

# The Art of successfully integrating Supplier Information into Baselines



**Project Controls**  
**EXPO**  
London, UK

# Introductions



## Ella Burt | DE&S Planning & Scheduling Lead

Ella has over a decade's experience in Project Controls in Aerospace and Defence across the disciplines. She currently heads the Planning and Scheduling community within DE&S. Ella has an MSc in Programme and Project Management and supports the APM Planning and Control Special Interest Group including as a reviewer PC in the 21<sup>st</sup> Century.

## Ben Fry | T&T Controls & Performance Director

Ben is an accomplished Projects Control leader with over 20 years global experience in major project delivery for defence and infrastructure. Ben has led the development and embedding of project controls in a range of public and private organisations. Currently a Director in Turner & Townsend and is embedded into DE&S. Ben is also the project controls service lead across the South West & South Wales region.



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# About DE&S



## Who we are

Part of the Ministry of Defence, we're a mix of 12,500 talented civil servants and military personnel located across the UK and abroad.



## What we do

Delivering a programme of work of over £13bn annually, we ensure the UK Armed Forces have all the equipment and support they need for their operations.

We equip our Armed Forces with the edge to protect our nation.

DE&S' manage over 600 live projects at any one time, delivering over 80% of the MOD's largest and most complex equipment projects.

Over five years we have awarded 4,500 contracts worth over £47 billion, spending over £8 billion every year on UK contracts which supports over 88,000 jobs.



# DE&S Strategy



**Delivering the outputs our armed forces need TODAY**



**Sharpening Defence's edge for TOMORROW**



**Driving efficiency and competitiveness TOGETHER**

# DE&S' 2015 Transformation

The transformation programme was the catalyst for standardisation of DE&S Ways of Working by introducing:

- Defined ways to operate and deliver
- An ISO9001 Business Management System (BMS)
- Standardisation consistent methods and tools across the organisation
- Matrix management processes
- Ongoing continuous improvement

## People

- Previously: Little targeted investment in people to develop a motivated, skilled and efficient work force
- Now: We have new approaches to people management to improve skill levels, motivation and performance

## Organisation

- Previously: Difficult to move resource to projects and areas of greatest priority to DE&S
- Now: We deploy our people functionally and flexibly to task according to skill & availability

## Process & Control

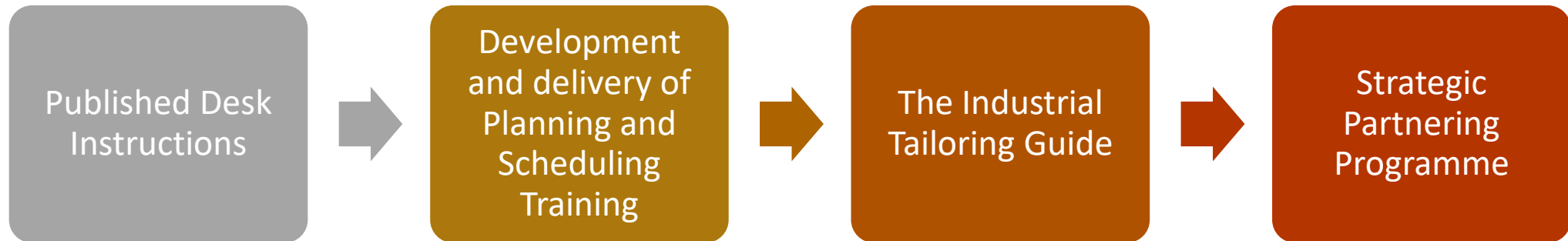
- Previously: Inconsistent processes and tolls which resulted in inefficiency
- Now: We're standardised our ways of working so people can focus on the value they add and cut out waste

# The Beginnings of Integration

- Following the Transformation, DE&S introduced Primavera P6 as part of a P3M tool Suite and associated ways of working.
- A key item was developing and maintaining Schedules which captured the full scope of the project – both internal (DE&S work) and external (Supplier work).
- These schedules represented the first time the organisation followed formal baseline and update processes, as well as rules regarding structure, set up, and coding of the Schedule.

# Improving Schedule Integration

Several steps were implemented to teach the business how to implement and manage integration:





# Published Desk Instructions

To create accessible guidance, DE&S dedicated resource to:

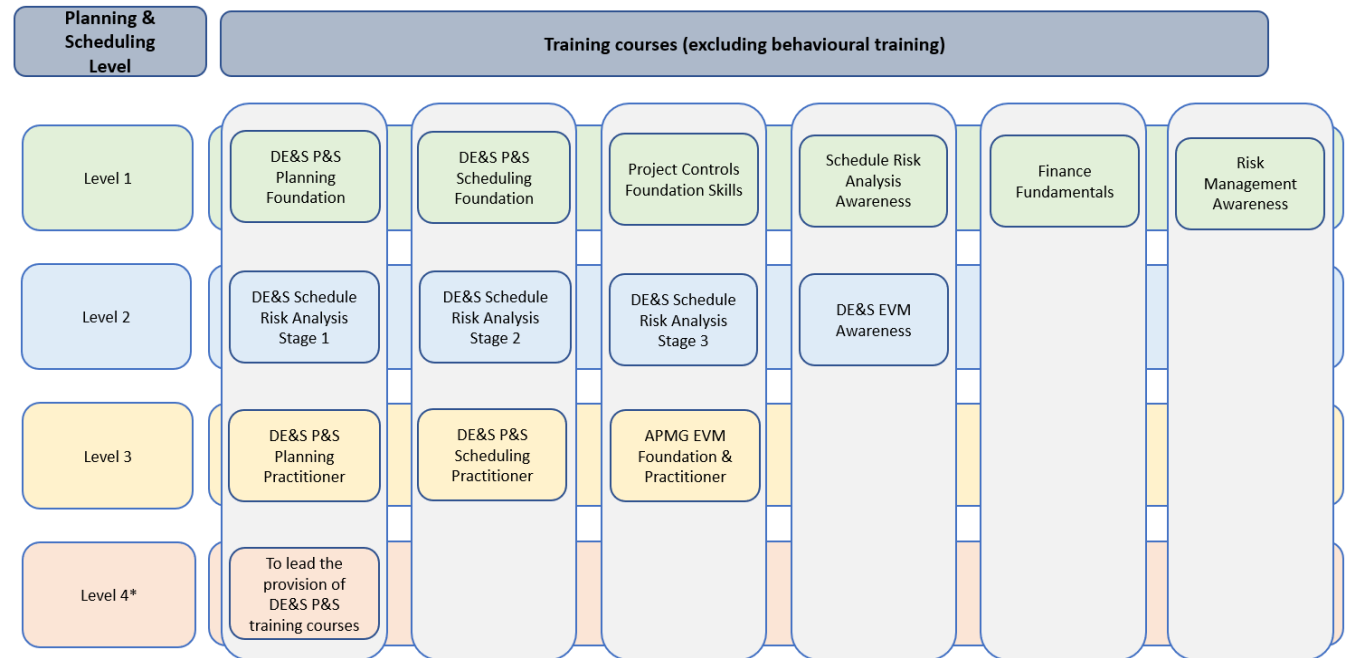
- Update and improve existing guidance,
- Develop new instructions where required,
- Ensure alignment across functional boundaries and other learning offerings,
- Maintain and continuously improve with a minimum of annual updates.



# Training Delivery

DE&S assigned dedicated SME resource to develop and deliver Planning and Scheduling training

The courses align to the Desk Instructions and broadly to APM guidance to provide a holistic approach to learning and implementation of Schedule integration.

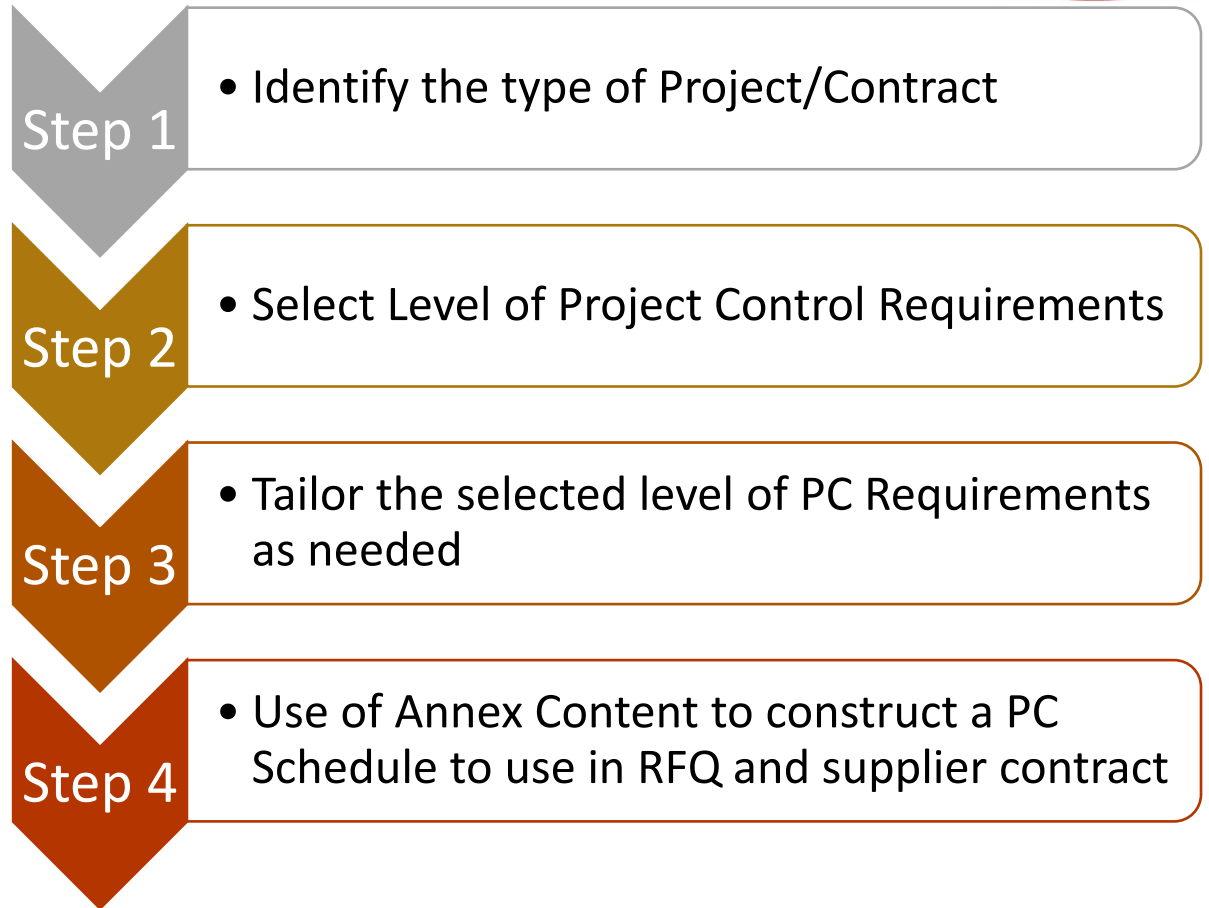


# The Industrial Tailoring Guide

A four-step process in the guide assists in the application of the principles.

The Contract terms and conditions will include a standard narrative condition stating that “The Contractor shall develop, deliver and update as needed over the term of the contract, an Earned Value Management Plan (EVMP) in accordance with the requirements stated in Schedule [xx]”.

This is tailored according to the complexity and type of contract.



# Project Controls Tailoring Table

Requirement	Level 1	Level 2	Level 3	Level 4	Level 5
<b>Organisation</b>					
Earned Value Management Plan [1] and Project Control System Description	X	X	X		
Work Breakdown Structure (WBS)	X	X	X	X	
WBS Dictionary	X	X	X	X	
<b>Planning, Scheduling and Budgeting</b>					
Contractor Master Schedule	X	X	X	X	
Milestone Schedule					X
<b>Analysis and Reporting</b>					
Contractor Performance Reports (CPR)					
Format 1 – WBS	X	X	X		
Format 2 – Organisation	X	D			
Format 3 – Change	X	X	X		
Format 4 – Staff	X	D			
Format 5 – Variance Analysis	X	X	X		
Format 6 – Schedule Reports	X	X	X		
Format 7 – Electronic EVM Data	X	D	D		
Format 8 – ETC and EAC*	X	X	D		
Contractor CSSR				X	
Sub-Contractor CSSR	X	X	D		
Spend against Plan				X	D
* ETC and EAC Frequency					
Comprehensive - Quarterly	X				
Comprehensive - Annually		X	D		
CAM Assessment - Monthly on CPRs	X	X	D		
In year spend forecast	X	X	X	X	X
<b>Revisions and Data Maintenance – Change Control</b>					
Risk [2]					
Risk and Opportunity Management Plan	X	X	X	X	
Cost Risk Analysis	X	X	D		
Schedule Risk Analysis	X	X	D		
Risk Register (from Active Risk Manager (ARM) or similar)	X	X	X	X	
<b>Authority Oversight and Governance</b>					
Integrated Baseline Review	X	D	D		
Demonstration Reviews	X	D			
Surveillance Reviews	X	D			
Validation of PC source data	X	D	D		
<b>Sub-Contractor Flow Down</b>					
EVMS requirements to flow down to Major Sub-Contractors	X	D			
Prime contractor to assess Project/EVM performance on Major Sub-Contractor		X	D		
<b>Support Metrics / KPI's (As required)</b>					
KPI Example 1	An appropriate level of KPIs are to be applied by following ILog Guidance issued separately				
KPI Example 2					
KPI Example 3					

- Contains the tiered level approach to implementation of PC for:
  - Organisation
  - Planning Scheduling and Budgeting
  - Analysis and Reporting including Budgeting and Forecasting
  - Revisions and Data Maintenance – Change Control
  - Risk Management - (Risk and Opportunity Management Plan)
- Authority, Oversight, and Governance covering reviews of the Earned Value Management System where applicable e.g. IBR.
- Where applicable the flow down of PC contractual conditions to subcontractors of the prime contractor.
- KPIs for use on support contracts not containing discrete work.



# Contract Type and Value Heat Map

- The five levels of PC application are shown within the Heat Map by Contract Type & project value.
- To be used as a guide and the most appropriate level chosen and tailored based on the requirements of the DE&S Project Team to provide manageable oversight.
- Most appropriate for Equipment Procurement Plan (EPP) projects.

	Commodities	PFI / FMS / COTS / MOTS	Competitive Firm / Fixed	Single Source Firm / Fixed	TCIF / Cost Reimbursement
Cat A > £400M	Level 4	Level 3	Level 3	Level 2	Level 1
Cat B £100M - £400M	Level 4	Level 3	Level 3	Level 2	Level 1
Cat C £20M - £100M	Level 4	Level 4	Level 4	Level 3	Level 2
Cat D < £20M	Level 5	Level 5	Level 5	Level 4	Level 3/4

<b>RED</b>	Higher Exposure
<b>AMBER</b>	Medium Exposure
<b>GREEN</b>	Lower Exposure

# Strategic Partnering Programme (SPP)



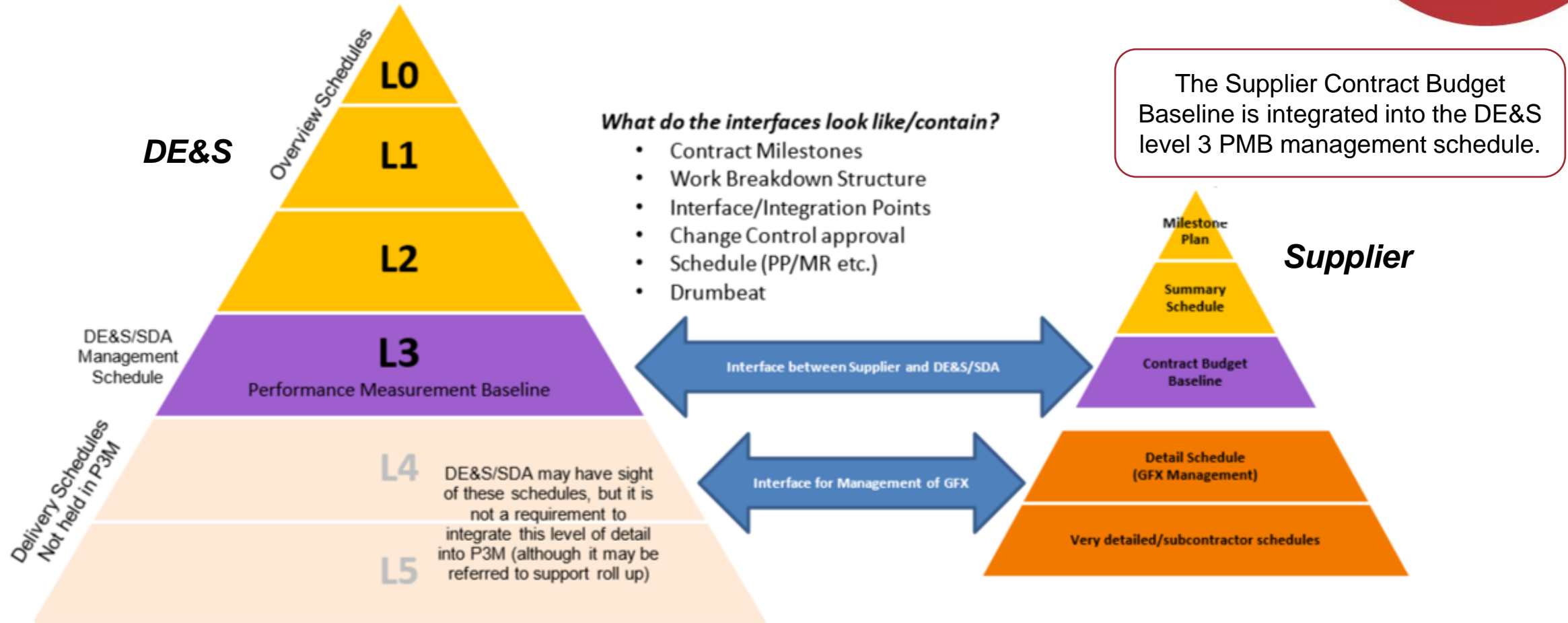
- Cabinet Office and Defence Commercial Strategic Partnering Programme (SPP) was mentioned in the recent NAO report ‘Improving the performance of major equipment contracts’ ...
- DE&S colleagues are working jointly with 6 strategic suppliers in direct support of the SPP, and NAO praised our work to deliver improvement via a shared view of programme performance.

# The Principles of Integration



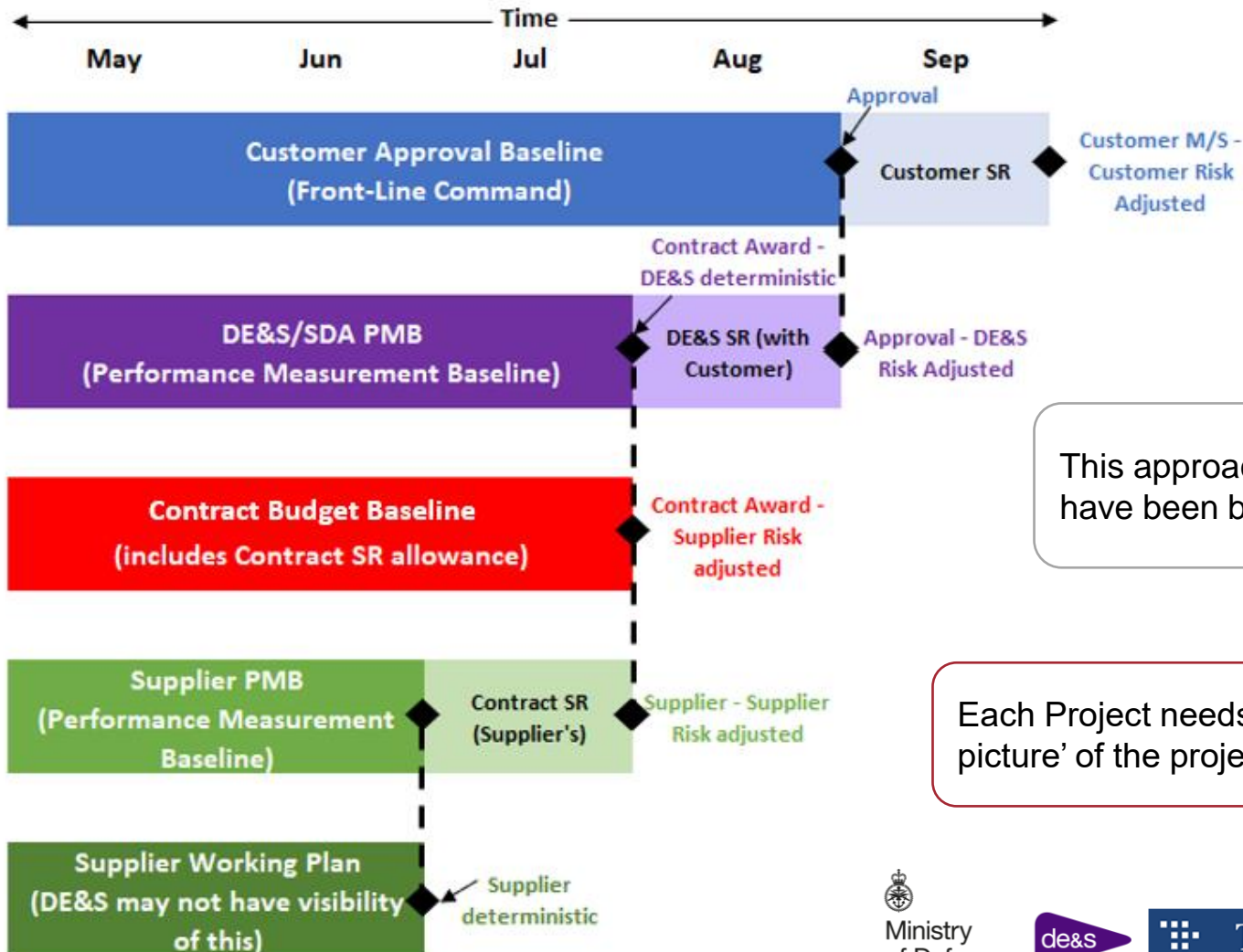
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# Principles: Horizontal Integration





# Principles: Vertical Integration



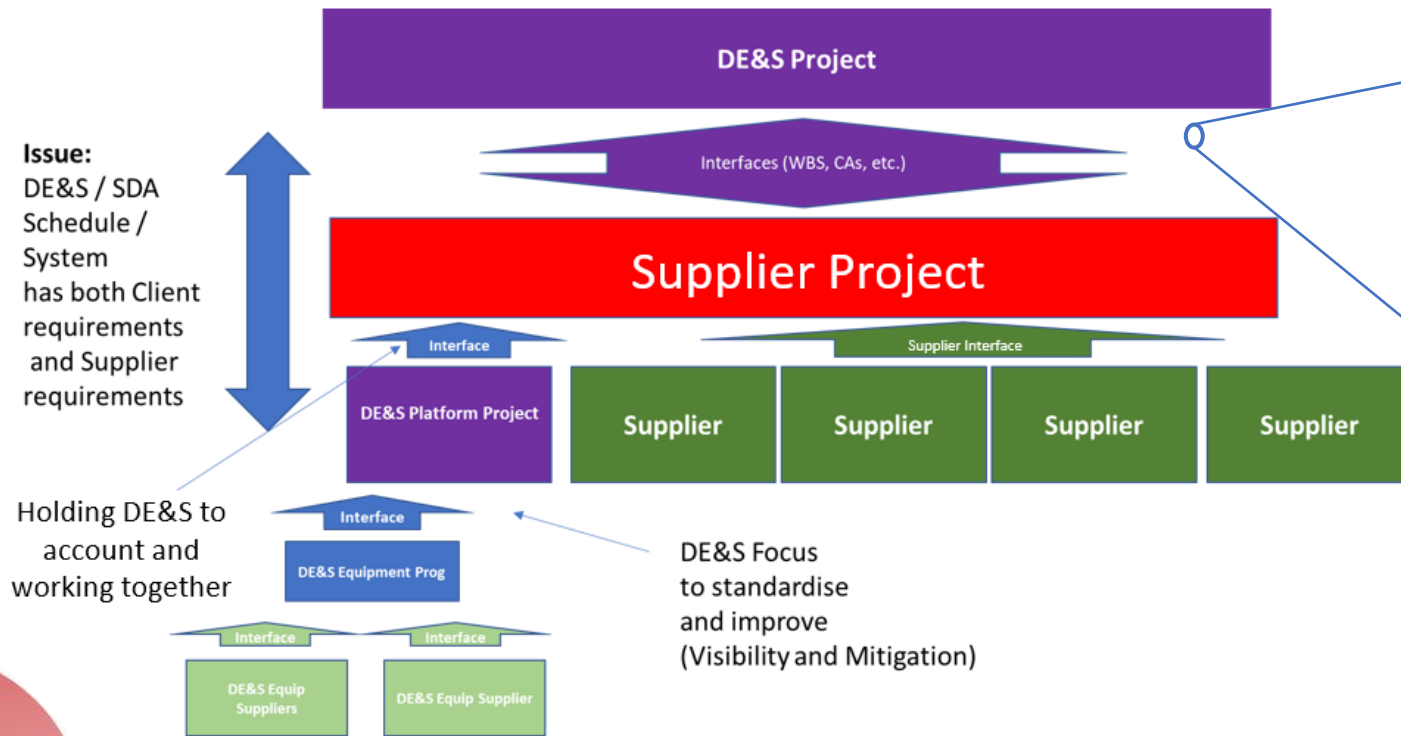
Vertical integration gives DE&S a way of ensuring alignment through the 'golden thread' from supplier through us to the customer.

This approach gives the business confidence that baselines have been built in a robust and well understood way.

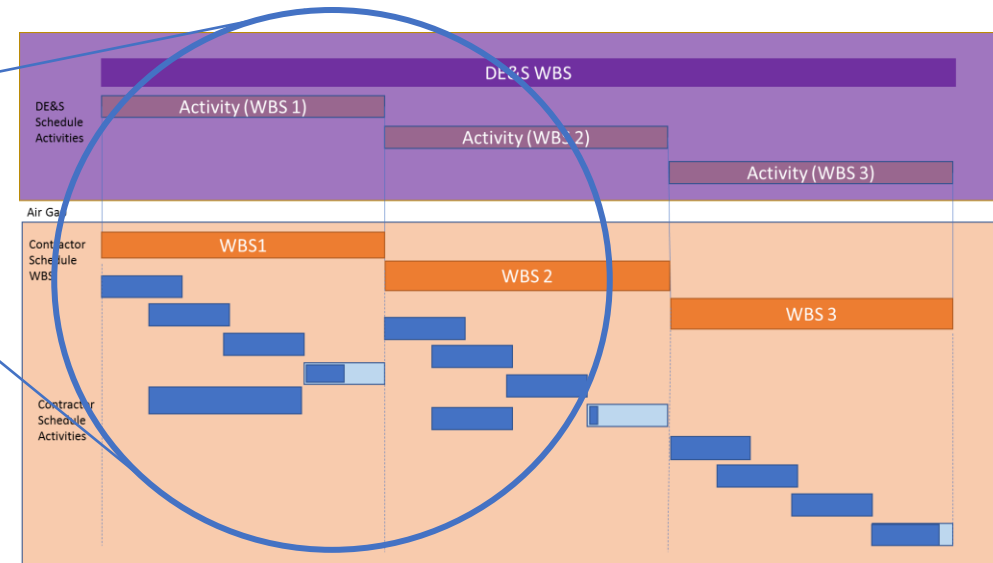
Each Project needs to work with its suppliers to ensure the 'big picture' of the project is understood and has appropriate alignment.

# Principles: Understanding Alignment

## The Bigger Picture



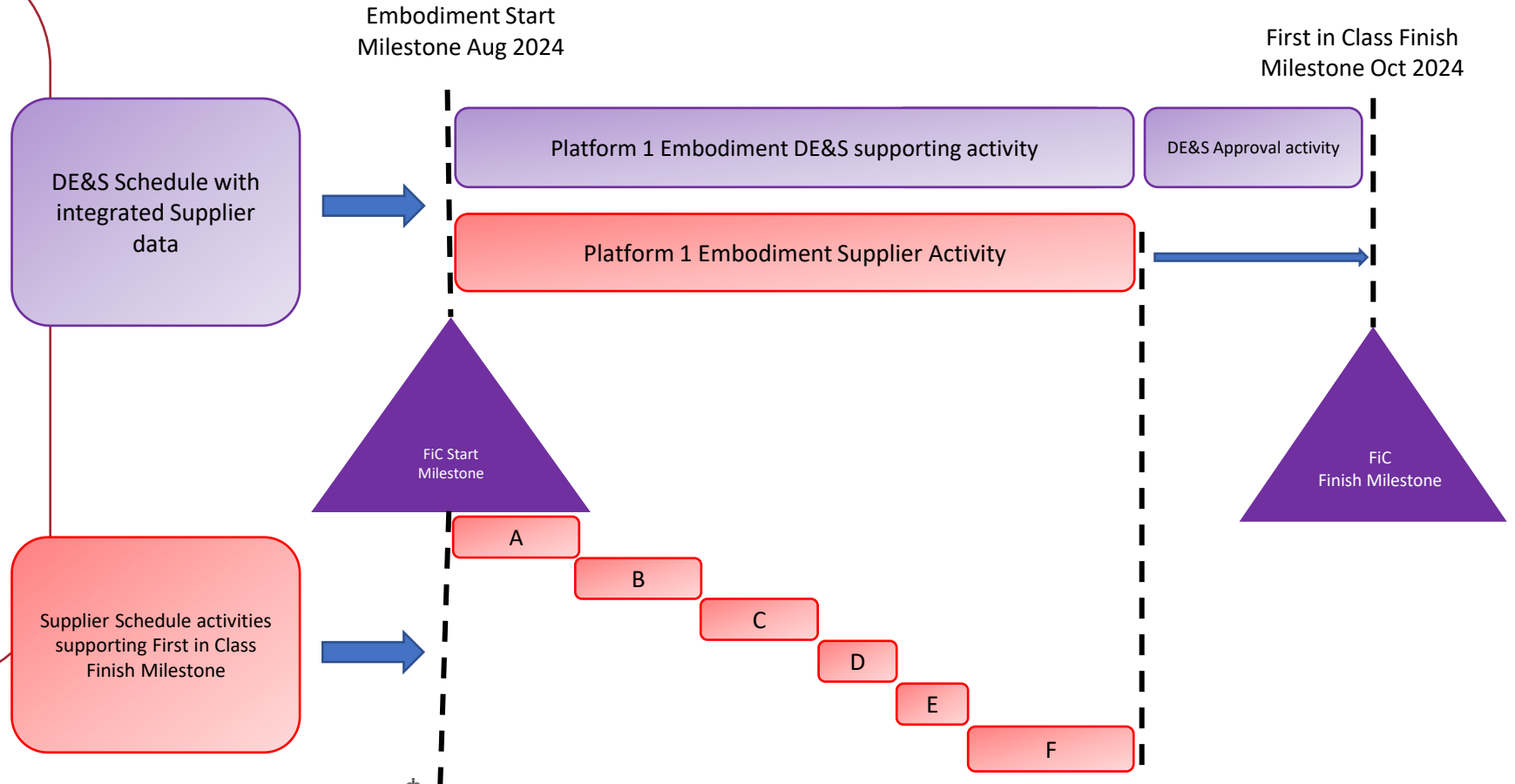
## The Detail Picture



# Principles: Roll Up

To integrate the Supplier Schedule we must assess:

- The Supplier deliverables required to achieve each DE&S WP including any Key Contract / Approval milestones.
- Distinguish the dependency links between Supplier activity and DE&S activity. There should be a logical flow between DE&S and supplier activity to demonstrate how the project scope will be delivered.



# Key Scheduling Tenets

WBS alignment and Logic must exist between DE&S activities and the supplier's activities

Schedules must represent activities to support achievement of milestones

Dependencies and interfaces must be identified and managed

Cost loaded aggregated supplier activities are required in enough detail to manage the Critical Path and Progress

Earned Value Techniques/Rules of Credit must be established up front to determine how progress will be claimed



# Summary

Over the last few years DE&S has worked to improve its Project Delivery Practices:

- Initially by ensuring everyone had a baseline containing 100% of the scope and that the whole Order Book was captured and managed;
- Then, developing those baselines in maturity terms to ensure key dependencies were modelled;
- We continue to look for improvements; between SPP and other initiatives future maturation is planned with focus on improving supplier relationships.

We have given teams the mechanisms to analyse trends, forecast, predict risks and issues and take action in a timely manner. Encouraged them to work collaboratively with suppliers and deliver to our customers.

# The Future of Integration

- We recognise EVM is only one tool for managing performance and delivery so are now introducing systems and processes to expand our management mechanisms.
- DE&S is beginning to consider how automation, more advanced tools, and combined ways of working could be employed to improve delivery.
- For certain projects DE&S is exploring potential opportunities to be found in shared environments.

# Questions





**THANK YOU**