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DCMA 14-Point Assessment: Using Deltek Acumen for Compliance Analysis

September 2019

Before You Begin

Advanced Metrics and Reporting in Acumen 8.5

It has taken many enhancements in Acumen over the years to satisfy the DCMA's newest and ever changing metrics for measuring performance and compliance of integrated cost and schedule. These metrics were formerly called EVAS/DDM. They are now called DECM for DCMA EVM Compliance Metrics. This presentation will describe some of the more advanced features in Acumen metrics that anyone can use in their metrics and reports.

Agenda

1. DCMA 14 Point Assessment
2. DCMAs new DECM Assessment
3. Advanced Capabilities in Metrics
4. Q&A

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DCMA 14 Point

DCMA 14 Point

- Now getting old (20 years?)
- For activities in the baseline, this looks at :

1. **Logic**
2. **Leads**
3. **Lags**
4. **Relationship Types**
5. **Hard Constraints**
6. **High Float**
7. **Negative Float**
8. **High Duration**
9. **Invalid Dates**
10. **Resources**
11. **Missed Tasks**
12. **Critical Path Test**
13. **Critical Path Length Index (CPLI)**
14. **Baseline Execution Index (BEI)**

DCMA Update

- DCMA moved from 14 points to EVAS to DECM which has currently 141 metrics that look at everything from basic schedule quality to cost/schedule integration to how well your accounting system matches your EVMS.
- Guideline 6 looks at Planning and covers most of the of the original metric areas although they got rid of some.
- DCMA experience with 14 point assessment:
  - Drove bad behavior rather than proper planning – people added logic to beat the metric rather than spending the time to get the logic right.
  - They are having the terminology removed from current PASEG (Planning and Scheduling Excellence Guide)

DECM Guideline 06 - Planning

06A101a	**Does each discrete WP, PP and SLP have task(s) represented in the IMS?**
06A102a	Are authorized risk mitigation activities incorporated into the IMS as required by the process instructions?
06A204b	**Are there open starts or finishes (“dangling logic”) in the schedule?**
06A205a	**Are lags used in the schedule?**
06A208a	**Do summary tasks in the schedule have logic applied?**
06A209a	**Are schedule network constraints limited?**
06A210a	**Do LOE tasks/activities have discrete successors?**
06A211a	Is high float rationale/justification acceptable?
06A212a	**Are there out of sequence tasks/activities & milestones?**
06A301a	Are lower level baseline and forecast dates traceable to, and not outside, the corresponding higher level dates in the IMS?
06A301b	Does the IMS baseline finish date align with contractual/CLIN finish (POP) date?
06A401a	Does the schedule tool produce a critical path that represents the longest total duration with the least amount of total float?
06A401b	Are key contractual milestones and events identified in the IMS?
06A501a	**In the IMS, do all of the tasks/activities & milestones have baseline start and baseline finish dates?**
06A504a	**Are actual start dates changed after first reported?**
06A504b	**Are actual finish dates changed after first reported?**
06A505a	**Do all in progress activities have actual start dates?**
06A505b	**Do all complete tasks/activities have actual finish dates?**
06A506a	**Are actual start and actual finish dates valid for all tasks/activities & milestones in the IMS?**
06A506b	**Are forecast start and finish dates valid for all tasks/activities & milestones in the IMS?**
06A506c	**Are forecast start/finish dates riding the status date of the IMS for two consecutive months?**
06I101b	Do schedule margin tasks represent risk impact to subsequent significant events/milestones?
06I201a	Are Schedule Visibility Tasks (SVTs) identified and controlled in the IMS?

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DCMA DECM Assessment

Formerly known as EVAS

DECM vs 14 Points

- More than half of DECM metrics require manual input to compare either contract, SOW or System Description to how the work is organized and managed
- More data (61 artifacts) used in the DECM metrics:
  - 02 Accounting/Fiscal Calendar
  - 03 EVM System Description
  - 04 Contract Statement of Work
  - 05 Contract Work Breakdown Structure Dictionary
  - 06 Contractual Documents
  - 07 Organization Breakdown Structure
  - 08 Control Account Plans
  - 09 Work Authorization Documentation (WAD)
  - 10 Integrated Master Plan
  - 11 Integrated Master Schedule (IMS)
  - 12 Program Critical Path
  - 13 EV Cost Tool Data

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Advanced Capabilities in Metrics

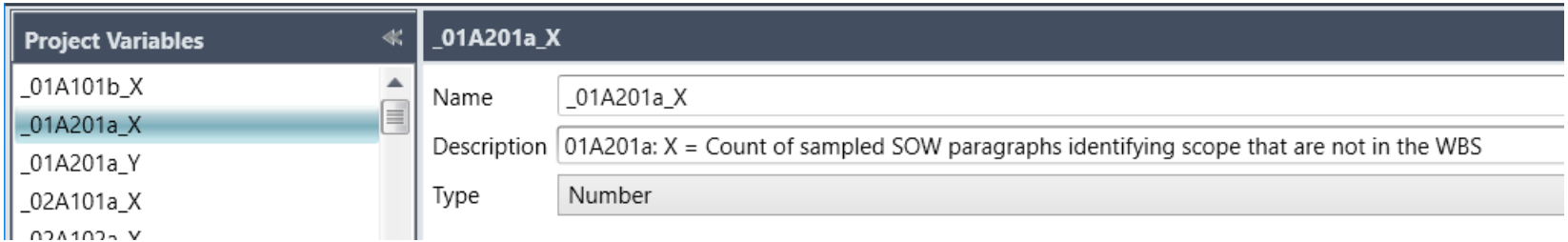
FUSE Enhancements to support DECM

- Project Variables
- Calculated Fields
- Control Account and Work Package Data
- WAD Data
- Reports and the Publish flag

Project Variables

- DECM has many metrics that are all or part manual.
- Project Variables allow you to enter user value for each project/snapshot and use those in metrics.
- E.g. DECM Metric 01A201a Complete SOW in WBS (M)
  - X = Count of sampled SOW paragraphs identifying scope that are not in the WBS
  - Y = Total count of sampled SOW paragraphs identifying scope.
  - Threshold X/Y = 0%

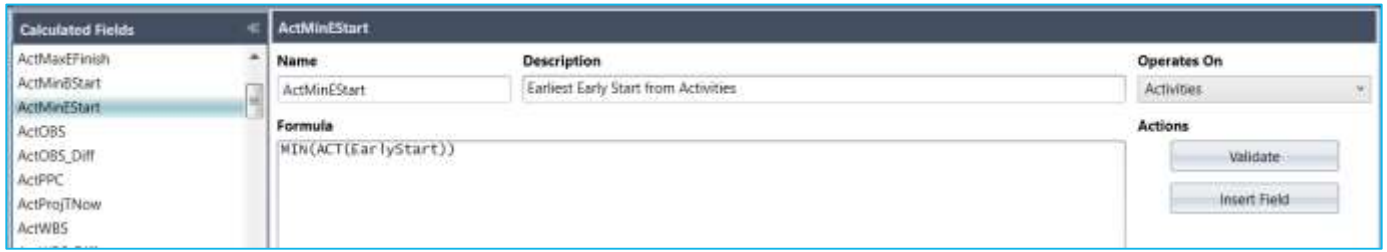
- Define project variables



- Define the metric to use them
  - IF(_01A201a_X < 0, -0.01, IF((_01A201a_X < _01A201a_Y), (_01A201a_X / _01A201a_Y), -0.01))

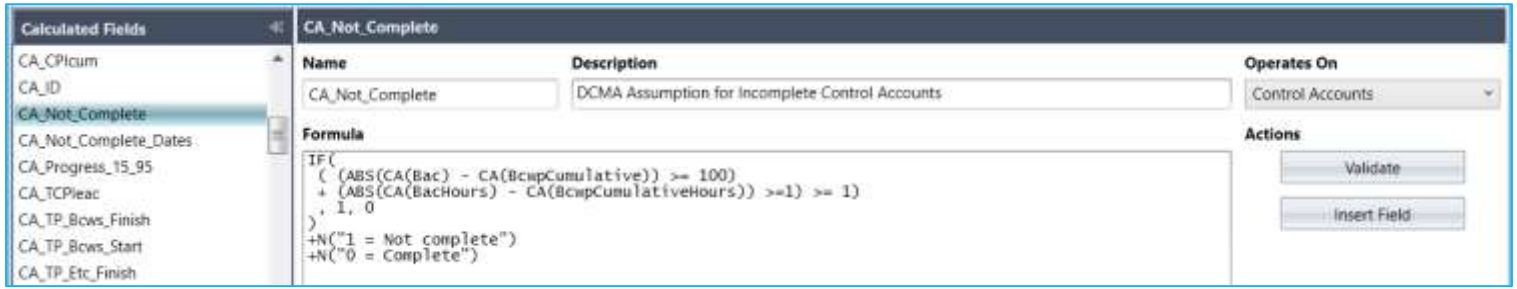
Calculated Fields

- Calculated fields were added as a way to rollup or down, values between Activities, Work Packages and Control Accounts
- Calculated fields are defined at a level, Activities, Work Packages and Control Accounts
- Calculated fields use Excel formulas just like metrics and have access to any Excel function plus fields at the level they are defined.



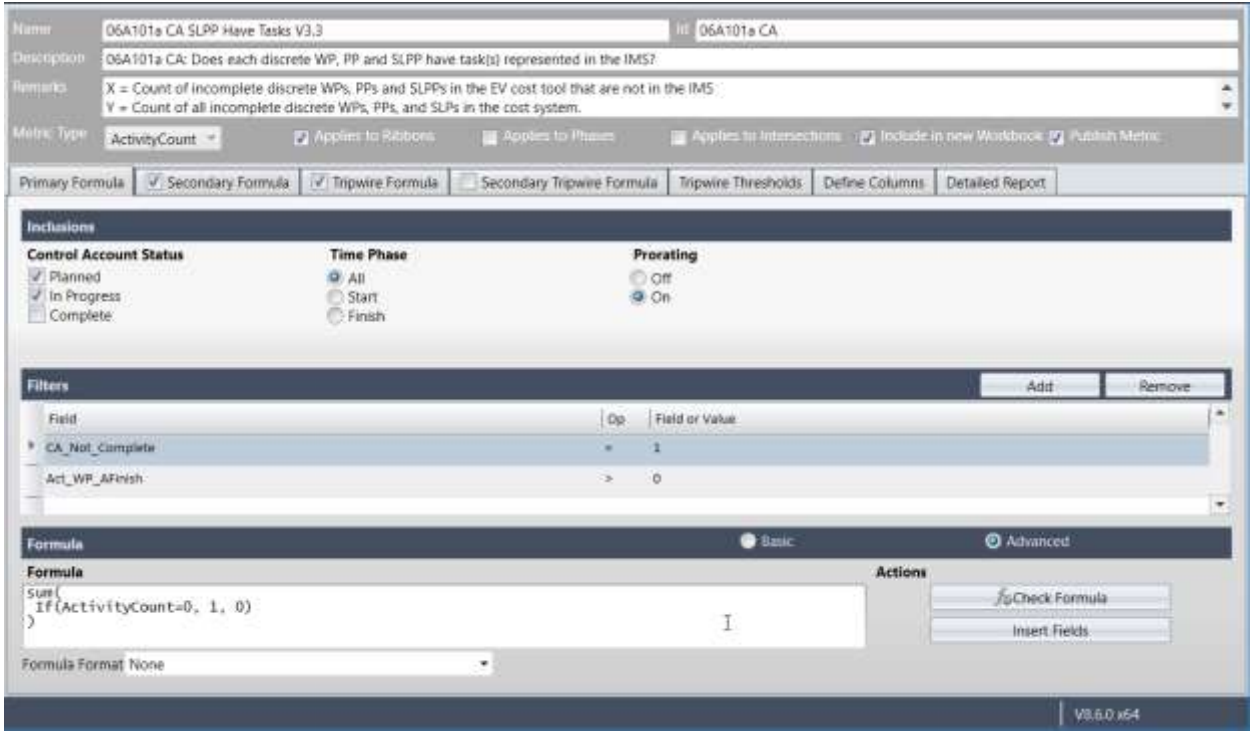
Calculated Fields

- Calculate Fields allow you to put logic in once place and use it in multiple places in either filters or formulas.
- This a DECM assumption about Control Accounts



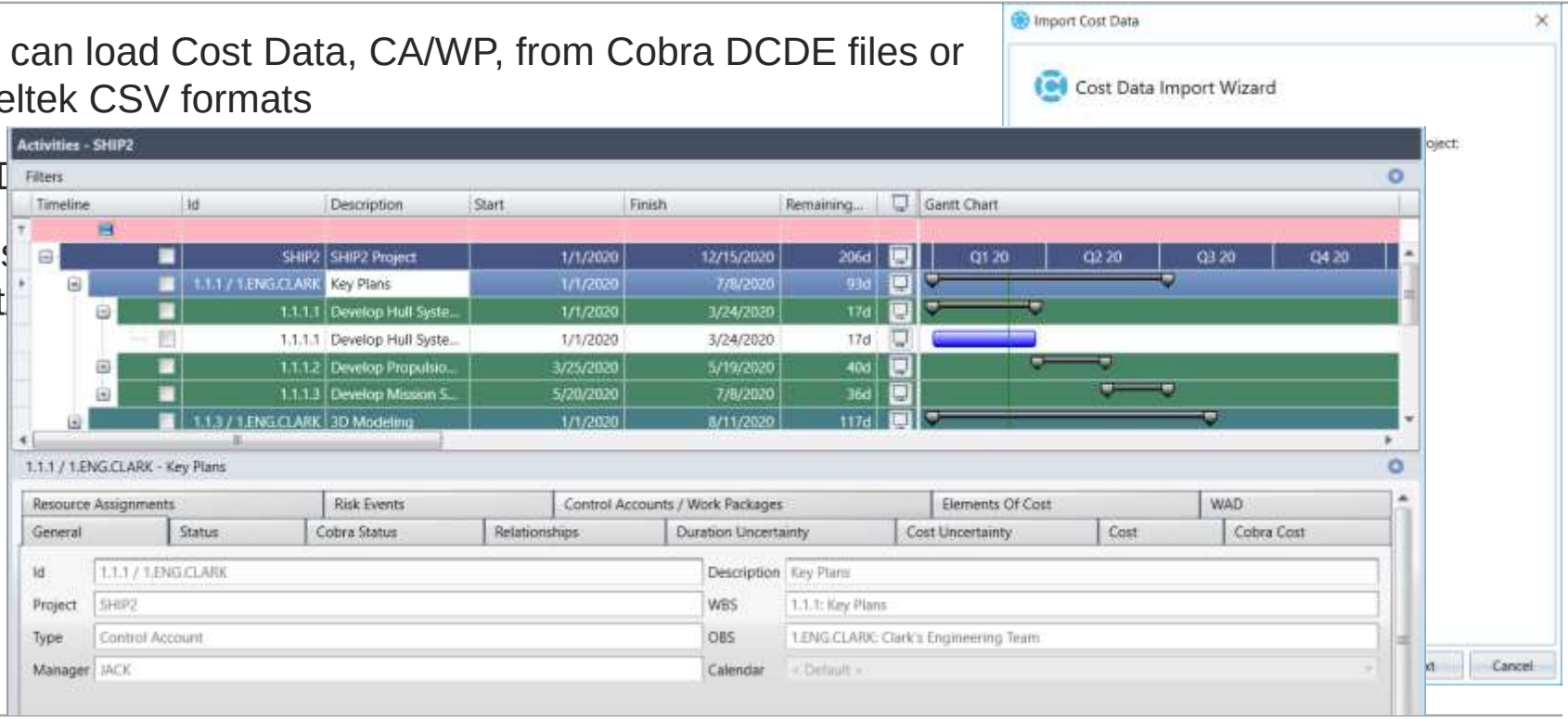
- It is used in many metrics providing reuse of code

Calculated Fields



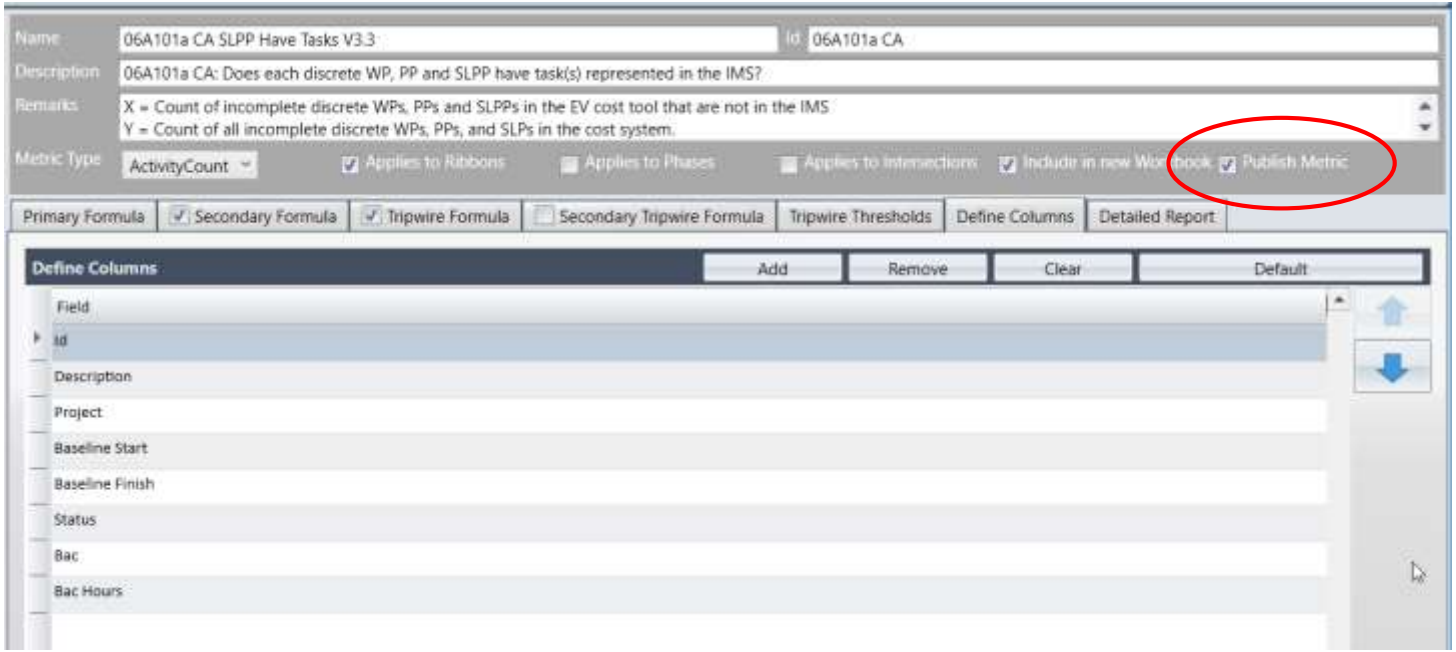
Control Account, Work Package and WAD Data

- You can load Cost Data, CA/WP, from Cobra DCDE files or a Deltek CSV formats
- WAD
- Thes
  cost



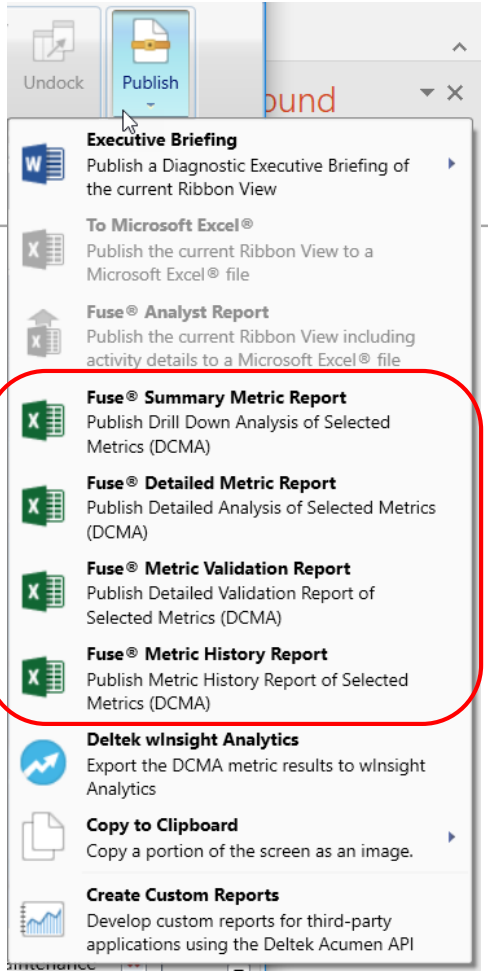
Reports and the Publish flag

» We added a Publish flag to metrics in 8.0 and control over what fields are published.



Reports and the Publish flag

- New reports use the publish flag to determine what to include
  - Fuse Summary Metric Report
  - Fuse Detailed Metric Report
  - Fuse Metric Validation Report
  - Fuse Metric History Report



Reports and the Publish flag – Summary Report

Fuse® Summary Metric Report		
Version 3.4 Metrics 8.6 - 154 Activities		
Program Summary		
Created on: 9/14/2019		
Created by: RobertEdwards		
		GL 01 WBS
Ribbons	SHIP	N/A
	SHIP1	N/A
	SHIP2	N/A

Fuse® Summary Metric Report
Version 3.4 Metrics 8.6 - 154 Activities
Program Summary -> Planning -> SHIP2: Detailed View
Created on: 9/14/2019
Created by: RobertEdwards

SHIP2: Detailed View

	7	0	0	-1	5	0	5
	21%	0%	0%	-1%	16%	0%	33%
Current Period (Time Now: 3/2/2020)				SHIP1 (Time Now: 2/3/2020)		SHIP (Time No
06A101a WP/PP Have Tasks V3.3	7	21%		7	20%	9

06A101a WP: Does each discrete WP, PP, and SLPP have task(s) represented in the IMS?

Id	Description	Project	Original Duration	Remaining Duration	Start	Finish
1.1.1.0	NTP Recieved	SHIP2	0	0	3/2/2020	3/2/2020
1.2.E.101	Erect Unit 101	SHIP2	5	5	10/26/2020	10/30/2020
1.2.E.102	Erect Unit 102	SHIP2	5	5	11/23/2020	11/27/2020
1.2.E.103	Erect Unit 103	SHIP2	5	5	12/2/2020	12/8/2020
1.2.6.3	Paint	SHIP2	4	4	12/9/2020	12/14/2020
1.2.6.2	Customer final inspection	SHIP2	0	0	12/15/2020	12/15/2020
1.2.6.4	Customer Acceptance Re	SHIP2	0	0	12/15/2020	12/15/2020

Current Period (Time Now: 3/2/2020) SHIP1 (Time Now: 2/3/2020) SHIP (Time No

Planning | Planning-GL-06-Schedule | Planning-GL-07-Progress-Assess | Planning-GL-08-PMB | Planning-GL-09-Cost

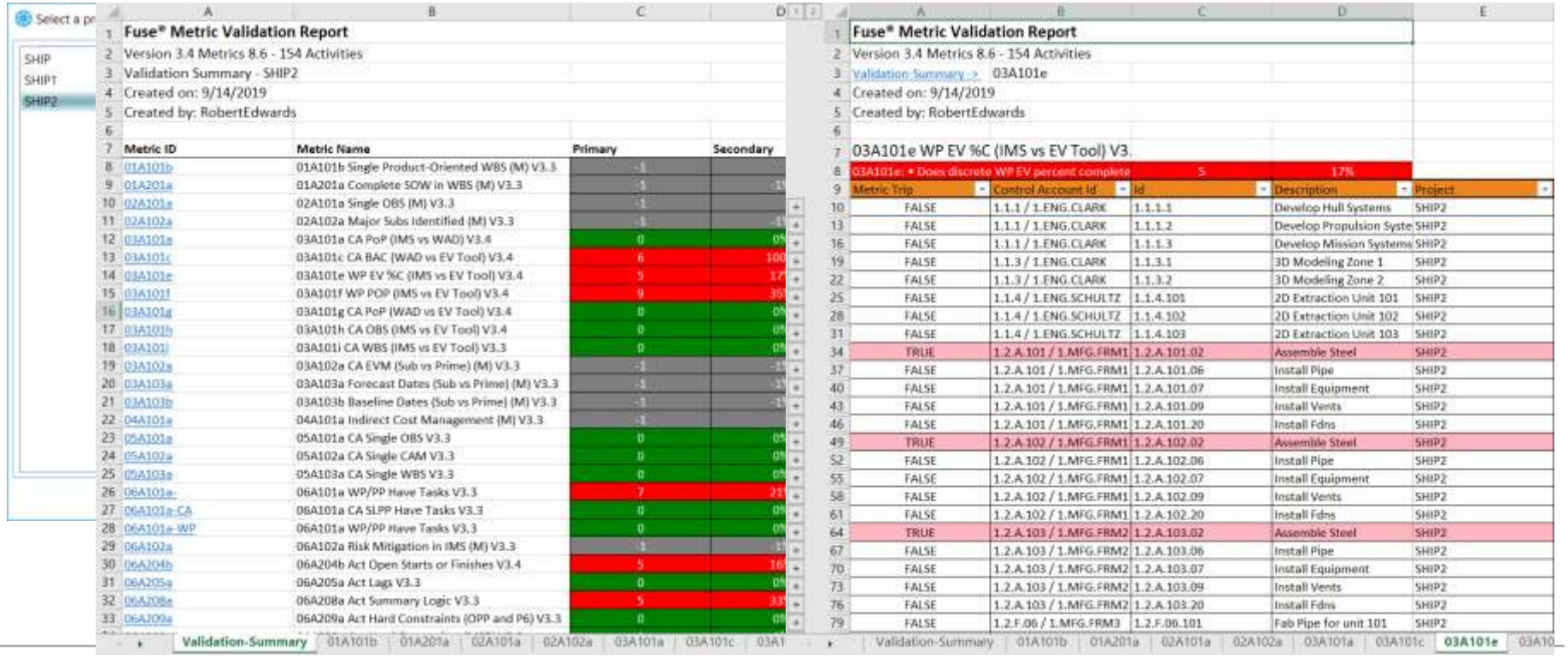
Reports and the Publish flag – Detailed Report

Detailed Me

Include In Repo

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Fuse® Detailed Metric Report**													
2	Version 3.4 Metrics 8.6 - 154 Activities													
3	Detailed Metric Report - SHIP													
4	Created on: 9/14/2019													
5	Created by: RobertEdwards													
6														
7														
8														
9														
10						**GL 01 WBS**		**GL 02 OBS**						**GL 03 Int**
11						01A101b Single Product-Oriented WBS (M) V3.3 (01A101b)	01A201a Complete SOW in WBS (M) V3.3 (01A201a)	02A101a Single OBS (M) V3.3 (02A101a)	02A102a Major Subs Identified (M) V3.3 (02A102a)	03A101a CA PoP (IMS vs WAD) V3.4 (03A101a)	03A101c CA BAC (WAD vs EV Tool) V3.4 (03A101c)	03A101e WP EV %C (IMS vs EV Tool) V3.4 (03A101e)	03A101f WP POP (IMS vs EV Tool) V3.4 (03A101f)	03A101g CA PoP (WAD vs EV Tool) V3.4 (03A101g)
12						-1	-1	-1	-1	3	6	0	10	2
13							-1%		-1%	38%	100%	0%	37%	33%
14					Record Count	52	52	52	52	8	6	27	27	6
15	**Project**	**Control Account**	**Work Package**	**Activity**	**Manager**	Coun	Coun	Coun	Coun	Coun	Coun	Coun	Coun	Coun
16	SHIP	1.1.1 / 1.ENG.CLARK			JACK						X			
17	SHIP	1.1.1 / 1.ENG.CLARK	1.1.1.1		JACK									
18	SHIP	1.1.1 / 1.ENG.CLARK	1.1.1.1	1.1.1.1										
19	SHIP	1.1.1 / 1.ENG.CLARK	1.1.1.2		JACK									
20	SHIP	1.1.1 / 1.ENG.CLARK	1.1.1.2	1.1.1.2										
21	SHIP	1.1.1 / 1.ENG.CLARK	1.1.1.3		JACK									
22	SHIP	1.1.1 / 1.ENG.CLARK	1.1.1.3	1.1.1.3										
23	SHIP	1.1.3 / 1.ENG.CLARK			EVELYN					X	X			X
24	SHIP	1.1.3 / 1.ENG.CLARK	1.1.3.1		EVELYN									
25	SHIP	1.1.3 / 1.ENG.CLARK	1.1.3.1	1.1.3.1										
26	SHIP	1.1.3 / 1.ENG.CLARK	1.1.3.2		EVELYN									
27	SHIP	1.1.3 / 1.ENG.CLARK	1.1.3.2	1.1.3.2										
28	SHIP	1.1.4 / 1.ENG.SCHUETZ			JACK					X	X			X

Reports and the Publish flag - Validation Report



Fuse® Metric Validation Report

Version 3.4 Metrics 8.6 - 154 Activities

Validation Summary - SHIP2

Created on: 9/14/2019

Created by: RobertEdwards

Metric ID	Metric Name	Primary	Secondary
01A101b	01A101b Single Product-Oriented WBS (M) V3.3	-1	
01A201a	01A201a Complete SOW in WBS (M) V3.3	-1	-1
02A101a	02A101a Single OBS (M) V3.3	-1	
02A102a	02A102a Major Subs Identified (M) V3.3	-1	-1
03A101a	03A101a CA PoP (IMS vs WAD) V3.4	0	0%
03A101c	03A101c CA BAC (WAD vs EV Tool) V3.4	6	100
03A101e	03A101e WP EV %C (IMS vs EV Tool) V3.4	5	17
03A101f	03A101f WP POP (IMS vs EV Tool) V3.4	9	35
03A101g	03A101g CA PoP (WAD vs EV Tool) V3.4	0	0%
03A101h	03A101h CA OBS (IMS vs EV Tool) V3.4	0	0%
03A101i	03A101i CA WBS (IMS vs EV Tool) V3.3	0	0%
03A102a	03A102a CA EVM (Sub vs Prime) (M) V3.3	-1	-1
03A103a	03A103a Forecast Dates (Sub vs Prime) (M) V3.3	-1	-1
03A103b	03A103b Baseline Dates (Sub vs Prime) (M) V3.3	-1	-1
04A101a	04A101a Indirect Cost Management (M) V3.3	-1	
05A101a	05A101a CA Single OBS V3.3	0	0%
05A102a	05A102a CA Single CAM V3.3	0	0%
05A103a	05A103a CA Single WBS V3.3	0	0%
06A101a-	06A101a WP/PP Have Tasks V3.3	7	21
06A101a-CA	06A101a CA SLPP Have Tasks V3.3	0	0%
06A101a-WP	06A101a WP/PP Have Tasks V3.3	0	0%
06A102a	06A102a Risk Mitigation in IMS (M) V3.3	-1	-1
06A204b	06A204b Act Open Starts or Finishes V3.4	5	16
06A205a	06A205a Act Lags V3.3	0	0%
06A208a	06A208a Act Summary Logic V3.3	5	33
06A209a	06A209a Act Hard Constraints (OPP and P6) V3.3	0	0%

Validation-Summary | 01A101b | 01A201a | 02A101a | 02A102a | 03A101a | 03A101c | 03A1

Fuse® Metric Validation Report

Version 3.4 Metrics 8.6 - 154 Activities

Validation Summary -> 03A101e

Created on: 9/14/2019

Created by: RobertEdwards

03A101e WP EV %C (IMS vs EV Tool) V3.

03A101e: • Does discrete WP EV percent complete 5 17%

Metric Trip	Control Account Id	Id	Description	Project
FALSE	1.1.1 / 1.ENG.CLARK	1.1.1.1	Develop Hull Systems	SHIP2
FALSE	1.1.1 / 1.ENG.CLARK	1.1.1.2	Develop Propulsion Syste	SHIP2
FALSE	1.1.1 / 1.ENG.CLARK	1.1.1.3	Develop Mission Systems	SHIP2
FALSE	1.1.3 / 1.ENG.CLARK	1.1.3.1	3D Modeling Zone 1	SHIP2
FALSE	1.1.3 / 1.ENG.CLARK	1.1.3.2	3D Modeling Zone 2	SHIP2
FALSE	1.1.4 / 1.ENG.SCHULTZ	1.1.4.101	2D Extraction Unit 101	SHIP2
FALSE	1.1.4 / 1.ENG.SCHULTZ	1.1.4.102	2D Extraction Unit 102	SHIP2
FALSE	1.1.4 / 1.ENG.SCHULTZ	1.1.4.103	2D Extraction Unit 103	SHIP2
TRUE	1.2.A.101 / 1.MFG.FRM1	1.2.A.101.02	Assemble Steel	SHIP2
FALSE	1.2.A.101 / 1.MFG.FRM1	1.2.A.101.06	Install Pipe	SHIP2
FALSE	1.2.A.101 / 1.MFG.FRM1	1.2.A.101.07	Install Equipment	SHIP2
FALSE	1.2.A.101 / 1.MFG.FRM1	1.2.A.101.09	Install Vents	SHIP2
FALSE	1.2.A.101 / 1.MFG.FRM1	1.2.A.101.20	Install Fdns	SHIP2
TRUE	1.2.A.102 / 1.MFG.FRM1	1.2.A.102.02	Assemble Steel	SHIP2
FALSE	1.2.A.102 / 1.MFG.FRM1	1.2.A.102.06	Install Pipe	SHIP2
FALSE	1.2.A.102 / 1.MFG.FRM1	1.2.A.102.07	Install Equipment	SHIP2
FALSE	1.2.A.102 / 1.MFG.FRM1	1.2.A.102.09	Install Vents	SHIP2
FALSE	1.2.A.102 / 1.MFG.FRM1	1.2.A.102.20	Install Fdns	SHIP2
TRUE	1.2.A.103 / 1.MFG.FRM2	1.2.A.103.02	Assemble Steel	SHIP2
FALSE	1.2.A.103 / 1.MFG.FRM2	1.2.A.103.06	Install Pipe	SHIP2
FALSE	1.2.A.103 / 1.MFG.FRM2	1.2.A.103.07	Install Equipment	SHIP2
FALSE	1.2.A.103 / 1.MFG.FRM2	1.2.A.103.09	Install Vents	SHIP2
FALSE	1.2.A.103 / 1.MFG.FRM2	1.2.A.103.20	Install Fdns	SHIP2
FALSE	1.2.F.06 / 1.MFG.FRM3	1.2.F.06.101	Fab Pipe for unit 101	SHIP2

Validation-Summary | 01A101b | 01A201a | 02A101a | 02A102a | 03A101a | 03A101c | 03A101e | 03A10

Reports and the Publish flag - History Report

Fuse® Metric History Report

Version 3.4 Metrics 8.6 - 154 Activities

Metric History

Created on: 9/14/2019

Created by: RobertEdwards

		SHIP (1/1/2020 8:00:00 AM)			SHIP1 (2/3/2020 8:00:00 AM)			SHIP2 (3/2/2020 8:00:00 AM)		
Metric ID	**Metric Name**	**Failed**	**X**	**%**	**Failed**	**X**	**%**	**Failed**	**X**	**%**
01A101b	01A101b Single Product-Oriented WBS (M) V3.3	-	-1		-	-1		-	-1	
01A201a	01A201a Complete SOW in WBS (M) V3.3	-	-1	-1%	-	-1	-1%	-	-1	-1%
02A101a	02A101a Single OBS (M) V3.3	-	-1		-	-1		-	-1	
02A102a	02A102a Major Subs Identified (M) V3.3	-	-1	-1%	-	-1	-1%	-	-1	-1%
03A101a	03A101a CA PoP (IMS vs WAD) V3.4	T	3	38%	F	0	0%	F	0	0%
03A101c	03A101c CA BAC (WAD vs EV Tool) V3.4	T	6	100%	T	6	100%	T	6	100%
03A101e	03A101e WP EV %C (IMS vs EV Tool) V3.4	F	0	0%	T	5	17%	T	5	17%
03A101f	03A101f WP POP (IMS vs EV Tool) V3.4	T	10	37%	T	9	32%	T	9	35%
03A101g	03A101g CA PoP (WAD vs EV Tool) V3.4	T	2	33%	F	0	0%	F	0	0%
03A101h	03A101h CA OBS (IMS vs EV Tool) V3.4	F	0	0%	F	0	0%	F	0	0%
03A101i	03A101i CA WBS (IMS vs EV Tool) V3.3	F	0	0%	T	0	0%	F	0	0%
03A102a	03A102a CA EVM (Sub vs Prime) (M) V3.3	-	-1	-1%	-	-1	-1%	-	-1	-1%
03A103a	03A103a Forecast Dates (Sub vs Prime) (M) V3.3	-	-1	-1%	-	-1	-1%	-	-1	-1%
03A103b	03A103b Baseline Dates (Sub vs Prime) (M) V3.3	-	-1	-1%	-	-1	-1%	-	-1	-1%
04A101a	04A101a Indirect Cost Management (M) V3.3	-	-1		-	-1		-	-1	
05A101a	05A101a CA Single OBS V3.3	F	0	0%	F	0	0%	F	0	0%
05A102a	05A102a CA Single CAM V3.3	F	0	0%	F	0	0%	F	0	0%
05A103a	05A103a CA Single WBS V3.3	F	0	0%	F	0	0%	F	0	0%
06A101a	06A101a WP/PP Have Tasks V3.3	T	9	25%	T	7	20%	T	7	21%
06A101a CA	06A101a CA SLPP Have Tasks V3.3	F	0	0%	F	0	0%	F	0	0%
06A101a WP	06A101a WP/PP Have Tasks V3.3	F	0	0%	F	0	0%	F	0	0%