Project Controls Solution at BAE Systems Land UK





Director TPG The Project Group UK& Ireland

- Over 25 years delivering Project Solutions
- Experience delivering in Aerospace, Defence, Pharma, and Government sectors



Peter O'Neill





Senior Consultant

- 15 years designing, delivering and supporting project management toolsets
- Microsoft Certified Trainer, PRINCE2 and MSP Practitioner



Anthony Allen



TPG The Project Group at a glance

International Experts for Enterprise-Wide Project Control solutions

- Defining and implementing your PPM strategy
- Designing and establishing your PPM solution
- Coaching and operating your solution long-term
- Focus on digital transformation and integration
- Increasing your PPM maturity







TPG Customers

















TPG UK Defence Customers

Extensive experience delivering PPM solutions within the Aerospace and Defence for over 20 years.



















inmarsat









TPG Global Presence







BAE SYSTEMS

BAE Systems

BAE Systems provides some of the world's most advanced, technology-led defence, aerospace and security solutions. With a skilled workforce of 89,600 people in more than 40 countries BAE Systems work with customers and local partners to develop, engineer, manufacture, and support products and systems delivering military capability, protecting national security and people, and keeping critical information and infrastructure secure





All images Copyright 2021 BAE Systems - All rights reserved





BAE SYSTEMS BAE Systems Land UK

BAE Systems Land UK design, manufacture, upgrade, and support combat vehicles and provide ammunition, precision munitions, artillery systems and missile launchers to a global customer base





All images Copyright 2021 BAE Systems – All rights reserved



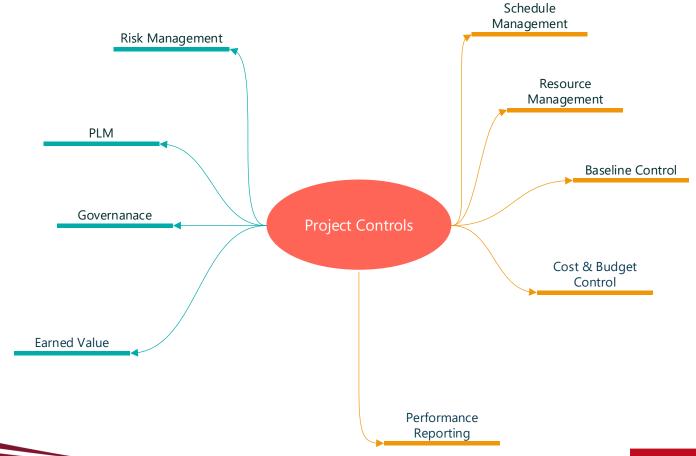


TPG Project Controls Challenge at BAE Systems Land (UK)





Established, world class Project Controls Processes and Governance







...running on a mix of technical platforms





The Challenge:

Build and deploy an Integrated Project Controls solution

The solution needed to be:

- Fully integrated (no manual treatment or transfer of data)
- Scalable for large projects and volumes of users
- Offer Intuitive User experience
- Tailorable depending on Project type and scale
- Offer comprehensive reporting and dashboards





Drivers

- Remove excel and 'cottage industries' around reporting
- Standardise definition and reporting outputs across the organisation
- Shift focus from analysing data and inputs to analysing outputs
- Improve speed and quality of decision making
- Improve change control across Projects
- Support trending
- Easily consolidate data by Project, Program, Portfolio and other attributes based on the single source of truth





Design principles

- Leverage existing investments in Technology stack
- Leverage existing investment in middle ware
- Deliver proven, configurable integration with systems
 e.g. SAP, Predict!, Cobra and in- house, bespoke
 systems
- Proven to be stable and scalable
- 'Configuration, not-code' design principle, reducing complexity and increasing supportability





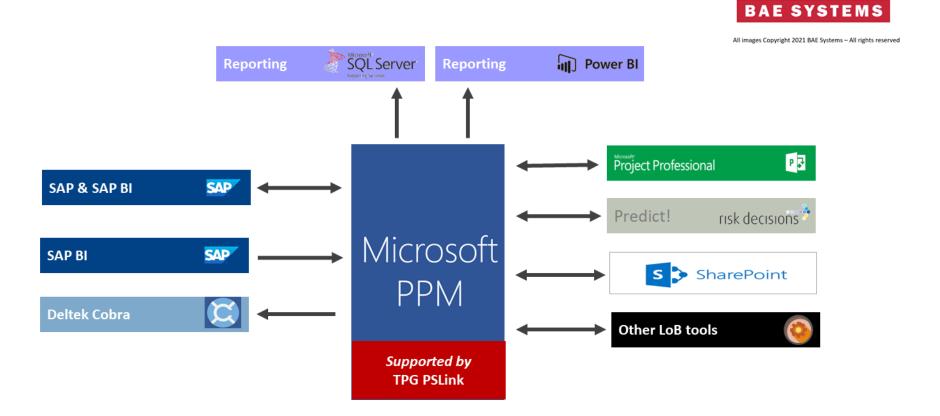
Approach

- Process: Well defined and understood, champions in the business
- People: Toolset training augmented process training using a variety of media
- Toolset: designed, fully tested met and exceeded all functional and non-functional requirements





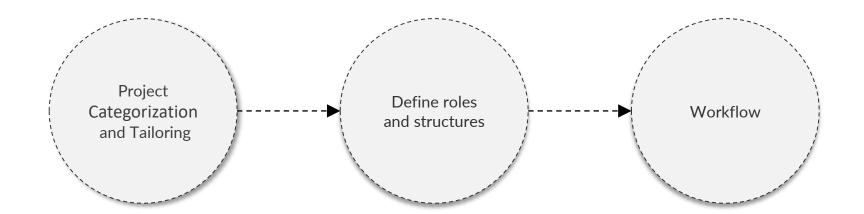
The solution







Project Set up and Governance









BAE SYSTEMS

All images Copyright 2021 BAE Systems - All rights reserved

Project Categorisation

Project Site Home Project Hub Home Project Centre / EDIT LINKS

Categorisation Guidance:

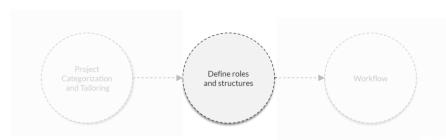
- . The Project should be categorised as FULL if any of the descriptors in the Full (High) column apply to the project.
- If no Full descriptors apply, the Project should be categorised as TAILORED if more than one of the descriptors in the Tailored (Medium) column apply to the Project. Where there are several Tailored descriptors relevant to the Project, the PNI(OH should consider whether the Project should move to FULL. As a guideline three descriptors may combine to make a FULL project. This release on the expensione & knowledge of the team involved to make an informed judgement.
- Where no Full or Tailored descriptors apply the Project is LITE.

Click for Existing Categorisation

Criteria	Descriptor	High	Medium	Low	Justification
	A Product or Service that could cause unacceptable safety risk to users.				
Product Safety				1	
	The risk that the project will not achieve its objectives due to risks which arise in the integration of critical technologies and / or sub-systems dependant on them.				
Technical					
	To ensure that the product conforms to the relevant Product Security				







BAE SYSTEMS

All images Copyright 2021 BAE Systems – All rights reserved

Project Roles

Add New

User	Role		
.##### Matt (UK)	Additional BAF Approver	Edit	Delete
'##### Lucy (UK)	Edit	Delete	
####### David ##### (UK)	Finance Manager	Edit	Delete
\####### David \##### (UK)	Project Accountant	Edit	Delete
###### Matt (UK)	Project Manager	Edit	Delete









All images Copyright 2021 BAE Systems - All rights reserved

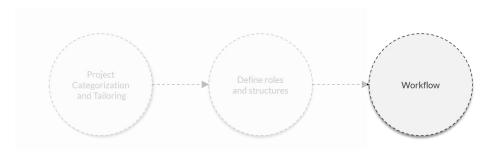
Control Accounts

WBS Description	WBS	OBS	OBS Code	CAM	Status	
Phase 7 - ##### Supply Uplift	1.#####.7	Portfolio Manager	BA.M.10000.10001.10002	##### Matt (UK)	Approved	Delete
Phase 6 - ##### Supply	1.#####.6	Portfolio Manager	BA.M.10000.10001.10002	##### Matt (UK)	Approved	Delete
Phase 5 - Core and Support Activity	1,####.5	Portfolio Manager	BA.M.10000.10001.10002	##### Matt (UK)	Approved	Delete
Phase 4 - Qual Test and Assessment	1,#####.4	Portfolio Manager	BA.M.10000.10001.10002	##### Matt (UK)	Approved	Delete
Phase 3 - ##################################	1.#####.3	Portfolio Manager	BA.M.10000.10001.10002	##### Matt (UK)	Approved	Delete
Phase 2 - Development of Qual Hardware	1.####.2	Portfolio Manager	BA.M.10000.10001.10002	##### Matt (UK)	Approved	Delete
Phase 1 - Project Launch	1.####.1	Portfolio Manager	BA.M.10000.10001.10002	##### Matt (UK)	Approved	Delete
*************	1.#####	Portfolio Manager	BA.M.10000.10001.10002	##### Matt (UK)	Approved	Delete

Export







BAE SYSTEMS

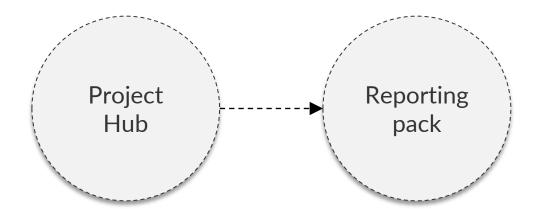
All images Copyright 2021 BAE Systems - All rights reserved

Workflow Stage Status: Sample Project

(① Status: Checked-in Last Modified: 12/10/2021 16:09											
Wo	orkflo	w Status						O4 - Executi	00			
								-				
01	- Initiation	n	02 - Definition	0.	3 - Mobilisation		02 - Project Change Request	01	1 - Project Execution			
Wo	Current Worldlow Stage: 01 - Project Execution Workflow Stage Status Awaiting submission to next stage.											
ΘA	II Work	kflow Stages										
Wo	rkflow 5	Stage status may not show current info	ormation until the project is either Su	bmitted or the page i	is Refreshed.							
			. ,						-			
L		Stage	State	Entry Date	Completion Date	Status Info						
\vdash												
\vdash	~	01 - Inquiry Details	Completed	14/05/2020 11:59	14/05/2020 12:00							
\perp												
L	~	01 - Project Categorisation	Completed	14/05/2020 12:00	14/05/2020 12:00							
L	~	02 - Project Definition Creation (S.	Completed	14/05/2020 12:00	14/05/2020 12:00							
		 Workflow Phase: 03 - Mobilisation 										
	~	01 - Control Account Creation / A	Completed	14/05/2020 12:00	14/05/2020 12:00							
		02a - Integrated Baseline Review	Not Started									
	~	02b - Baseline Approval	Completed	14/05/2020 12:00	14/05/2020 12:01							
	V	03 - Budget Authorisation	Completed	14/05/2020 12:01	14/05/2020 12:01							
	÷	01 - Project Execution	In Progress (Waiting for Input)	05/11/2020 09:40	26/10/2020 16:55	Awaiting submission t	o next stage.					
	V	02 - Project Change Request	Completed	26/10/2020 16:55	05/11/2020 09:40							



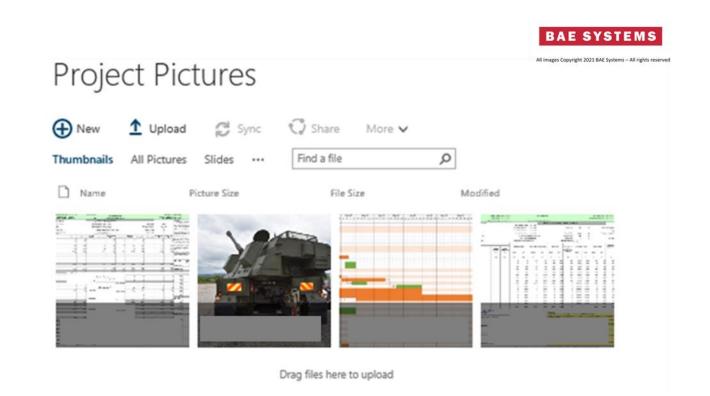








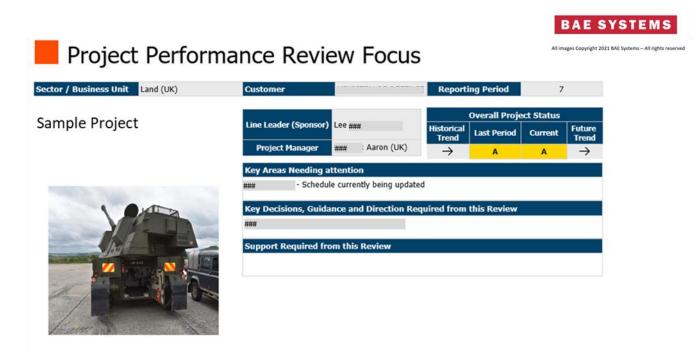






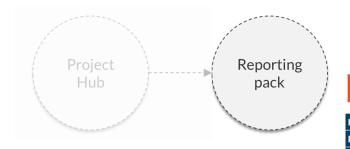












BAE SYSTEMS

All images Copyright 2021 BAE Systems — All rights reserved

Project Contract Summary

Project Name	#####	Reporting Period	7	Price Type	Firm
Business Unit	Land (UK)	Original Contract Value	£.#####	System Design Authority	Steve #####
Customer		Current Contract Value	£.#####	Project/Contract Type	#####
End User	, 1	Contract Start	17/12/2018	Internal Order Number	#####
Project Manager	##### Aaron (UK)	Contract Finish	31/12/2022	Forecast Finish	07/03/2023
Line Leader	Lee #####	% Internal Trading		Special Conditions	
Offset		Site Location	.#####	Warranty	
Product Trading Risk		Payment Terms		Liquidated Damages	
Significant Project Changes		Currency	Sterling	% Subcontract	



Narrative / Key Takeaways

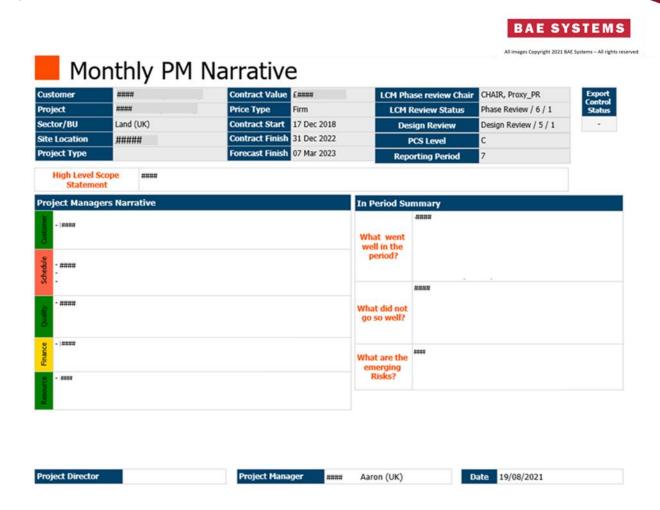
Overall Project RAG Status: AMBER

Cost Challenge on the project significant and new schedule required due to project issues.

















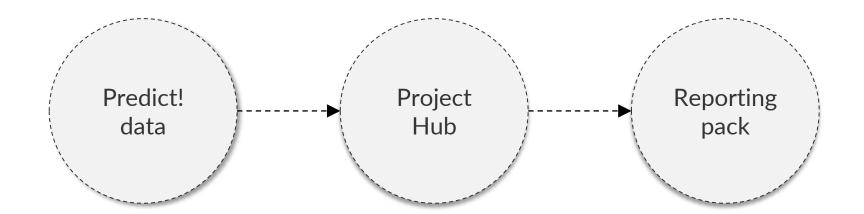
BAE SYSTEMS

All images	Conveight 2	2021 BAF	Systems -	All rights (reserved

Baseline Change Control List	-3	-2	-1	Current	Future Trend
Baseline Change Control	G	G	G	G	\rightarrow
Business Benefits List	-3	-2	-1	Current	Future Trend
Business Benefits					-
Customer Satisfaction List	-3	-2	-1	Current	Future Trend
Customer Satisfaction	G	G	A	G	\rightarrow
Delivered Quality List	-3	-2	-1	Current	Future Trend
Delivered Quality	G	G	G	G	\rightarrow
Management Of SHE and Product Safety List	-3	-2	-1	Current	Future Trend
Management Of Product Safety	G	G	G	G	\rightarrow
Management Of Project Quality	G	G	G	G	\rightarrow
Management Of SHE	G	G	G	G	\rightarrow
Project KPI's List	-3	-2	-1	Current	Future Trend
KPI - Cost Challenge Uplift	А	Α	А	А	\rightarrow
KPI - Project Payment Milestones	G	G	G	G	\downarrow
KPI - Project Resources	G	G	G	G	\rightarrow
Technical Maturity List	-3	-2	-1	Current	Future Trend
Technical Maturity	G	G	G	G	\rightarrow

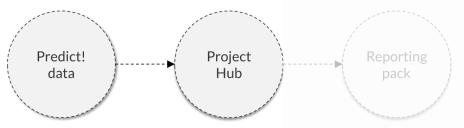






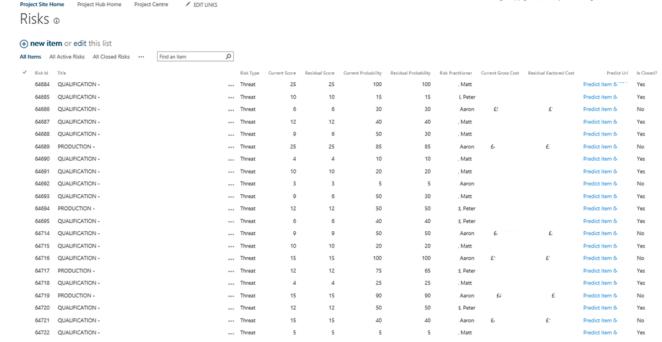






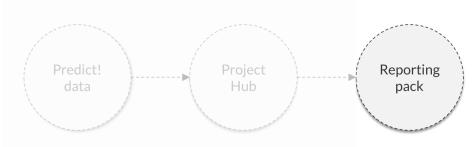


All images Copyright 2021 BAE Systems - All rights reserved



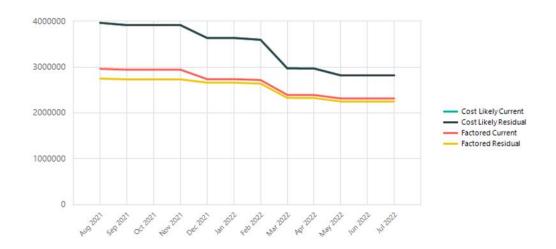








Risk Waterfall



Narrative / Key Takeaways





Predict! Project Hub Reporting pack

Risk Management

BAE SYSTEMS

All images Copyright 2021 BAE Systems - All rights reserved

Risk Management

ID	Risk	Mitigation Strategy	Current Score	Residual Score	Cur. Gross Cost	Res. Factored Cost	Status
6####	###### Performance not achieved	******	25	25	£#####	£#####	Active
6####	Project Cost Challenge	#####	25	25	£#####	£#####	Active
7####	#####	#####	25	25	£#####	£#####	Active
6####	PRODUCTION - Additional Tooling Costs	#####	16	16	£#####	£#####	Active
6 ####	QUALIFICATION - Unsatisfactory Trial Results Bishopton	******	15	15	£#####	£######	Active
6####	PRODUCTION - Manufacturing Delays		15	15	£####	£####	Active
6####	QUALIFICATION - Assembly Quality Issues		15	15	£#####	£#####	Active
6####	BREXIT - Port delays	#####	15	15	£0	£0	Active
6####	PRODUCTION - Increase in Supply Chain costs	******	15	15	£#####	£;#####	Active
6####			15	15	£#####	£#####	Active
		Top 10 Total			£:#####D	£.#####	
		All Total			£:#####0	£##### 0	

Narrative / Key Takeaways

No change in month.









All images Copyright 2021 BAE Systems - All rights reserved

Opportunity Management

ID		Opportunity		Current Score	Residual Score	Cur. Gross Value	Res. Factored Value	Status
6(###	###			20	8	£:###	£:###	Active
6###!	###			15	15	£7,###	£:###	Active
6,###	###			12	12			Active
6(###	###			10	6	£###	£###	Active
6(###	###			10	6	£###	£:###	Active
			Top 10 Total			£3###	£###	
			All Total			£:###	£###	

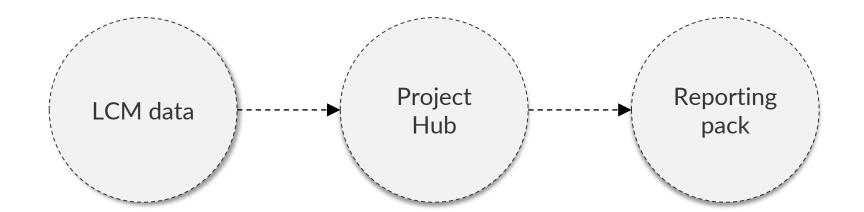
Narrative / Key Takeaways

No change in month.



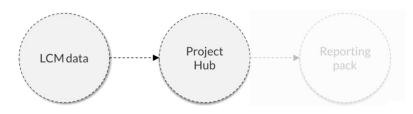


Lifecycle Management









Lifecycle Management

BAE SYSTEMS

All images Copyright 2021 BAE Systems – All rights reserved

LCMS Reviews & Actions

Reviews											
Review Type	Phase	Iteration	Review Chairperson	Baseline Date	Planned Date	Held Date	Completed Date	Result	Status	Acknowledged Date	Open Actions Coun
Phase Review	6	1	CHAIR, Proxy_PR	30 Apr 2021	27 Aug 2021				Work In Progress		0
Phase Review	5	1	CHAIR, Proxy_PR	13 Jul 2020	21 Aug 2020	16 Oct 2020	02 Nov 2020	Pass	Locked	04 Nov 2020	0
Design Review	5	1	### Andrew	22 Feb 2021	02 Sep 2021				Work In Progress		2
Design Review	5	1	### Andrew	13 Jul 2020	17 Aug 2020	17 Aug 2020	12 Oct 2020	Pass	Locked	16 Oct 2020	0
Phase Review	4	2	CHAIR, Proxy_PR	07 Apr 2020	07 Apr 2020	07 Apr 2020	21 May 2020	Pass	Locked	21 May 2020	0
Phase Review	4	1	CHAIR, Proxy_PR	06 Jan 2020	19 Dec 2019	19 Dec 2019	14 Jan 2020	Fail	Locked	10 Mar 2020	0
Design Review	4	1	### Andrew	23 Mar 2020	19 Dec 2019	19 Dec 2019	29 Jan 2020	Pass	Locked	09 Apr 2020	0
Design Review	3B	2	### Andrew	04 Oct 2019	04 Oct 2019	04 Oct 2019	13 Nov 2019	Proceed	Locked	20 Nov 2019	0
Phase Review	3B	2	CHAIR, Proxy_PR	07 Oct 2019	07 Oct 2019	14 Nov 2019	25 Nov 2019	Proceed	Locked	25 Nov 2019	0
Design Review	38	1	### Andrew	31 Jul 2019	31 Jul 2019	05 Aug 2019	06 Aug 2019	Refer	Locked	27 Sep 2019	0
Phase Review	3B	1	CHAIR, Proxy_PR	31 Jul 2019	31 Jul 2019	05 Aug 2019	03 Sep 2019	Refer	Locked	18 Sep 2019	0
Phase Review	3A	1	CHAIR, Proxy_PR	31 May 2019	31 May 2019	30 May 2019	25 Jun 2019	Proceed	Locked	02 Jul 2019	0
Design Review	3A	1	### Andrew	25 Apr 2019	30 May 2019	30 May 2019	08 Jul 2019	Proceed	Locked	27 Sep 2019	0
Phase Review	2C	2	CHAIR, Proxy_PR	06 Jan 2020	19 Dec 2019	14 Jan 2020	10 Mar 2020	Pass	Locked	13 May 2020	0
Design Review	2C	1	### Andrew	06 Jan 2020	19 Dec 2019	19 Dec 2019	29 Jan 2020	Pass	Locked	09 Apr 2020	0
Phase Review	2C	1	CHAIR, Proxy_PR	31 Jan 2019	31 Jan 2019	13 Feb 2019	04 Apr 2019	Refer	Locked	04 Jun 2019	0
Design Review	2B / 2C	1	#### James	01 Feb 2019	08 Nov 2018	18 Dec 2018	03 Jan 2019	Proceed	Locked	29 Jan 2019	0
Technical Bid Review	28	2	####### Gavin	30 Nov 2019	30 Nov 2019	01 Jan 2020	06 Jun 2020	Pass	Locked	07 Jul 2020	0
Phase Review	28	1	###### Andrew	31 May 2018	17 Dec 2018	11 Dec 2018	21 Jan 2019	Proceed	Locked	07 Feb 2019	0
Technical Bid Review	28	1	###### , Gavin	01 Feb 2019	08 Nov 2018	24 Oct 2018	27 Jan 2019	Pass	Locked	28 Jan 2019	0
Design Review	2A	2	#### James	23 Jan 2018	23 Jan 2018	01 Feb 2018	02 Mar 2018	Proceed	Locked	26 Nov 2018	0
Phase Review	2A	1	###### Andrew	22 Dec 2017	01 Feb 2018	01 Feb 2018	14 Aug 2018	Proceed	Locked	14 Aug 2018	0





LCM data Project Hub Reporting pack

Lifecycle Management

BAE SYSTEMS

All images Copyright 2021 BAE Systems - All rights reserved

Lifecycle Management

Overall	-3	-2	-1	0	Future Trend	RTG Date
LCM Status	G	G	G	G	\rightarrow	

Overall	Project Management Plan	Engineering Management Plan	LCM Tailoring Statement
Authorised By	Matt ########	Anna ########	Stephen####
Latest Issue Date	06/10/2020	06/10/2020	29/09/2020

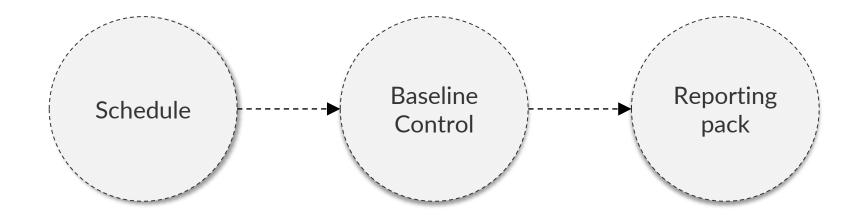
Review	PMB Planned	PMB Actual	Chairperson Recommendation	Chairperson	Total No. of Actions	Review Status
5	02/09/2021	22/02/2021	Ĭ	#### Andrew	2	Work In Progress
6	27/08/2021	30/04/2021		CHAIR, Proxy_PR	0	Work In Progress
5	21/08/2020	13/07/2020	Pass	CHAIR, Proxy_PR	0	Locked
5	17/08/2020	13/07/2020	Pass	#### Andrew	0	Locked
4	07/04/2020	07/04/2020	Pass	CHAIR, Proxy_PR	0	Locked
2C	19/12/2019	06/01/2020	Pass	CHAIR, Proxy_PR	0	Locked
4	19/12/2019	23/03/2020	Pass	#### Andrew	0	Locked
4	19/12/2019	06/01/2020	Fail	CHAIR, Proxy_PR	0	Locked
2C	19/12/2019	06/01/2020	Pass	#### Andrew	0	Locked
2B	30/11/2019	30/11/2019	Pass	######## , Gavin	0	Locked

Narrative / Key Takeaways

LCM 5 Design & Phase review held and passed. Actions ongoing.







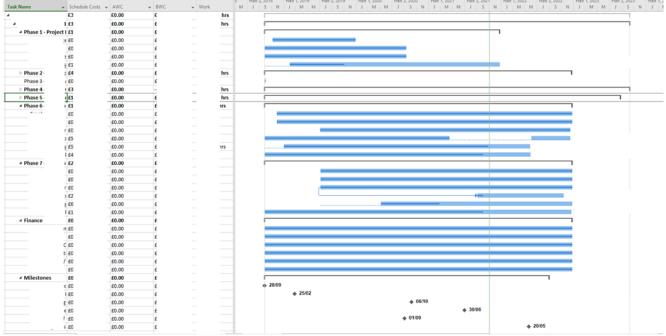






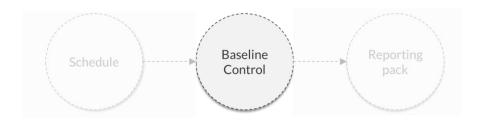
BAE SYSTEMS

All images Copyright 2021 BAE Systems – All rights reserved











Baseline Change Control

Add New

	Reference	Category	Date Raised	Last Updated	Status		
	1.#### BCR4	Baseline Maintenance	26/10/2020	26/10/2020	Implemented	View	
	1,### .BCR5	Baseline Maintenance	26/10/2020	26/10/2020	Approved	View	

Export

Overall Narrative	
None	Edit

RAG	Future Trend	Return to Green		
G	No Change	110		



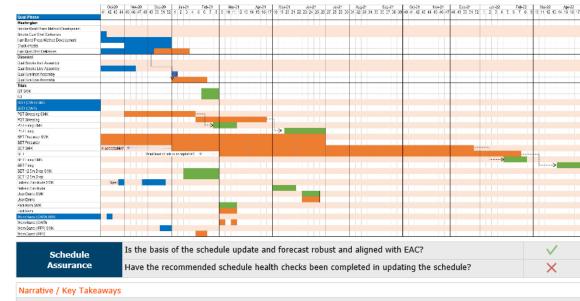




BAE SYSTEMS

All images Copyright 2021 BAE Systems – All rights reserved

Project Schedule



- Delays to shell production and trail packaging failure are impacting the schedule.





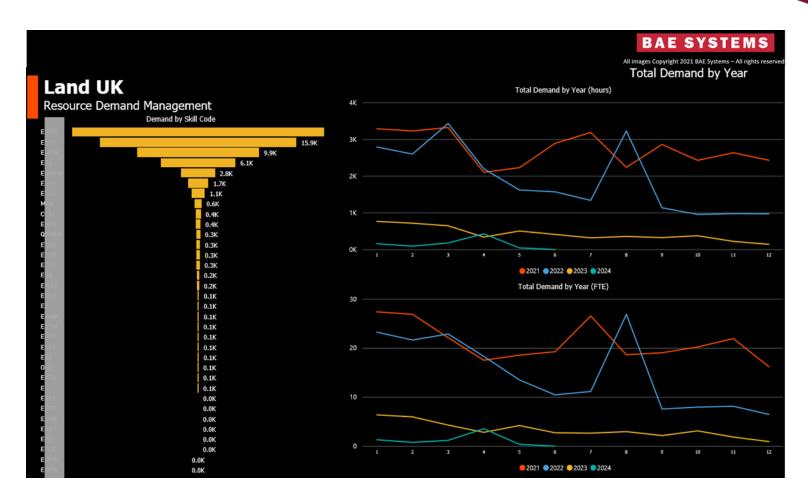
Additional Capability



- Central repository for all Project and Resource data.
- Enabling, cross Project cross team analysis can be carried out



Resource Demand





Resource Demand





Project Success

- Solution delivered on-time, under budget
- Successful adoption by users and stakeholders
- Supports further analysis and interrogation of Project Controls data driving not just Project, but Business Unit wide decision making
- Land UK have set a benchmark within BAE Systems for Project Controls and Project Controls toolset deployment, with other business units keen to adopt the toolset and processes



Q&A



THANK YOU

