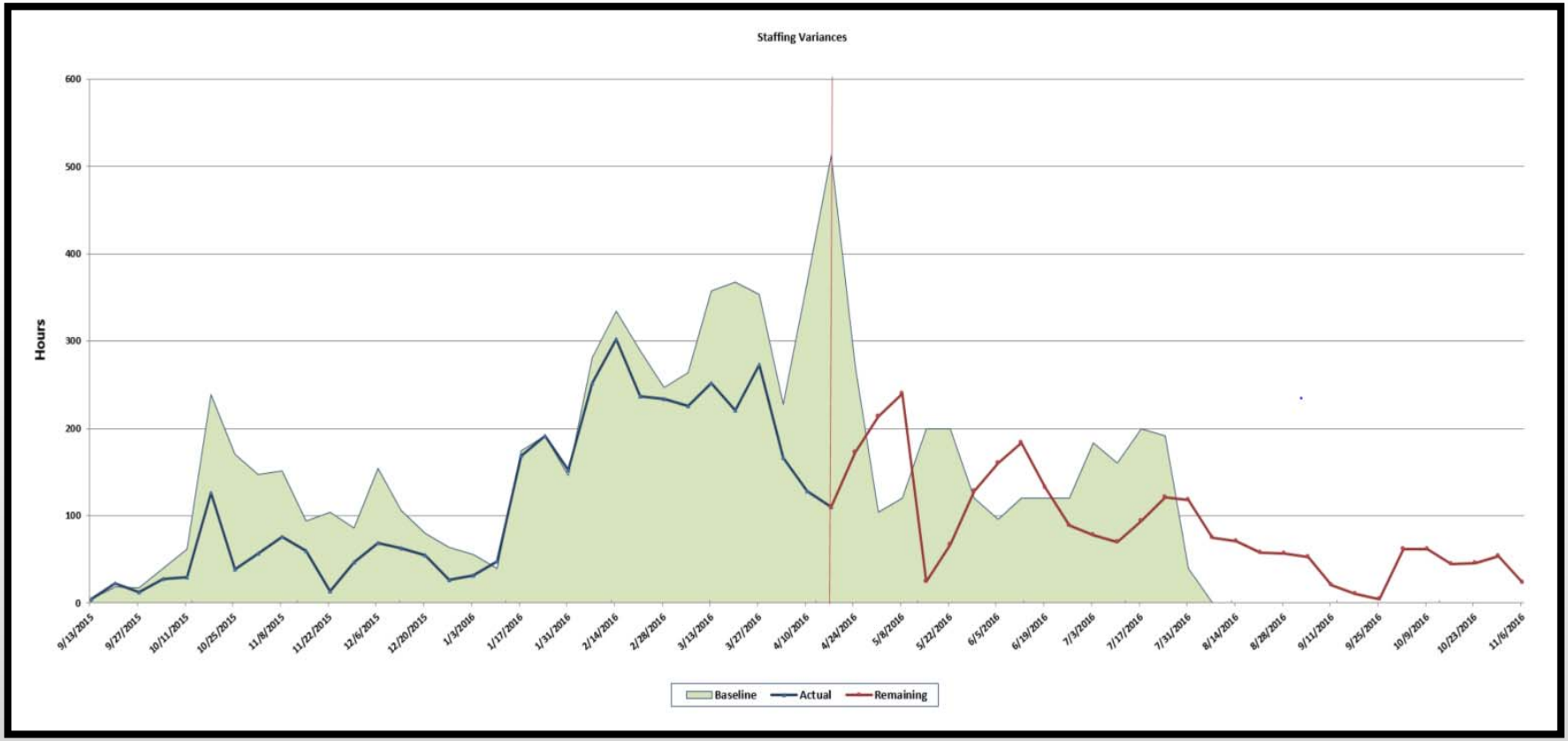
- Verify Staffing using Project Statistics
- Sum data points and compare to Work

Weeks	3/27/2016	4/3/2016	4/10/2016	4/17/2016	4/24/2016	5/1/2016	5/8/2016	5/15/2016	5/22/2016
Baseline	354	228	368	512	272	104	120	200	200
Actual	273	166	128	110					
Remaining				110	173	213	240	25	67



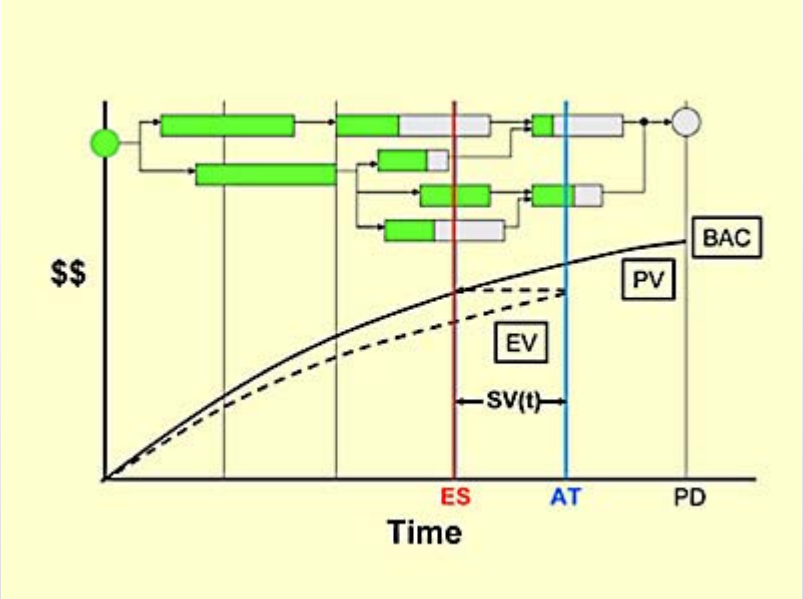
Weekly Status Report: Staffing Chart

- Visual output of the EV Data tab
- Supports the analysis in the Weekly Status Report



Earned Schedule (ES)

- **Earned schedule** is an extension to the theory and practice of **earned** value management (EVM)
- As of 2005, **Earned Schedule** is designated as an "emerging practice" by the Project Management Institute
- ES resolves the long-standing dilemma of the EVM schedule indicators providing false information for late performing projects
- ES provides the ability to predict project completion dates and is the bridge for performing meaningful schedule analysis from the EVM data



Earned Schedule (ES) cont.

- Uses time based metrics
  - PV, EV, BAC
- Used to compare forecasts

Project Statistics for 'EDMM SAMPLE'

	Start	Finish
Current	Fri 9/11/15	Thu 11/3/16
Baseline	Fri 9/11/15	Fri 7/29/16
Actual	Fri 9/11/15	NA
Variance	0d	66d

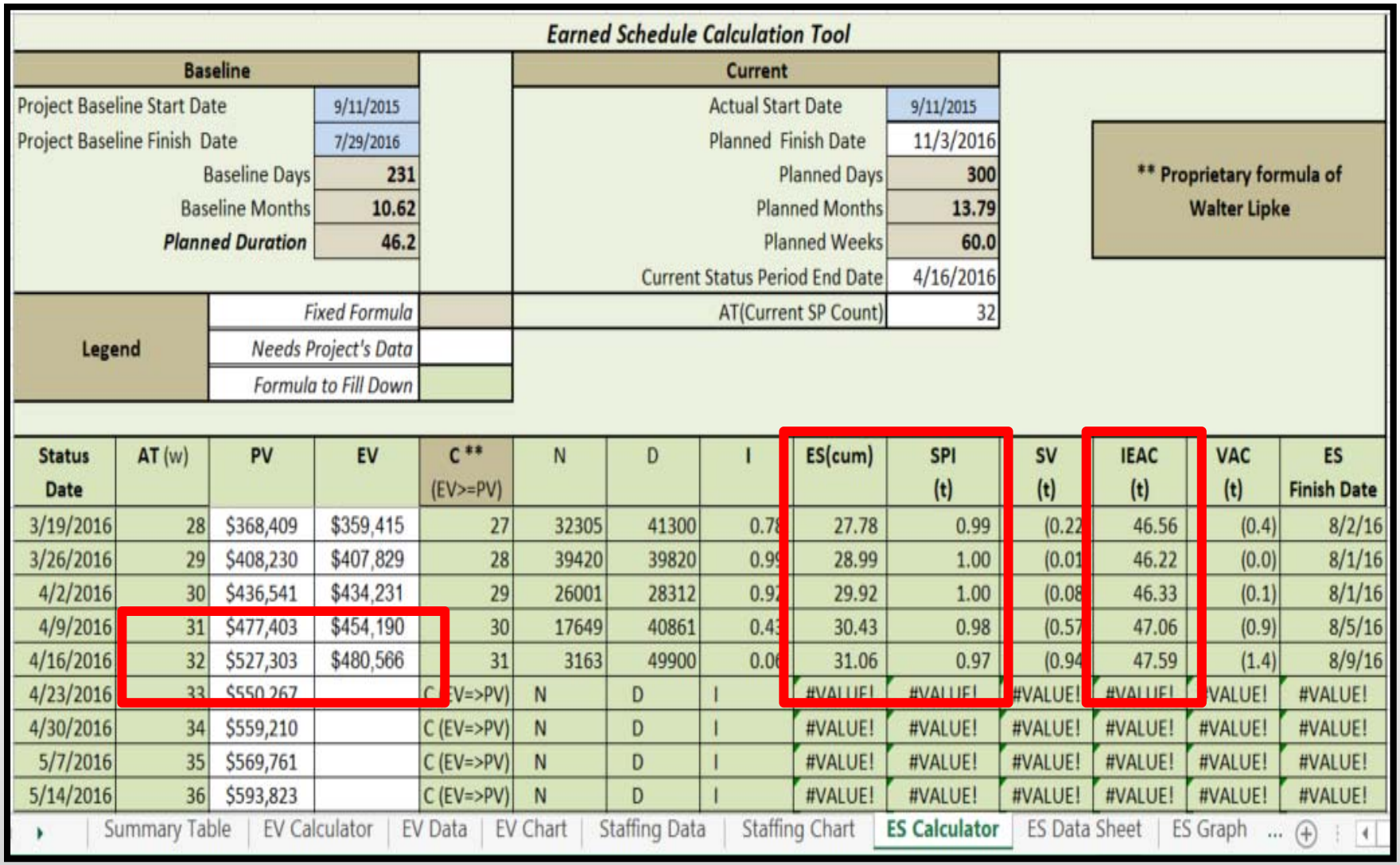
	Duration	Work	Cost
Current	288d	6,254h	$584,857.71
Baseline	222d	7,998h	$733,733.80
Actual	174.99d	3,721h	$353,216.46
Remaining	113.01d	2,533h	$231,641.25

Percent complete:

	Weeks	4/2/2016	4/9/2016	4/16/2016	4/23/2016	4/30/2016	5/7/2016	5/14/2016
2	PV	$436,541	$477,403	$527,303	$550,267	$559,210	$569,761	$593,823
3	EV	$434,231	$454,190	$480,566				
4	AC	$318,153	$337,912	$353,216				
5	EAC			$353,216	$368,804	$387,532	$408,062	$409,857
6	Remaining Cost				$15,587	$18,728	$20,530	$1,796
7								
8								
9	CPI	1.36	1.34	1.36				
10	SPI	0.99	0.95	0.91				
11								

Summary Table | EV Calculator | EV Data | EV Chart | Staffing Data | Staffing Chart | ES Calcula

Earned Schedule Calculator



Earned Schedule Calculation Tool

Baseline		Current	
Project Baseline Start Date	9/11/2015	Actual Start Date	9/11/2015
Project Baseline Finish Date	7/29/2016	Planned Finish Date	11/3/2016
Baseline Days	231	Planned Days	300
Baseline Months	10.62	Planned Months	13.79
Planned Duration	46.2	Planned Weeks	60.0
		Current Status Period End Date	4/16/2016
		AT(Current SP Count)	32

** Proprietary formula of Walter Lipke

Legend	
	Fixed Formula
	Needs Project's Data
	Formula to Fill Down

Status Date	AT (w)	PV	EV	C ** (EV>=PV)	N	D	I	ES(cum)	SPI (t)	SV (t)	IEAC (t)	VAC (t)	ES Finish Date
3/19/2016	28	$368,409	$359,415	27	32305	41300	0.78	27.78	0.99	(0.22	46.56	(0.4)	8/2/16
3/26/2016	29	$408,230	$407,829	28	39420	39820	0.99	28.99	1.00	(0.01	46.22	(0.0)	8/1/16
4/2/2016	30	$436,541	$434,231	29	26001	28312	0.92	29.92	1.00	(0.08	46.33	(0.1)	8/1/16
4/9/2016	31	$477,403	$454,190	30	17649	40861	0.43	30.43	0.98	(0.57	47.06	(0.9)	8/5/16
4/16/2016	32	$527,303	$480,566	31	3163	49900	0.06	31.06	0.97	(0.94	47.59	(1.4)	8/9/16
4/23/2016	33	$550,267		C (EV=>PV)	N	D	I	#VALUE!	#VALUE!	#VALUE!	#VALUE!	VALUE!	#VALUE!
4/30/2016	34	$559,210		C (EV=>PV)	N	D	I	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
5/7/2016	35	$569,761		C (EV=>PV)	N	D	I	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
5/14/2016	36	$593,823		C (EV=>PV)	N	D	I	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

Summary Table | EV Calculator | EV Data | EV Chart | Staffing Data | Staffing Chart | ES Calculator | ES Data Sheet | ES Graph ...

Earned Schedule Data

- PD(t) Wks = Planned Duration
- AT Wks = Actual Time
- EAC(t) Wks = current week
- EAC(t)cum = current scheduled number of weeks
- ES = number of completed PV time increments
- SPI(t) = Schedule Performance Index

Weeks	3/25/2016	4/1/2016	4/8/2016	4/15/2016	4/22/2016	4/29/2016	5/6/2016	5/13/2016	5/20/2016	5/27/2016	6/3/2016	6/10/2016	6/17/2016
PD(t) Wks	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2
AT Wks	29	30	31	32									
EAC(t) Wks				32	33	34	35	36	37	38	39	40	41
EAC(t) cum	46.2	46.3	47.1	48.0									
ES	28.99	29.92	30.43	30.82									
SPI(t)	1.00	1.00	0.98	0.96									

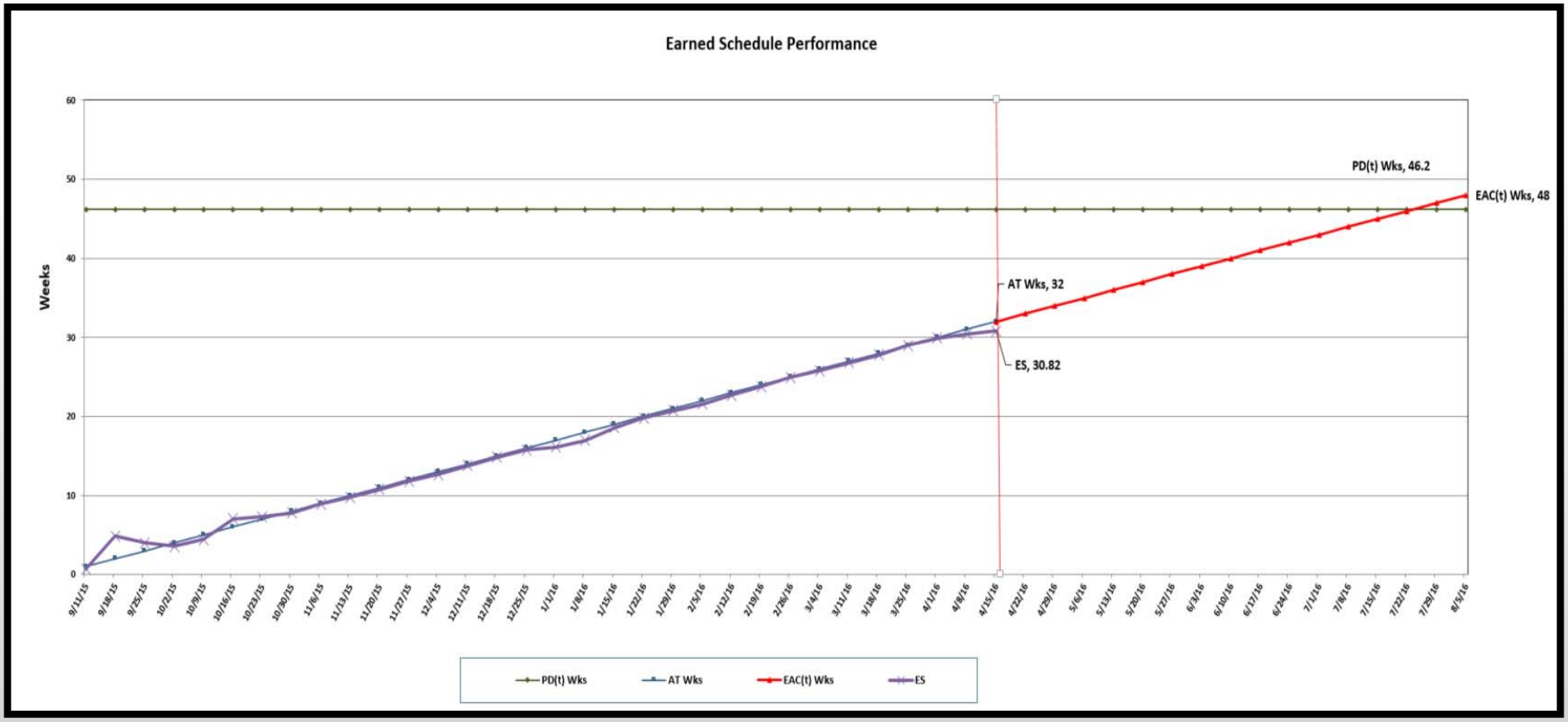
Summary Table | EV Calculator | EV Data | EV Chart | Staffing Data | Staffing Chart | ES Calculator | **ES Data Sheet** | ES Graph ...

Status Date	AT (w)	PV	EV	C ** (EV>=PV)	N	D	I	ES(cum)	SPI (t)	SV (t)	IEAC (t)	VAC (t)	ES Finish Date
3/19/2016	28	$368,409	$359,415	27	32305	41300	0.78	27.78	0.99	(0.22)	46.56	(0.4)	8/2/16
3/26/2016	29	$408,230	$407,829	28	39420	39820	0.99	28.99	1.00	(0.01)	46.22	(0.0)	8/1/16
4/2/2016	30	$436,541	$434,231	29	26001	28312	0.92	29.92	1.00	(0.08)	46.33	(0.1)	8/1/16
4/9/2016	31	$477,403	$454,190	30	17649	40861	0.43	30.43	0.98	(0.57)	47.06	(0.9)	8/5/16
4/16/2016	32	$527,303	$480,566	31	3163	49900	0.06	31.06	0.97	(0.94)	47.59	(1.4)	8/9/16
4/23/2016	33	$550,267		C (EV=>PV)	N	D	I	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
4/30/2016	34	$559,210		C (EV=>PV)	N	D	I	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
5/7/2016	35	$569,761		C (EV=>PV)	N	D	I	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
5/14/2016	36	$593,823		C (EV=>PV)	N	D	I	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

Summary Table | EV Calculator | EV Data | EV Chart | Staffing Data | Staffing Chart | **ES Calculator** | ES Data Sheet | ES Graph ...

Weekly Status Report: Earned Schedule Data Chart

- Visual output of the ES Data tab
- Supports the analysis in the Weekly Status Report



Weekly Status Report: EV Summary

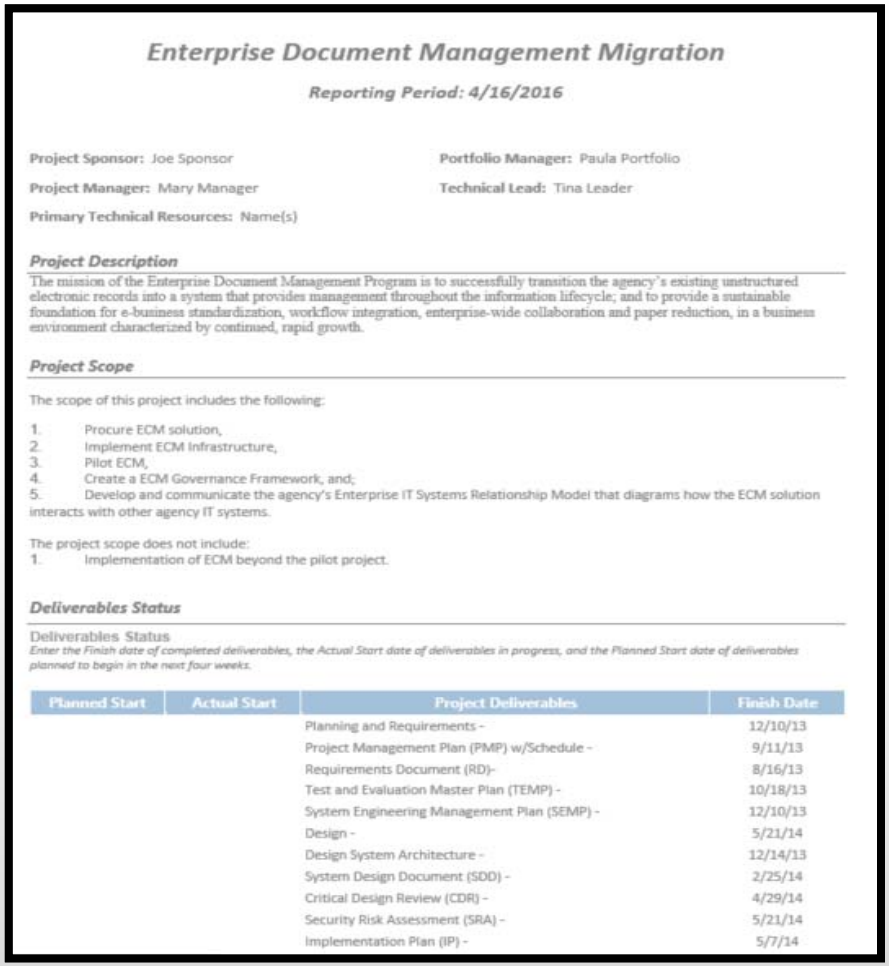
- The view from the mountain top!
  - Updated based on data previously collected
  - Summarizes Performance at the project level

Schedule		
Status Date	4/16/2016	Current
Baseline Start		9/11/2015
Planned/Actual Start		9/11/2015
Baseline Finish		7/29/2016
Planned/Actual Finish		11/3/2016
Finish Variance (wks)		-14.0
Earned Value		
Planned Value (PV)		$527,303
Earned Value (EV)		$480,566
Schedule Variance (SV) ($)		-$46,737
SPI ($)		0.91
Actual Cost (AC)		$353,216
Cost Variance (CV)		$127,350
CPI		1.36
BAC ($)		$733,734
EAC ($)		$584,858
Budget Variance (VAC) $		$148,876
Earned Schedule		
Planned Duration (PD) (t)(wks)		46.2
Actual Time (AT) (wks)		32
Earned Schedule (ES) (wks)		*31.1*
Schedule Variance (SV) (t)		-0.9
SPI (t)		0.97
EAC (t) (wks)		47.6
VAC (t) (wks)		-1.4
ES Project Finish		8/9/16
Resource Hours		
Baseline Work		7,998
Estimated Work		6,254
Actual Work		3,721
Projected Work Variance		1744
% Work Variance		22%

Output: Weekly Status Report

How it all comes together!

- Information from the Project Charter/SOW
  - Leadership
  - Description
  - Scope
  - Deliverables



Enterprise Document Management Migration

Reporting Period: 4/16/2016

Project Sponsor: Joe Sponsor
Portfolio Manager: Paula Portfolio
Project Manager: Mary Manager
Technical Lead: Tina Leader
Primary Technical Resources: Name(s)

Project Description

The mission of the Enterprise Document Management Program is to successfully transition the agency's existing unstructured electronic records into a system that provides management throughout the information lifecycle; and to provide a sustainable foundation for e-business standardization, workflow integration, enterprise-wide collaboration and paper reduction, in a business environment characterized by continued, rapid growth.

Project Scope

The scope of this project includes the following:

1. Procure ECM solution,
2. Implement ECM Infrastructure,
3. Pilot ECM,
4. Create a ECM Governance Framework, and;
5. Develop and communicate the agency's Enterprise IT Systems Relationship Model that diagrams how the ECM solution interacts with other agency IT systems.

The project scope does not include:

1. Implementation of ECM beyond the pilot project.

Deliverables Status

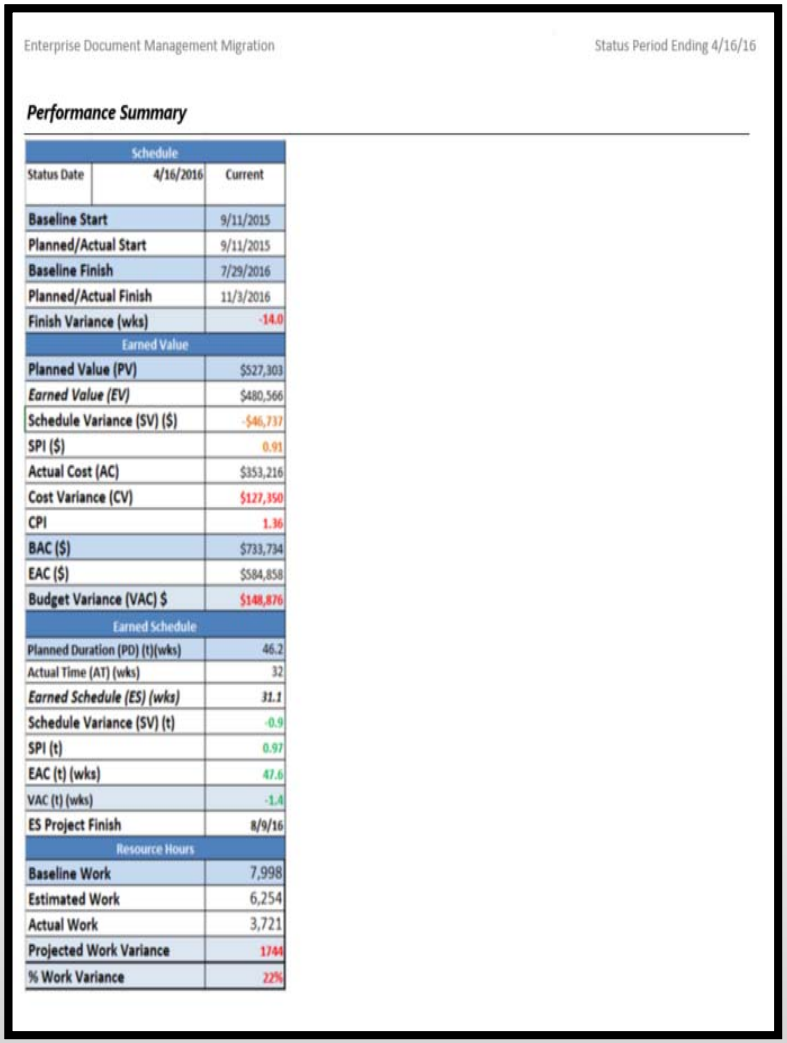
Deliverables Status

Enter the Finish date of completed deliverables, the Actual Start date of deliverables in progress, and the Planned Start date of deliverables planned to begin in the next four weeks.

Planned Start	Actual Start	Project Deliverables	Finish Date
		Planning and Requirements -	12/10/13
		Project Management Plan (PMP) w/Schedule -	9/11/13
		Requirements Document (RD)-	8/16/13
		Test and Evaluation Master Plan (TEMP) -	10/18/13
		System Engineering Management Plan (SEMP) -	12/10/13
		Design -	5/21/14
		Design System Architecture -	12/14/13
		System Design Document (SDD) -	2/25/14
		Critical Design Review (CDR) -	4/29/14
		Security Risk Assessment (SRA) -	5/21/14
		Implementation Plan (IP) -	5/7/14

Output: Weekly Status Report

- Performance Summary



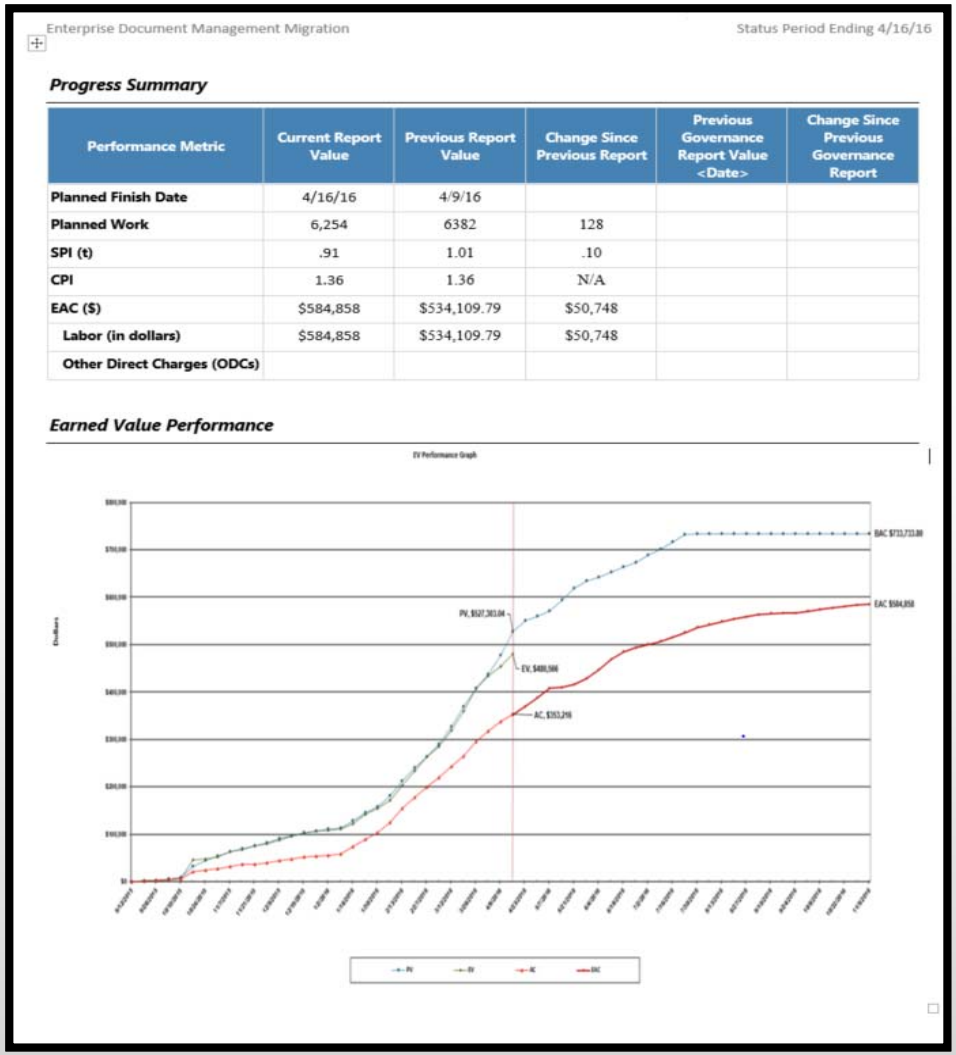
Enterprise Document Management Migration — Status Period Ending 4/16/16

Performance Summary

Schedule		
Status Date	4/16/2016	Current
Baseline Start		9/11/2015
Planned/Actual Start		9/11/2015
Baseline Finish		7/29/2016
Planned/Actual Finish		11/3/2016
Finish Variance (wks)		-14.0
Earned Value		
Planned Value (PV)		$527,303
Earned Value (EV)		$480,566
Schedule Variance (SV) ($)		-$46,737
SPI ($)		0.91
Actual Cost (AC)		$353,216
Cost Variance (CV)		$127,350
CPI		1.36
BAC ($)		$733,734
EAC ($)		$584,858
Budget Variance (VAC) $		$148,876
Earned Schedule		
Planned Duration (PD) (t)(wks)		46.2
Actual Time (AT) (wks)		32
Earned Schedule (ES) (wks)		*31.1*
Schedule Variance (SV) (t)		-0.9
SPI (t)		0.97
EAC (t) (wks)		47.6
VAC (t) (wks)		-1.4
ES Project Finish		8/9/16
Resource Hours		
Baseline Work		7,998
Estimated Work		6,254
Actual Work		3,721
Projected Work Variance		1744
% Work Variance		22%

Output: Weekly Status Report

- Progress Summary
  - Reports changes since the last report and Governance Report
- EV Chart



Enterprise Document Management Migration — Status Period Ending 4/16/16

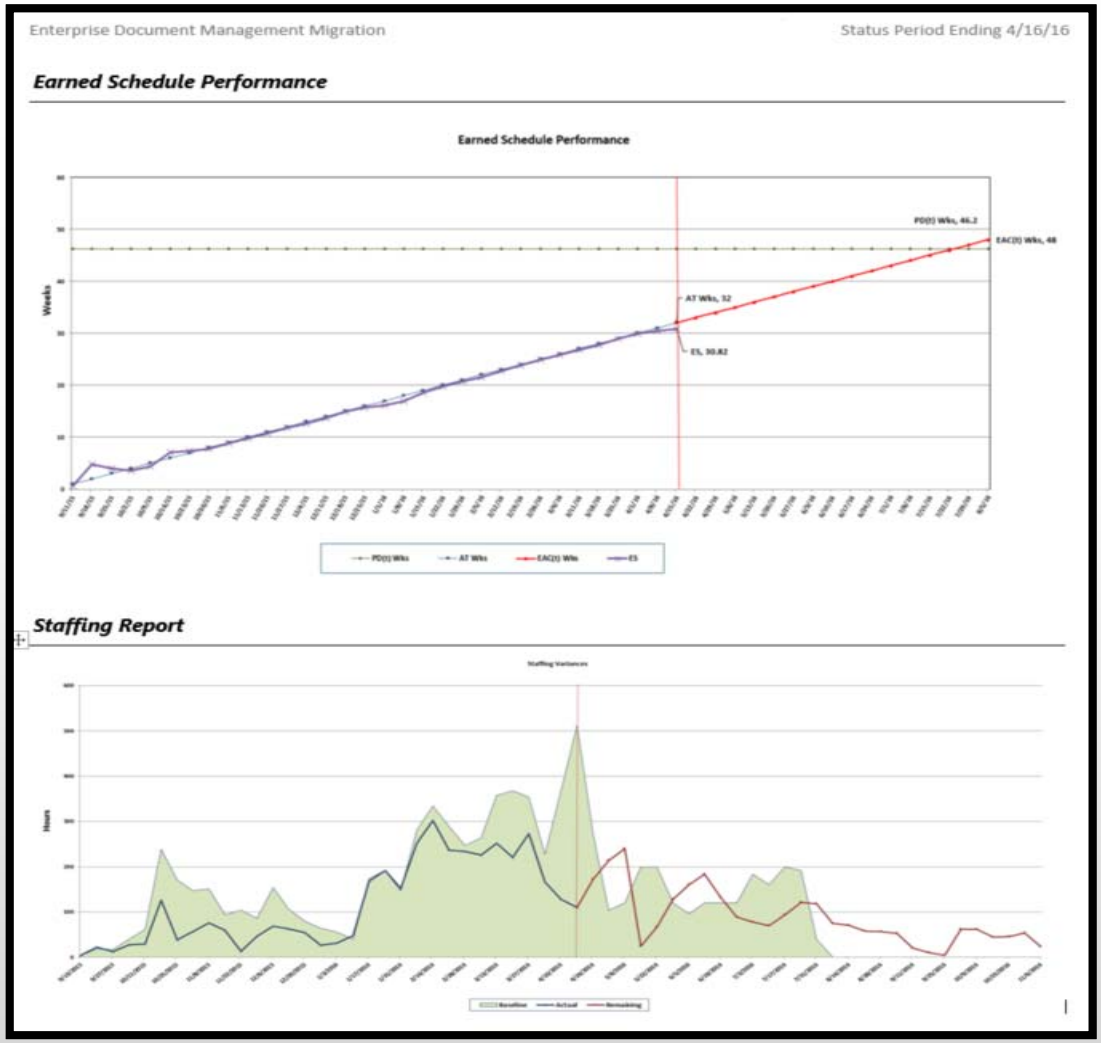
Progress Summary

Performance Metric	Current Report Value	Previous Report Value	Change Since Previous Report	Previous Governance Report Value <Date>	Change Since Previous Governance Report
Planned Finish Date	4/16/16	4/9/16			
Planned Work	6,254	6382	128		
SPI (t)	.91	1.01	.10		
CPI	1.36	1.36	N/A		
EAC ($)	$584,858	$534,109.79	$50,748		
Labor (in dollars)	$584,858	$534,109.79	$50,748		
Other Direct Charges (ODCs)					

Earned Value Performance

Output: Weekly Status Report

- ES Chart
- Staffing Chart



Output: Weekly Status Report

- Performance Analysis
- Risk Register
  - Changes to Risks Since Last Report
- Issue Log

Key Takeaways

- Best Practices?
  - Use Physical % Complete to calculate EV in MS Project to reduce the risk of data manipulation
  - Use Graphs & Charts to communicate EV & ES data to executives, technical resources and laypersons
  - Use Earned Schedule with to forecast completion date when projects are delayed
- Tips & Tricks
  - Use a EV Calculator to verify EV data
  - Use Earned Schedule to analyze the completion forecast
  - Use Graphs & Charts to communicate EV data
  - Automate when possible!