

4-6 October, Nationals Park, Washington DC



Earned Value at the MOD

John Lister, Projects Director at RPC UK Ltd

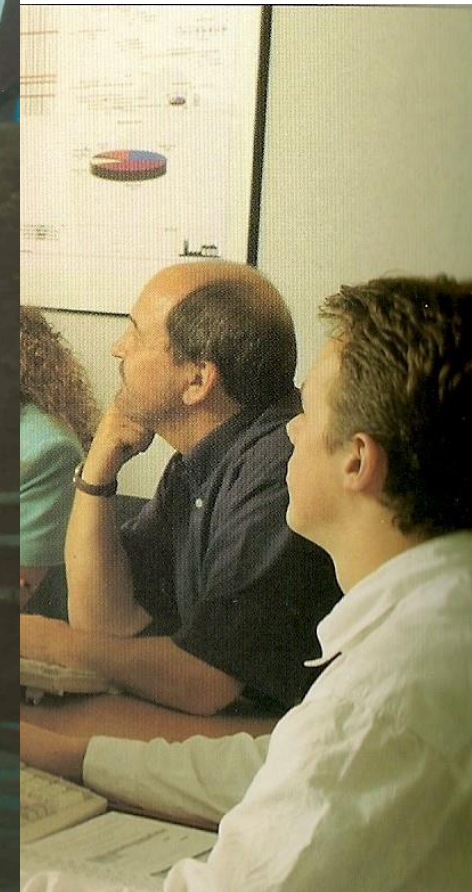


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2022



John Lister





Ministry
of Defence





£10

(£Bn) ANNUAL BUDGET



11,500

DE&S STAFF



150

DE&S SITES



600+

LIVE PROJECTS

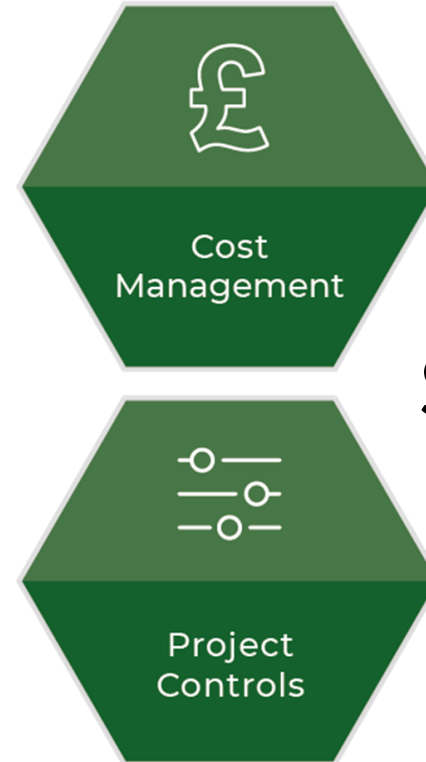
How did we get there



+

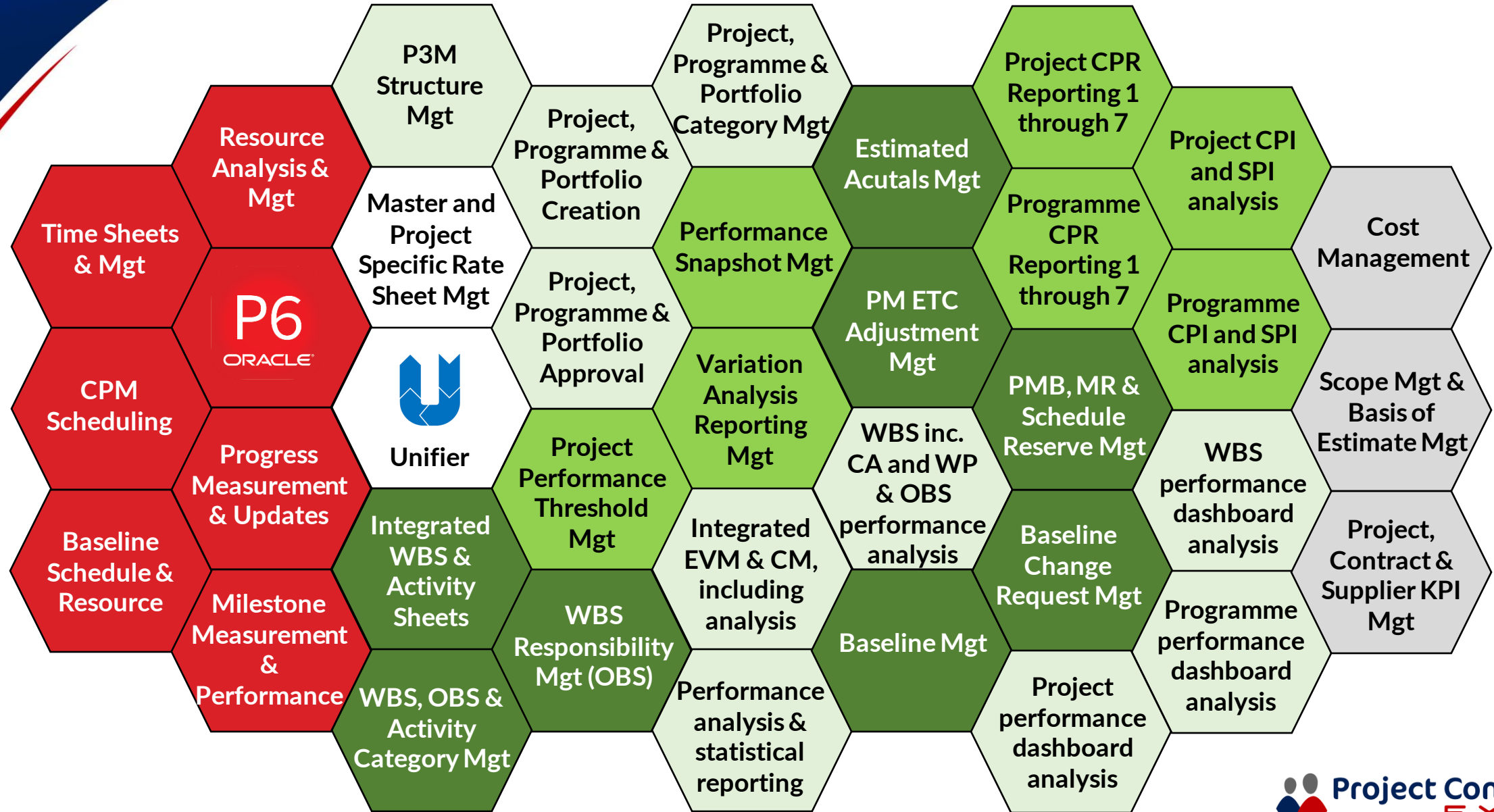


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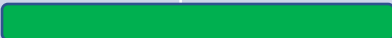

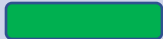




RPC
Solution
Sets

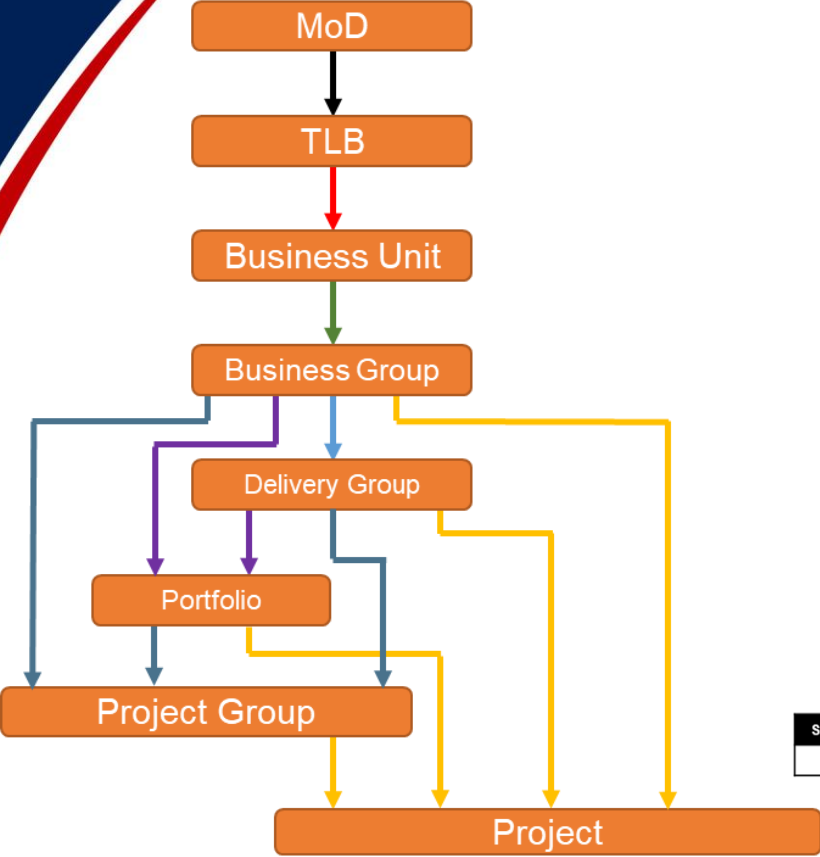




UK MoD case study

	2021	2022	2023
Discovery			
Rapid Prototype			
Earned Value Management			
Cost Management			
Project History and In Year Performance Management			
Project Management Capability Enhancements			
Solution Integration			

Accommodating Multi Functional, Level and Services Projects



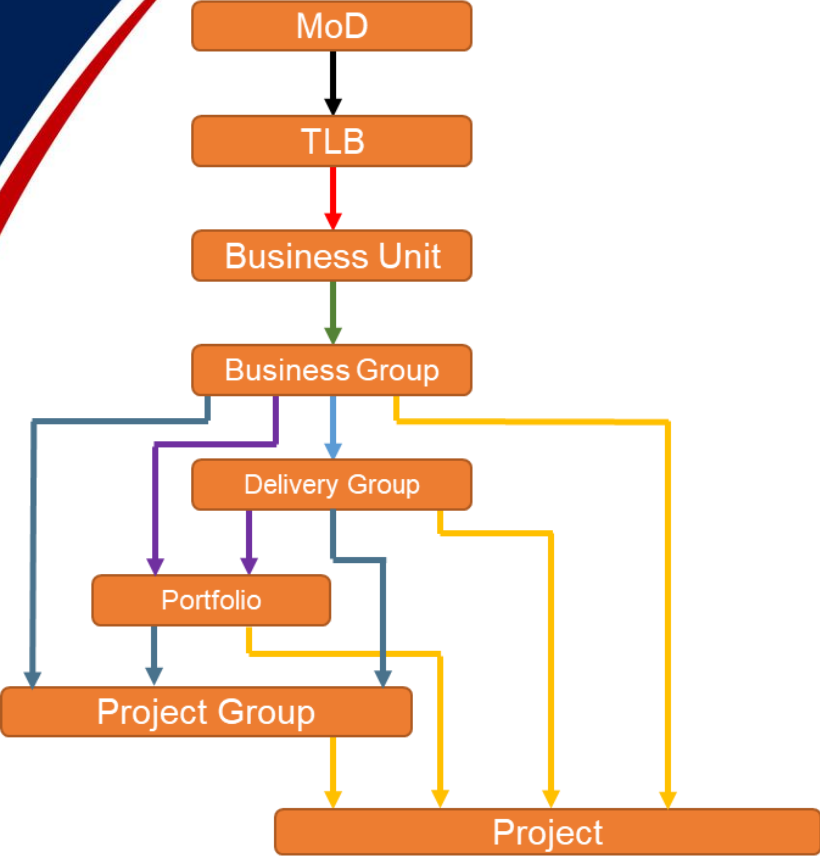
Basic Acquisition Project

Shell Type	Name / Description
MoD	MoD
TLB	DE&S
Portfolio	EPP Portfolio
Project Group	EPP Project Group

Shell Type and Capability Map		
Ref#	Shell Type	Capabilities Included
1	<All Shell Levels>	Summarised, via rollup of detailed immediate sub shell data, performance and analysis shell dashboard(s)
2	Business Unit	Shell structure creation capabilities via controlled workflows
3	Project	Integrated P6 Schedule Management including : 1. Many to one (P6 to Unifier) schedule to project mapping 2. Resource mapping 3. WBS mapping and management 4. Activity mapping
		WBS and CBS Earned Value Management including : 1. PMB and MR Distribution Management 2. EVM Analysis (including Estimated Actuals) 3. WBS and CBS Performance Variation Analysis 4. Project Manager adjustments to Value of Work and Estimate to Complete 5. Baseline Change Requests and Change Management
		CBS Cost Management including : 1. Controlled Cost Sheet complete with LPC to RAC mapping using CBS 2. Approval management for each separate project using Approval form and CBS to roll up cost, Review Notes, forecasting and Control Totals forecasting 3. In Year and Future Forecasting 4. Financial Risk Forecasting 5. Financial reporting and distribution
		CBS Expenditure Capture including : 1. Commitment integration and Commitment spend integration from Project Account (Project Sub-ledger) 2. Non-contracted spend integration from Project Account (Project Sub-ledger)
Project Management Enhancements 1. Basis of Estimate and scope definition 2. ISS Project KPI management, including CASP and SASP Milestone performance		



Accommodating Multi Functional, Level and Services Projects



Overarching Support Approval with separate pricing periods- Project

Shell Type	Name / Description
MoD	MoD

Shell Type	Name / Description
TLB	DE&S

Shell Type	Name / Description
Portfolio	

Shell Type	Name / Description	Reporting layer
Project Group	Project Group	

P6 PROJECT(S)

Cost/Approval Detailed reporting layer

Shell Type	Name / Description
Project	

Shell Type	Name / Description
Project	

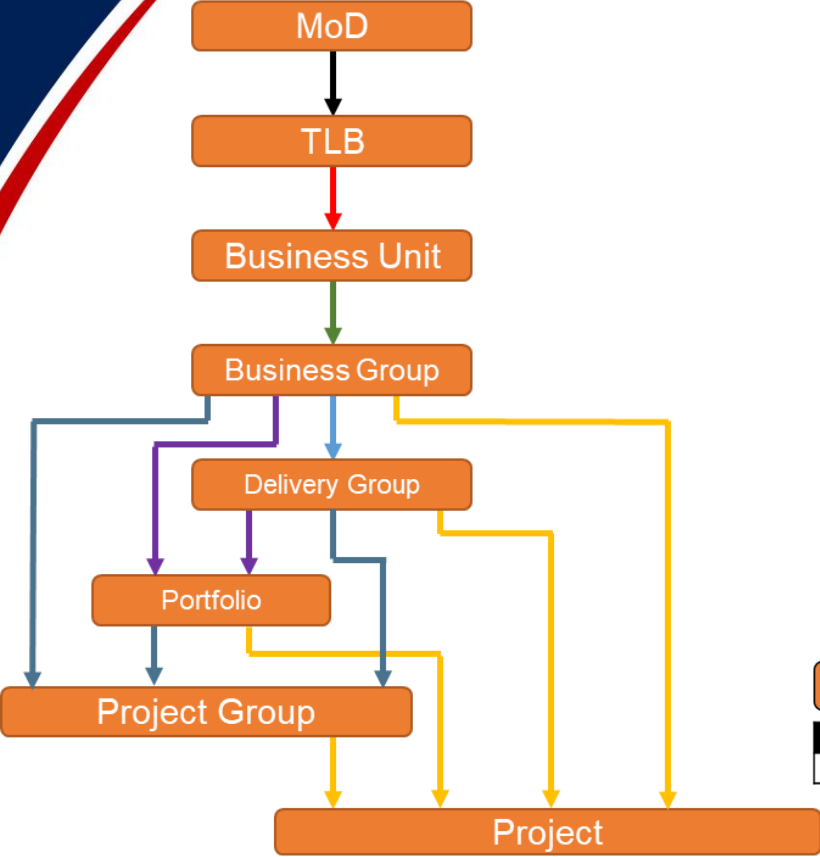
Shell Type	Name / Description
Project	

Shell Type	Name / Description
Project	

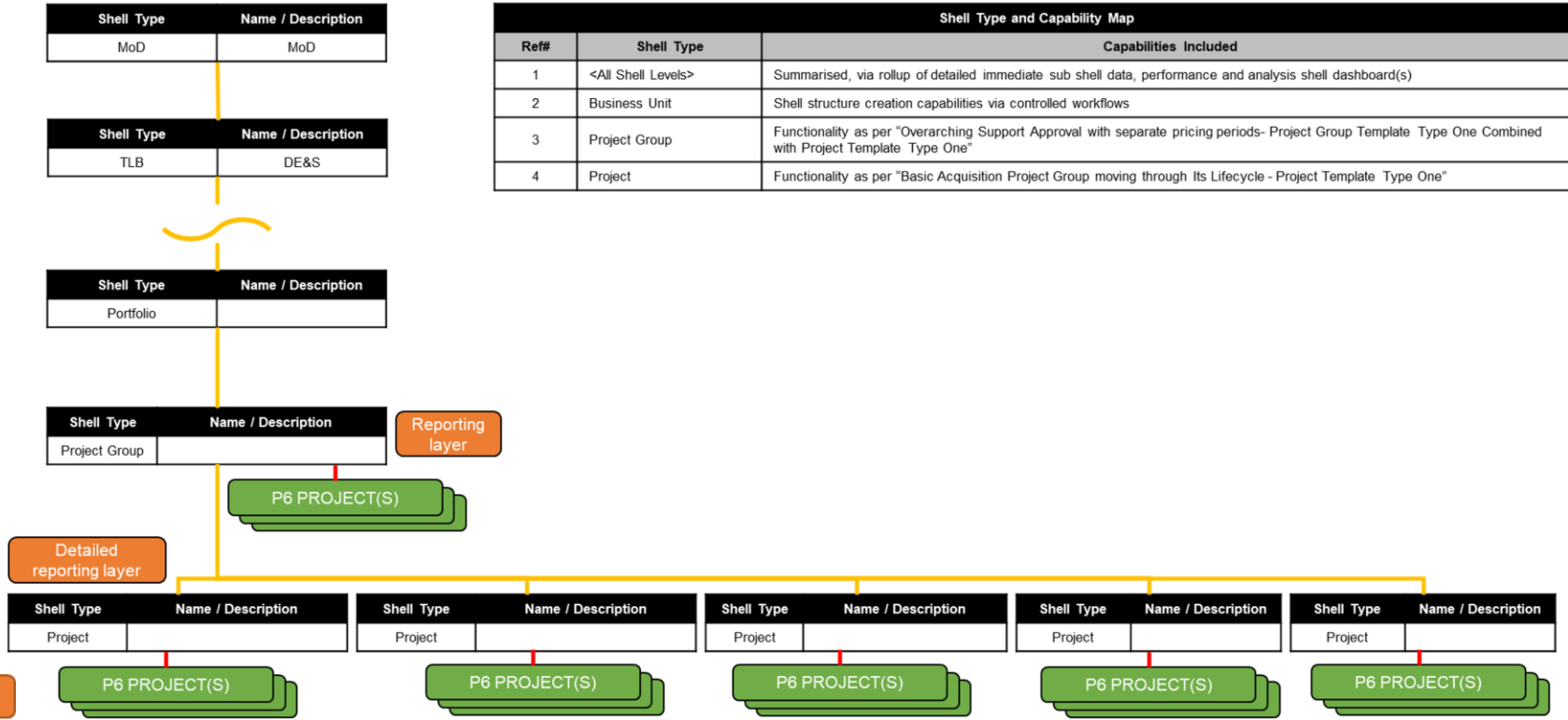
Shell Type	Name / Description
Project	

Shell Type and Capability Map		
Ref#	Shell Type	Capabilities Included
1	<All Shell Levels>	Summarised, via rollup of detailed immediate sub shell data, performance and analysis shell dashboard(s)
2	Business Unit	Shell structure creation capabilities via controlled workflows
3	Project Group	Integrated P6 Schedule Management including : 1. Many to one (P6 to Unifier) schedule to project mapping 2. Resource mapping 3. WBS mapping and management 4. Activity mapping
		WBS and CBS Earned Value Management including : 1. PMB and MR Distribution Management 2. EVM Analysis (including Estimated Actuals) 3. WBS and CBS Performance Variation Analysis 4. Project Manager adjustments to Value of Work and Estimate to Complete 5. Baseline Change Requests and Change Management
		Project Management Enhancements 1. Basis of Estimate and scope definition 2. ISS Project KPI management), including CASP and SASP Milestone performance
4	Project	Overarching Approval Management 1. Overarching Approval and any review notes held at this level with forecasting rolled up from Project shells
		CBS Cost Management including : 1. Controlled Cost Sheet complete with LPC to RAC mapping using CBS 2. Approval management for each separate project using Approval form and CBS to roll up cost, Review Notes, forecasting and Control Totals forecasting 3. In Year and Future Forecasting 4. Financial Risk Forecasting 5. Financial reporting and distribution
		CBS Expenditure Capture including : 1. Commitment integration and Commitment spend integration from Project Account (Project Sub-ledger) 2. Non-contracted spend integration from Project Account (Project Sub-ledger)

Accommodating Multi Functional, Level and Services Projects



Complex Framework Project with Multiple LOT and Service Categories



EVM System Capabilities

Information

Activity Manager

OBS Sheet

WBS Sheet

Rate Sheet

Activity Sheet

Cost Manager

Cost Sheet

Cash Flow

Earned Value Manager

Earned Value Analysis

Earned Value Analysis Report

Earned Value BP's

Baseline PMB, MR and SR Definition

Baseline Change Request

ACWP

PM ETC Adjustment Requests

PM ETC Adjustment

Performance Snapshot

Variance Analysis Report

Internal Functions

Reports

Earned Value Solution Delivered

OBS Sheet

PUID	Short Name	Full Name	Title	Departm...	User	Status
RD001	RD	Russell Dobson	Project Manager	IT	Russell Dobson	Active
NH001	NH	Neil Hogben	Manager	IT	Neil Hogben	Active
JB001	JB	James Bentley	Senior Technician	IT	James Bentley	Active
HW001	HW	Holly Wenman	Technical Engineer	IT	Holly Wenman	Active
RG001	RG	Russell Gable	Technical Engineer	IT	Russell Gable	Active

System WBS Sheet

Project: P6 - NH_TEST_PRJ_04-01-22_3

WBS Code	WBS Name	OBS	WBS Type
1	NH_TEST_PR...		
2	1 WBS0		WBS Element
3	1 WBS0.1	Holly Wenman	Control Account
4	2 WBS0.2	Russell Dobson	Control Account
5	1 WBS0.2.1	Holly Wenman	Work Package
6	1 WBS0.2.1.1		
7	3 WBS0.3		WBS Element
8	1 WBS0.3.1	Neil Hogben	Control Account
9	1 WBS0.3.1.1	Russell Gable	Planning Package
10	1 WBS0.3.1.1.1		
11	2 WBS1		WBS Element

General WBS Information

WBS Path

WBS Code: 1

WBS Name: WBS0.2.1

ETC Technique: 1 * (BAC - EV)

WBS Type: Work Package

Funding Type: EP Cost

Performance Measurement Type: EVM

Supplier: a Supplier

Responsibility

Cum. Earned Value Budget Management

Cum. Earned Value Performance

Earned Value Solution Delivered

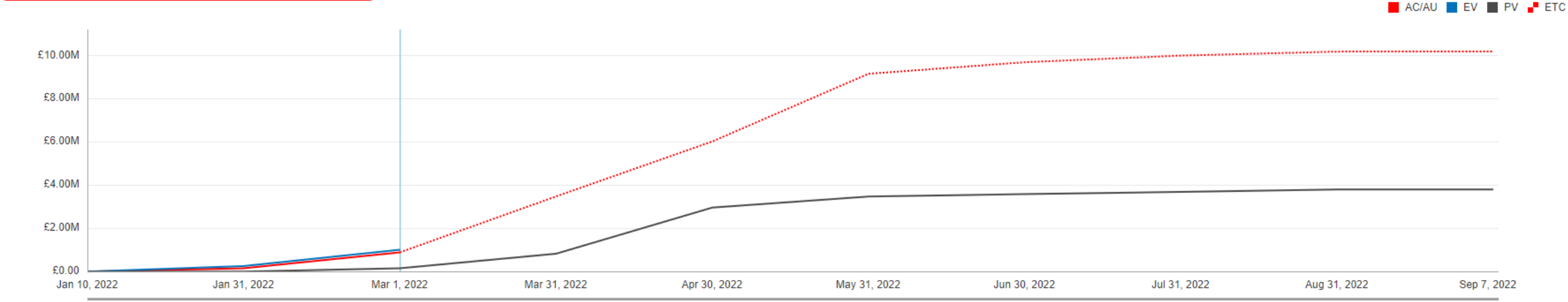
EV Sheet Earned Value Analysis

Period Standard Reporti... Projects PRJ-100004 WBS Type WBS Code Cost & Rate Type Standard | Direct

Apply Reset

Project	All	Date	PV	EV	AC/AU	ETC	RC/RU	EAC	CPI	SPI
WBS	-	03/01/2022	£156,962.03	£1,009,800.00	£888,602.67	£9,285,412.74	£9,295,208.02	£10,174,015.41	1.14	6.43
Cost & Rate Type	-									

Cumulative At Completion Variance Indices Incremental



Cumulative Values and Indices

Print Share Full Screen

Name	BAC	EAC	PV	EV	AC/AU	ETC	RC/RU	CV	SV	VAC	CPI	SPI	CSI	TCPI(EAC)	TCPI(BAC)
Overall Summary	£3,800,000.00	£10,183,810.69	£156,962.03	£1,009,800.00	£888,602.67	£9,295,208.02	£9,295,208.02	£121,197.33	£852,837.97	(£6,383,810.69)	1.14	6.43	7.31	0.3	0.96
PRJ-100004 MID INCR Data Verific...	£3,800,000.00	£10,183,810.69	£156,962.03	£1,009,800.00	£888,602.67	£9,295,208.02	£9,295,208.02	£121,197.33	£852,837.97	(£6,383,810.69)	1.14	6.43	7.31	0.3	0.96

Earned Value Solution Delivered

Baseline Change Request

General Impacted WBS Nodes Risks and Issues Key Milestones Assumptions Associated Projects Associated Project Groups

General Record Information

General Workflow Information

General Information

Initial Impact Assessment

- Scope
- Schedule
- Cost
- Related Risk
- Management Reserve
- Schedule Reserve
- Admin Change

Description

Indicative Cost Change £0.00

Indicative Schedule Change (days) 0

- Mandatory Requirement

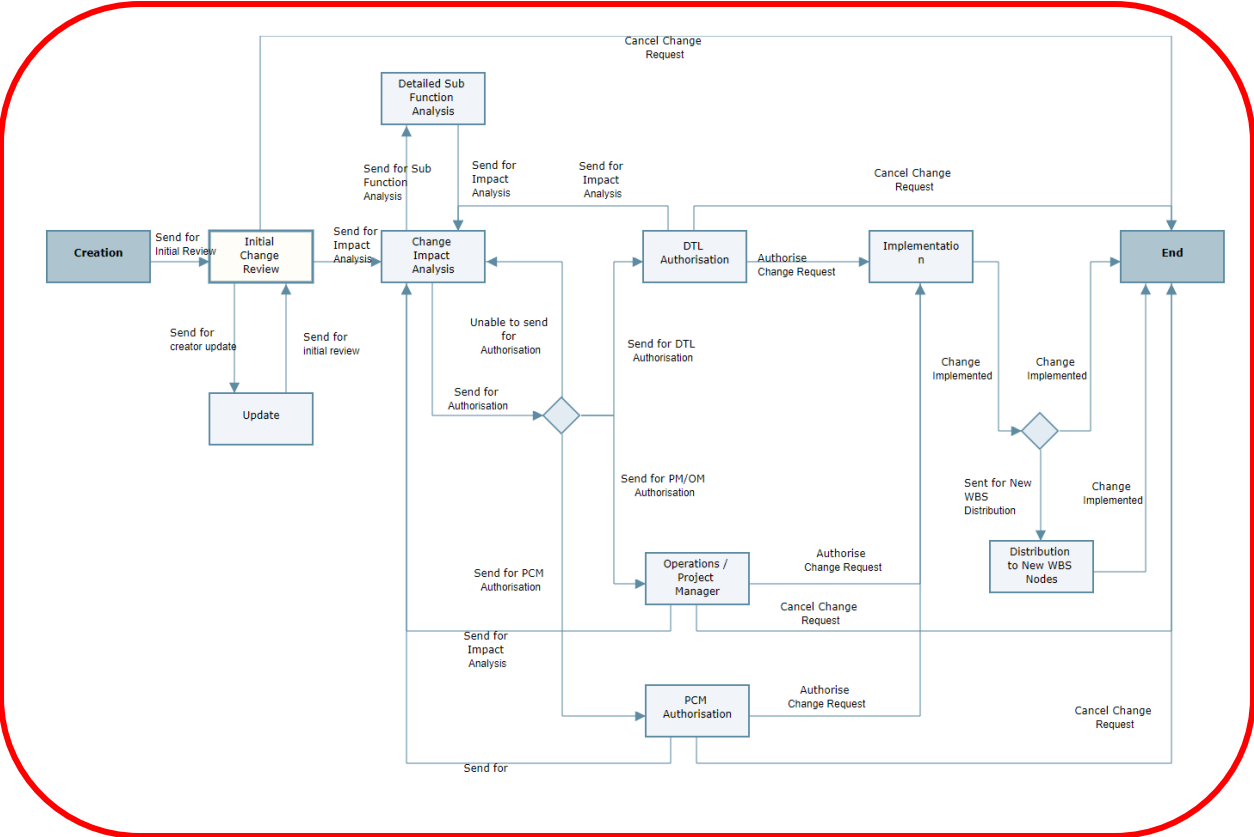
Description of Change

Comments

Posted by: Show All

Company Administrator MoD 08/23/2022 04:47 AM

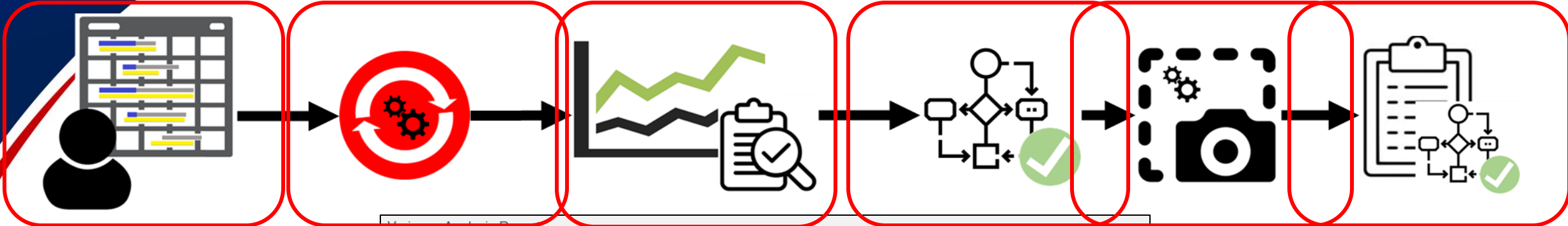
Impact assessment has been made during review period is incomplete and requires further action before proceeding



Audit Log: BCR-000001

Date	Event	Action	Field	Old Value	Audit Details
08/23/2022 04:47 AM	General Comments	Text comments:Impact as...			Date: 08/23/2022 04:47 AM
01/05/2022 08:05 AM	Auto Creation of "BCR SR B...	The Auto Creation condi...	BCR SR Budget ...		Project Name
01/05/2022 08:05 AM	Auto Creation of "BCR PMB ...	The Auto Creation condi...	BCR PMB and M...		Event: General Comments
01/05/2022 08:05 AM	Auto Creation of "BCR DB an...	The Auto Creation condi...	BCR DB and UB ...		Action: Text comments:Impact assessment has been made during review peri...
01/05/2022 08:05 AM	Workflow>Creation	Send for Initial Review	Send to		Attachment

Earned Value Solution Delivered



Variance Analysis Report

General Additional Information Items

- General Record Information
- General Workflow Information
- WBS Additional Information
- WBS Responsibility Information
- Current Period Performance
- Cumulative Performance
- At Completion

Period SV/SPI Variances

<input type="checkbox"/> Period SPI Lower Threshold Breached	<input checked="" type="checkbox"/> Period SPI Upper Threshold Breached	<input type="checkbox"/> Period SV Lower Threshold Breached	<input type="checkbox"/> Period SV Upper Threshold Breached
Period EV: 85.00	Period PV: 45.00	Period SV: 40.00	Period SPI: 1.89

Period SV Impact, Analysis and Corrective Actions

Period CV/CPI Variances

Reference Records

Type	Ref No.	Title/User Name	Business Process
VAR	VAR-000270		Variance Analysis
SS	SS-000066		Performance Sna
RP	RP-000001		Reporting Period

Total: 3

Earned Value Solution Delivered

EVM System Reporting Capabilities

- Bullseye CPI and SPI Chart
- CPI Top 3 Projects Report
- SPI Top 3 Projects Report
- CPR 1 Currency Report
- CPR 1 Units Report
- CPR 2 Currency Report
- CPR 2 Units Report
- CPR 3 Currency Report
- CPR 4 Units Report
- CPR 5 VAR Report
- CPR 7 Currency Report
- EVM Performance Dashboard
- EAC TCPI Report
- VAC Top 3 Projects Report

WBS SPREAD DASHBOARD

Number: PRJ-100003 | Date Date: 01/03/2022
 Name: (EVM) PRJ04 - Test | Period Start Date: 01/02/2022
 FINANCIAL PERIODS | Period Finish Date: 28/02/2022
 Run Date: 23/08/2022

	EP PMB	PSS PMB	OPEX PMB	TOTAL PMB	MR
ORIGINAL:	£50,000.00	£100,000.00	£100,000.00	£300,000.00	£200,000.00
DELTA / CHANGE:	£13,015.00	£12,025.00	£14,015.00	£39,055.00	£14,060.00
NEW / REVISED:	£63,015.00	£112,025.00	£184,015.00	£339,055.00	£214,060.00
DISTRIBUTED:	£14,020.00	£13,005.00	£15,025.00	£42,050.00	£17,060.00
UNDISTRIBUTED:	£48,995.00	£99,020.00	£148,990.00	£297,005.00	£197,000.00

PERFORMANCE DATA

WBS Name	WBS Type	Funding Type	EV	PV	AC	SV	CV	SI	CR	EV	PV	AC	SV	CV	SI	CR	BAC	ETC	EAC	VAC	TCPI(BAC)
WBS0.2	Current Account	PSS Cost	£85,680	£45,380	£36,584	£40,300	£49,096	1.89	2.34	£85,680	£40,300	£5,940	£5,940	£24,400	1.06	1.40	£100,800	£15,120	£71,400	£29,400	0.38
TOTAL	TOTAL	TOTAL	£85,680	£45,380	£36,584	£40,300	£49,096	1.89	2.34	£85,680	£40,300	£5,940	£5,940	£24,400	1.06	1.40	£100,800	£15,120	£71,400	£29,400	0.38

SPI v CPI TREND REPORT

SPV v CPI by Project

PRJ_NUMBER PRJ-100003

PROJECT EAC/TCPI REPORT

Number: PRJ-100003 | Date Date: 01/03/2022
 Name: (EVM) PRJ04 - Test | Period Start Date: 01/02/2022
 FINANCIAL PERIODS | Period Finish Date: 28/02/2022
 Run Date: 23/08/2022

	EP PMB	PSS PMB	OPEX PMB	TOTAL PMB	MR
ORIGINAL:	£50,000.00	£100,000.00	£150,000.00	£300,000.00	£200,000.00
DELTA / CHANGE:	£13,015.00	£12,025.00	£14,015.00	£39,055.00	£14,060.00
NEW / REVISED:	£63,015.00	£112,025.00	£164,015.00	£339,055.00	£214,060.00
DISTRIBUTED:	£14,020.00	£13,005.00	£15,025.00	£42,050.00	£17,060.00
UNDISTRIBUTED:	£48,995.00	£99,020.00	£148,990.00	£297,005.00	£197,000.00

PERFORMANCE DATA (CUMULATIVE)

WBS Name	Funding Type	SV	CV	SI	CR	BAC	EAC	PM EAC	IEAC1	IEAC2	IEAC3	TCPI(BAC)	TCPI (PM EAC)
WBS0.2	PSS Cost	£5,940	£24,400	1.06	1.40	£100,800	£71,400	£76,400	£72,080	£71,460	£72,431	1.00	0.38 (1.00)

COST PERFORMANCE REPORT (CPR) 1 - CURRENCY - HIERARCHY REPORTING LEVEL

Run Date: 23/08/2022

Project Group	Period Start	Period End	EV	PV	AC	SV	CV	SI	CR	EV	PV	AC	SV	CV	SI	CR	BAC	ETC	EAC	VAC	TCPI (BAC)
RD_PG_001	01/02/2022	28/02/2022	£108,360	£129,360	£63,000	£21,000	£46,360	0.64	1.72	£221,760	£239,200	£163,800	£13,440	£67,960	0.94	1.35	£453,600	£0	£395,840	£57,760	0.80

COST PERFORMANCE REPORT (CPR) 2 - CURRENCY

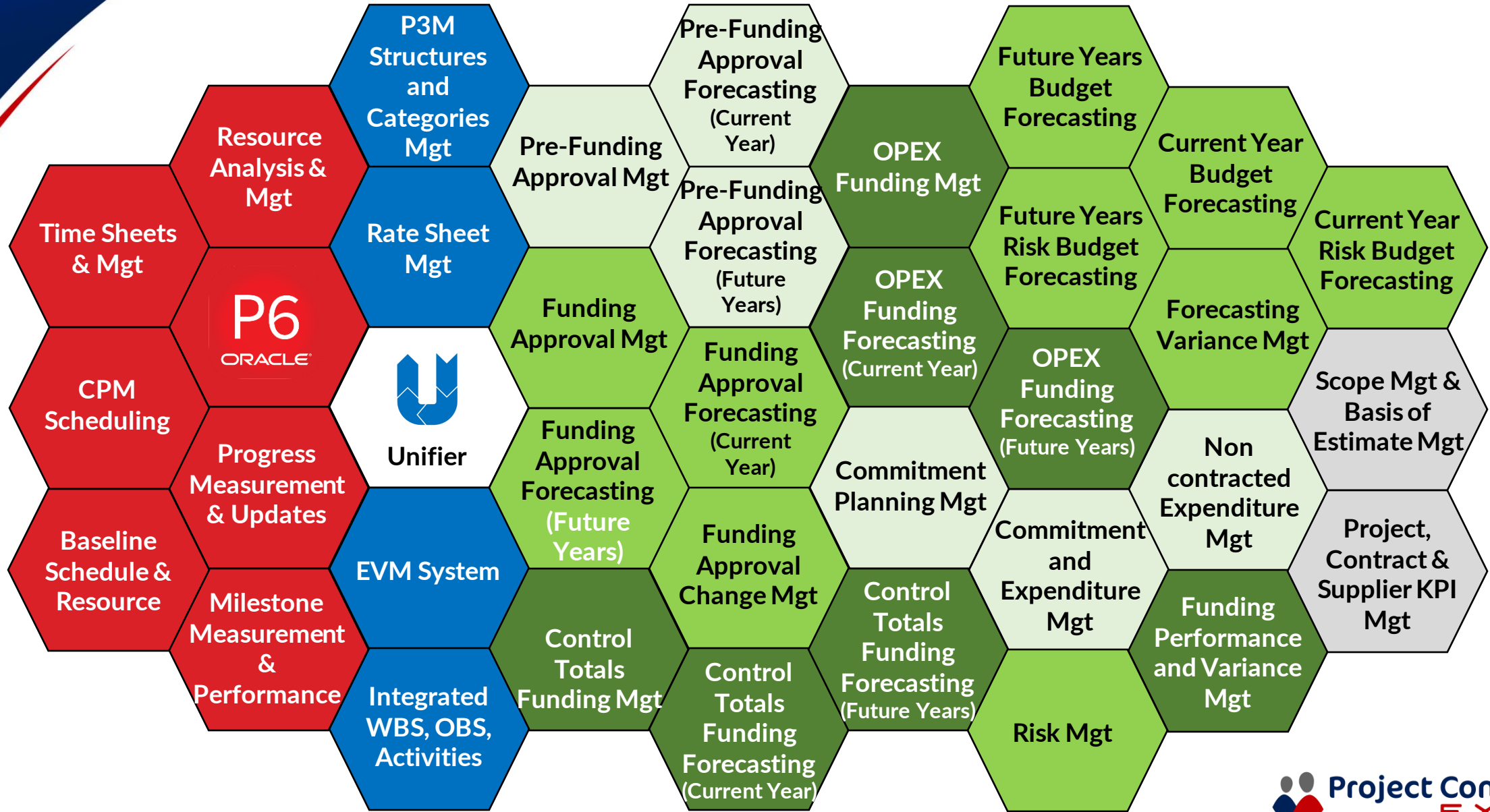
FORMAT 2 - ORGANISATIONAL BREAKDOWN STRUCTURE

Number: PRJ-100003 | Date Date: 01/03/2022
 Name: (EVM) PRJ04 - Test | Period Start Date: 01/02/2022
 FINANCIAL PERIODS | Period Finish Date: 28/02/2022
 Run Date: 23/08/2022

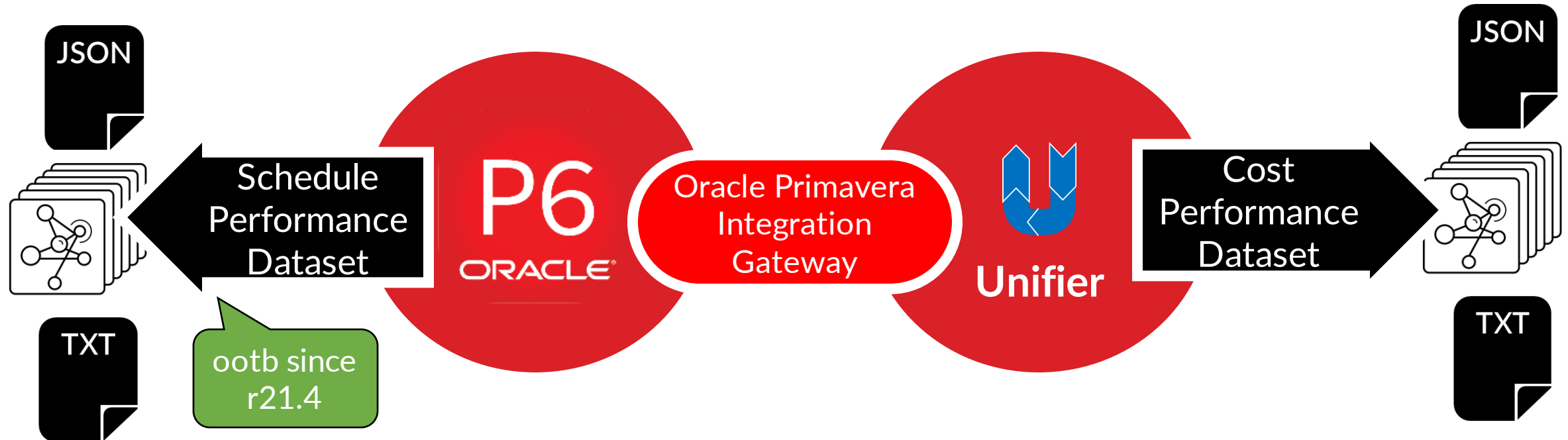
	EP PMB	PSS PMB	OPEX PMB	TOTAL PMB	MR
ORIGINAL:	£50,000.00	£100,000.00	£150,000.00	£300,000.00	£200,000.00
DELTA / CHANGE:	£13,015.00	£12,025.00	£14,015.00	£39,055.00	£14,060.00
NEW / REVISED:	£63,015.00	£112,025.00	£164,015.00	£339,055.00	£214,060.00
DISTRIBUTED:	£14,020.00	£13,005.00	£15,025.00	£42,050.00	£17,060.00
UNDISTRIBUTED:	£48,995.00	£99,020.00	£148,990.00	£297,005.00	£197,000.00

PERFORMANCE DATA

OBS - WBS	WBS Name	Funding Type	EV	PV	AC	SV	CV	SI	CR	EV	PV	AC	SV	CV	SI	CR	BAC	ETC	EAC	VAC	TCPI(BAC)
Niel Hopfen	WBS0.2	PSS Cost	£85,680	£45,380	£36,584	£40,300	£49,096	1.89	2.34	£85,680	£40,300	£5,940	£5,940	£24,400	1.06	1.40	£100,800	£15,120	£71,400	£29,400	0.38
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IPMDAR Adoption



DCMA EVMS Compliance Metrics



Oracle Primavera Reporting and Analytics

P6
ORACLE®

Oracle Primavera
Integration
Gateway



Unifier



THANK YOU