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Tim Sheldon  
Corporate Head of Project Controls  
Defence Equipment and Support

# Defence Equipment and Support (DE&S)



**“To equip and support our Armed Forces for operations now and in the future.”**

# The DE&S Organisation – What We Do

- We manage complex programmes to deliver equipment and support to the UK's Armed Forces.
- Operating from a headquarters in Bristol, and from other locations in the UK and overseas, DE&S delivers an equipment programme that will spend approximately £132 billion of taxpayers money over 10 years (2016-2026).

## Our strategic objectives:

**Delivery** – deliver safely the agreed DE&S programme of work and associated support and services to our Customers

**Transformation to a Match Fit organisation** – implement the DE&S Transformation Implementation Plan to create a 'Match Fit' DE&S

**Leadership and Engagement** – Build a culture of professionalism, continuous improvement, effective engagement and high performance through creating an exciting and challenging set of business targets where delivery will be rewarded.



DE&S HQ  
Abbey Wood

# DE&S In Numbers

Over 11,000 Staff

150 Locations

£12 Billion Annual Spend

£1.2 Billion Annual Operation Expenditure Budget

660,000 Commodities

800 Million Shelf Items

# Key Industry Partners



# What Works Well .....

Vital support to operations

Airseeker



Foxhound



Merlin Upgrade

# And where could we improve .....

Nimrod MRA4



Queen Elizabeth Aircraft Carrier



# DE&S Project Controls, Chapter 1-Cost Assurance and Analysis Service (CAAS) Transformation (2010-2015)

- Historically DE&S Project Controls Specialist are grouped in CAAS- **Cost Forecasting, Cost Engineering, Cost Accountancy.**
- 1999 – Implementation of Smart Acquisition – The Integrated Project Team (IPT) is king. CAAS became a ‘support group’.
- Led to decade of decay from **2000 to 2010** with **CAAS staff reduced from 700 to 300**, and development activities wound down
- CAAS unable to provide cost management support to all key MOD projects, link broken with the MOD capability area. DE&S project teams engaged external support piecemeal to make up shortfall.
- **2009 ‘Review of Acquisition’ highlighted 42% cost growth and 81% schedule slippage relates to initial estimates. Also highlighted the need for an effective MOD cost management capability.**

# The CAAS Transformation Journey (2010-2015)

- CAAS Development included as a key component of the Defence Acquisition Reform Programme (DARP) in 2010. Key objectives were:
  - **Increase Capacity (from 300 to 475 staff by FY14/15)**
  - **Increase Capability (with an external partner)**
- Defence Reform Report June 2011:  
***“We welcome the development and increased use of the independent costing capability provided by the Cost Assurance and Analysis Service. The Department should mandate the use of this service more broadly across Defence to support investment decisions and planning”.***
- Moved from commercial to **Finance Function** in Apr 2012 with key independent role in budgeting & investment decision space as a pan MOD asset.



# DE&S Approach to Independent Cost Estimates

- **Independent Cost Estimates** (ICEs) are benchmarks and challenges to the Project Team costs and risks as part of the DE&S Planning Round, to ensure that **costs are robust and credible**;
- ICEs support senior financial decisions at Senior Executive Reviews

## How did this start?

- In May 2010, CAAS was tasked to support the Strategic Defence and Security Review (SDSR)
- In March 2011, Chief of Defence Material commissioned CAAS to provide an independent view on the cost of the Equipment Procurement Programme (EPP) over the forthcoming 10 year budget window.
- In May 2011, the independent CAAS view was used to inform a **Realism Provision** (a Departmental contingency) of £5.4Bn, which allowed for uncertainty and high impact low probability risk to project costs.

# DE&S Approach to Independent Cost Estimates

**Head of Profession for Cost Estimating and Forecasting** – provides instructions and guidance on how to construct an independent cost estimate; the **PR-ICE (Planning Round-Independent cost Estimating) Team** is responsible for delivering the CAAS ICEs into the QRPC (Quarterly Review of Programme Cost) process (with consistency and quality) and providing aggregated ICE data analysis to inform senior decision making.

## Model Scenario

### CAAS Benchmark view (aligned with PT on scope at 50% confidence)

The CAAS Benchmark is a direct comparator estimate to the Project Team (PT) cost submission. It is an estimate aligned with the Project's Third Order Assumptions (3OAs), aiming to benchmark the PT's estimate through the application of CAAS good practice.

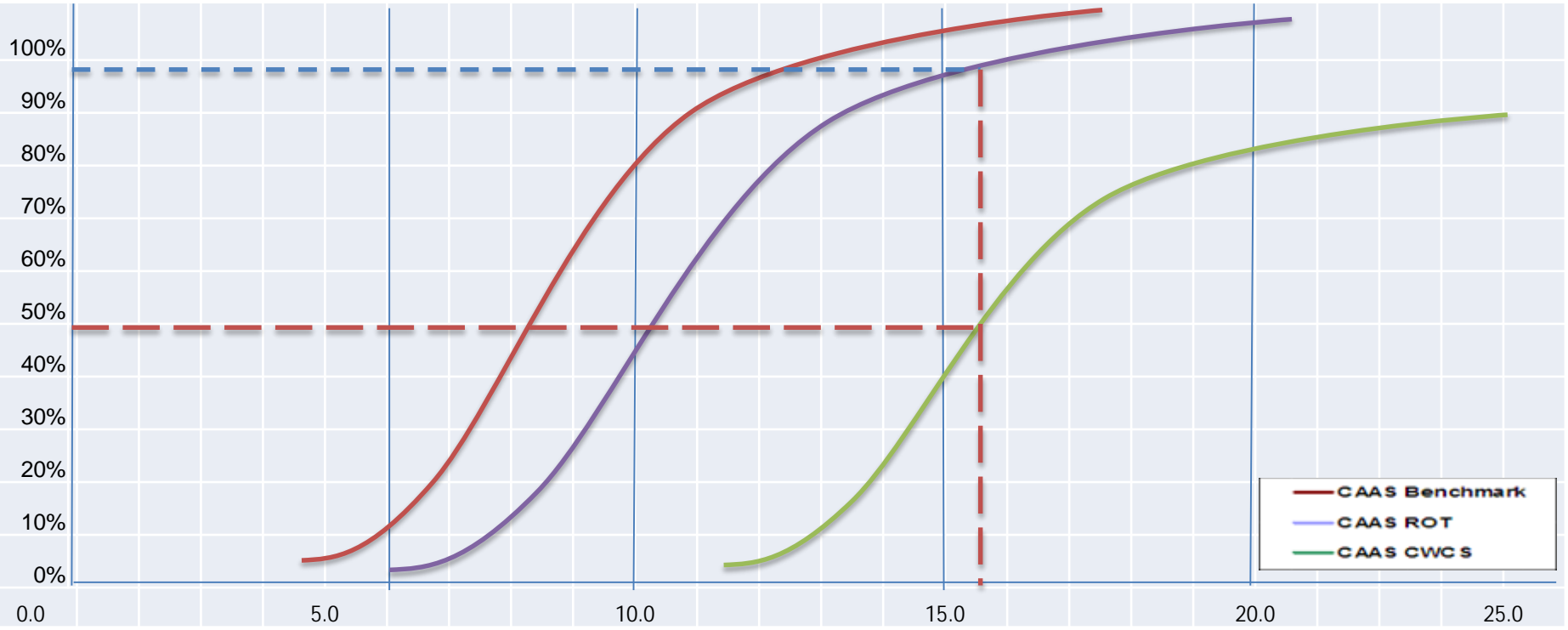
### CAAS Credible Worse Case Scenario (upper ceiling)

Based on sensitivity analyses conducted on the CAAS ROT, an estimate that captures a credible worst case scenario of the project's outturn that is highly unlikely to be breached. This approach provides a logical and informed selection of the outturn upper-bound that supports a defensible PR-ICE narrative.

### CAAS Realistic Outturn (ROT) – Expert opinion

An independent estimate of project outturn that is based on realistic and evidence-based assumptions and developed to consistent CAAS Functions. The CAAS ROT is not constrained by PT assumptions and represents the CAAS view of a realistic estimate of project outturn;

# DE&S Approach to Independent Cost Estimates



# The CAAS Independent Cost Estimate Annual Programme

## Quarterly Review of Programme Costs (QRPC)

- Senior Executive Audience
- Published view, focus on cost delta
- Available for annual National Audit Office (NAO) Audit
- Audience only see the a specific Output.

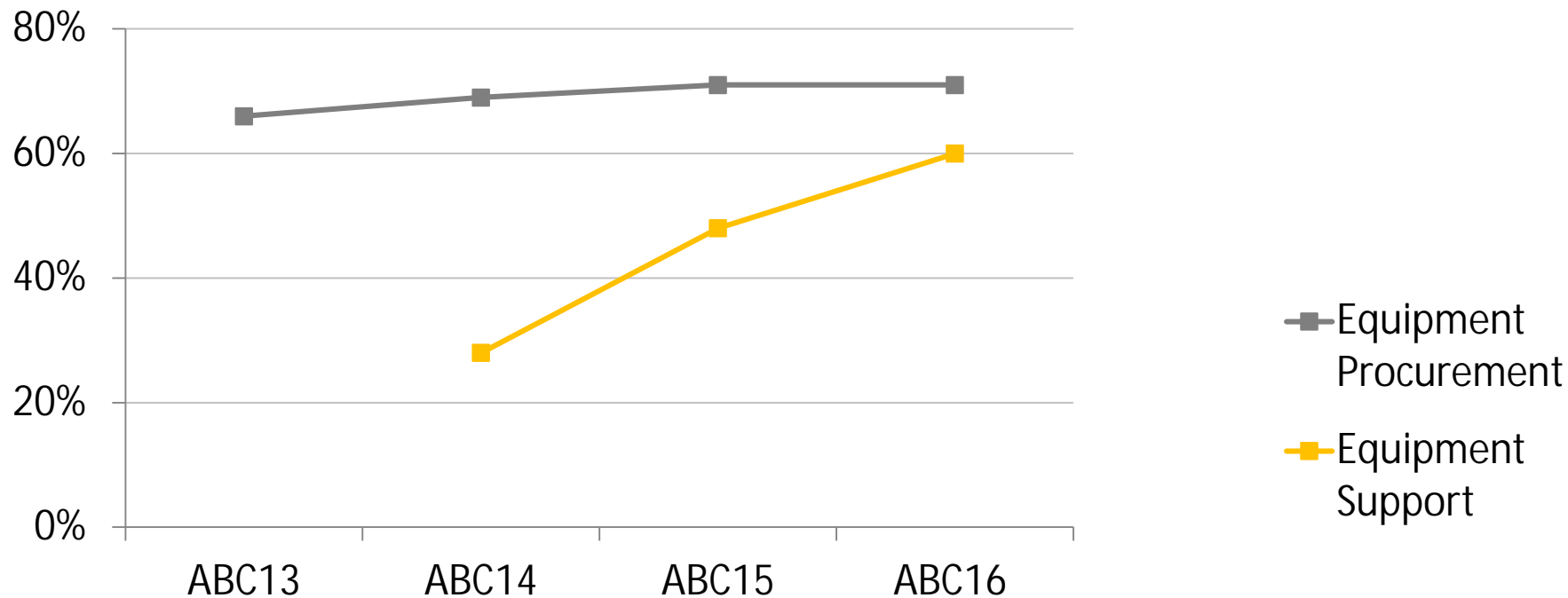
## CFO Review

- Review of ICEs, twice yearly.
- Reports recommendations to DE&S Finance Director

## Annual Programme Review Board (PRB)

- Focused on methodology and evolution.
- Panel of CAAS members & external industry experts
- Internal to CAAS – a *'sanity check'*
- Positive & constructive feedback in a safe and friendly environment; staff development.
- Opportunity to explore issues and solutions, to agree the way forward and confirm readiness for formal submission.

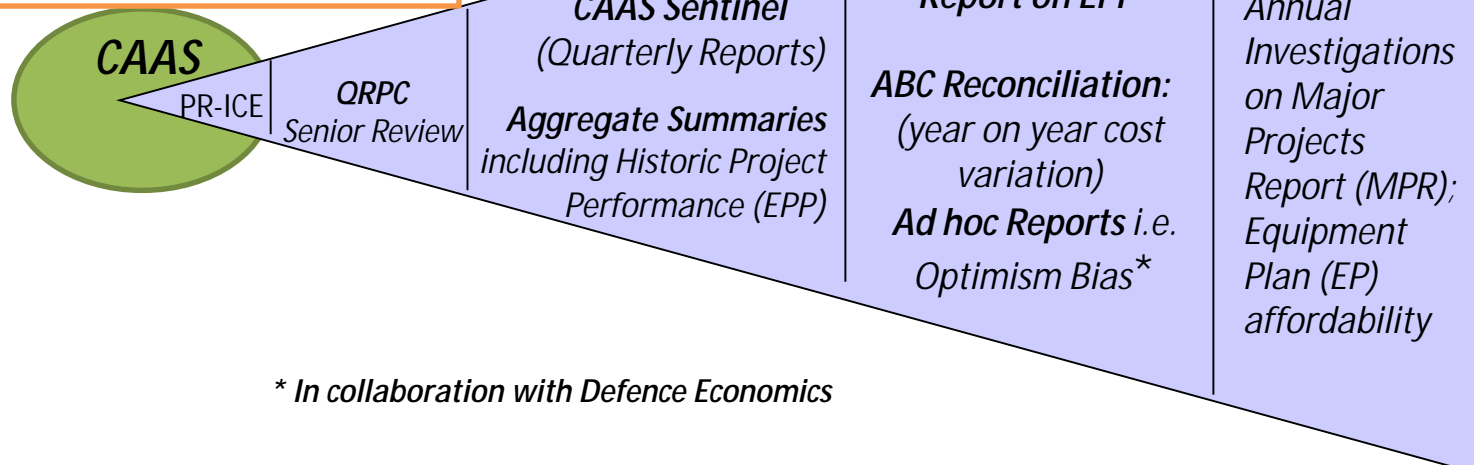
# CAAS Independent Cost Estimate programme by % Value



# CAAS Independent Cost Estimate Output 'Reach'

## BENEFIT

Through QRPC and Annual Reporting, CAAS helps DE&S and MOD to maintain a current, accurate and realistic understanding of the cost of the Equipment Procurement, accurately profiled across the first 10 years, reviewed at the appropriate level with all relevant stakeholders, and recorded, to better inform all decision making.



\* In collaboration with Defence Economics

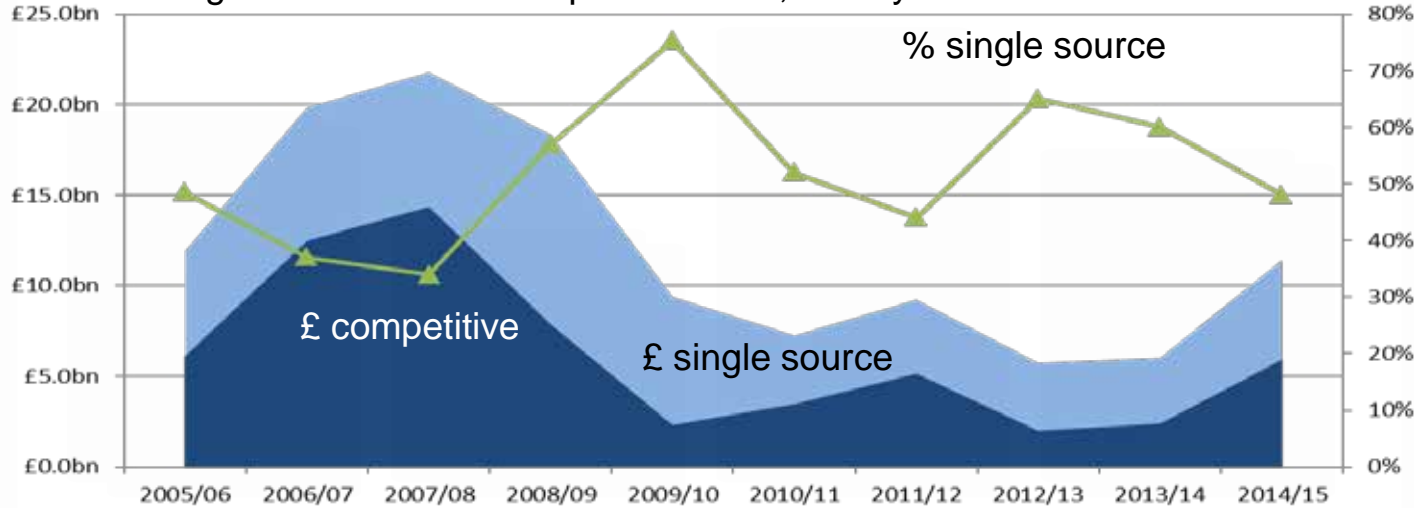
# Modelling Cost Growth & Schedule Slippage

## Historic Project Performance (HPP) Model

Year	Average Schedule Slippage %	Average Cost Growth %	Project Sample Size	Comment
2012	81	42	170 Projects	2009 Defence Acquisition Report
2013	79	39	170 Projects	Dataset Updated.
2014	75	39	263 Projects	Dataset Updated.
2015	71	14	116 Projects	Filtered to exclude legacy projects.

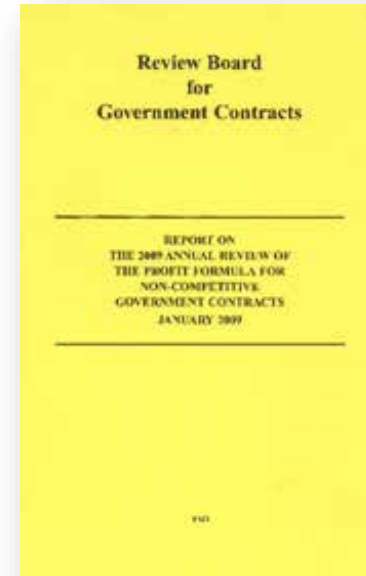
# Single Source Procurement

- On average 52% of the MOD's procurement, £6bn/year



- MOD policy to use competition whenever possible
- Use single source where
  - only one supplier can do the work
  - “freedom of action” or “operational advantage”
  - urgency

## Previously governed by the ‘Yellow Book’





# Why is change necessary ?

- Huge changes to industrial landscape and procurement approaches since 1968
- Yellow Book 46 years old based on a Gentleman's Agreement – no legal basis
- Does not address poor commercial leverage – no pricing 'dispute resolution' mechanism
- Based on consensus so lacks mechanism for self-reform
- Limited to profit and overhead costs (circa 40% of the total)
- No incentive for efficiency

**Lord Currie, in his 2011 Review, concluded that the Yellow Book needed “a fundamental recasting”**

## Defence Industry 'back in the day'





# Defence Reform Act 2014 (Part 2)

- Lord Currie Review published (2011)
- Industry consultation (2012)
- A White Paper published (2013)
- Defence Reform Bill - introduced (2013)
- **Defence Reform Act** - Royal Assent (2014)
- **Single Source Contract Regulations** (2014)
- **In force**
  - 18 Dec 2014 £500M+
  - 31 Mar 2015 £5M+

Statutory Regime – applies to everyone (above £5m)

Sits alongside contracts

Flows down the single source supply chain (above £25m)

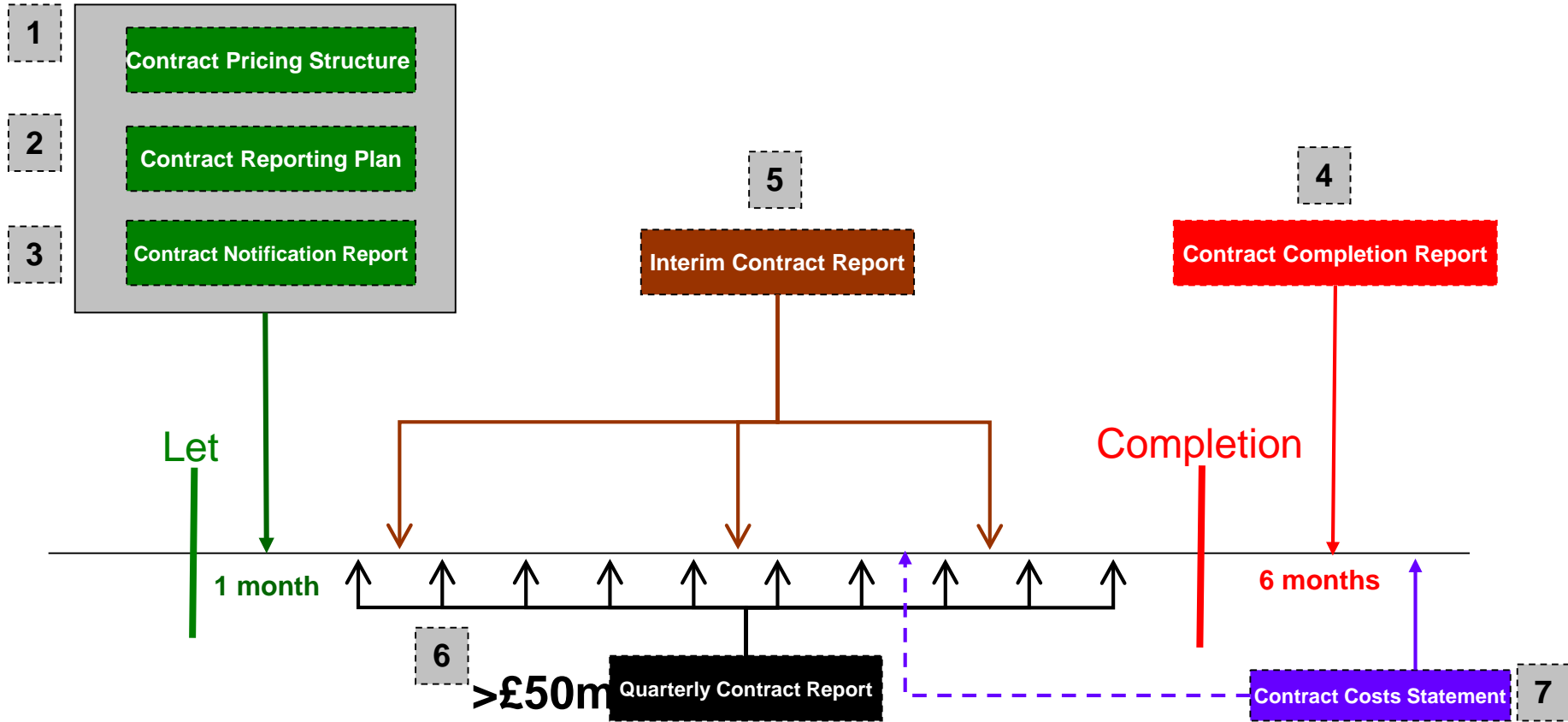
The image shows the cover page of the Defence Reform Bill Contents. It features the title 'Defence Reform Bill' at the top, followed by 'CONTENTS'. The contents are organized into sections: Part 1 (Defence Procurement), Part 2 (Single Source Contracts), and Part 3 (Qualifying Defence Contracts). The page number '31/3' is visible at the bottom right.

Defence Reform Bill	
CONTENTS	
Part 1	
Defence procurement	
Defence procurement arrangements	
1	Arrangements for providing defence procurement services
2	Financial assistance
3	Financial claims against contractors or former contractors
4	Liabilities relating to provisions used by a contractor
5	Jurisdiction of Ministry of Defence Police
6	Status of contractor
7	Restrictions on disclosure or use of information
8	Intellectual property rights
Transfer	
9	Transfer of assignments: application of TUPE regulations
10	Transfer scheme
General	
11	Financial provisions
12	Interpretation of this Part
Part 2	
SINGLE SOURCE CONTRACTS	
Single Source Acquisition Office	
13	Single Source Regulations Office (or "SSRO")
Qualifying defence contracts	
14	Regulations relating to qualifying defence contracts
31	31/3

# Standardised Contract Reporting

1. Contract Reporting Plan (CRP) – list all statutory reports due through contract
2. Contract Pricing Statement (CPS) - the EIPS as was. Will be in Defined Pricing Structure (DPS).
3. Contract Notification Report (CNR) – the ‘baseline’ for the contract price
4. Quarterly Contract Report (QCR) - only for QDC's(Qualifying Defence Contract) >£50m
5. Interim Contract Report (ICR) - as specified by MOD
6. On-request Contract Report (OCR) – as requested by MOD
7. Contract Completion Report (CCR) – record of final outcome
8. Contract Costs Statement (CCS) – as required by MOD

# Contract Reporting



# SSRO



# Statutory Requirements – SSRO

Single Source Regulations Office (SSRO) has two equally important statutory aims

- **Value for money for the taxpayer**
- **Fair and reasonable price for suppliers**

## Setting Rules

- 5 yearly review
- Annual profit rate
- Statutory guidance
- Public recommendations to SofS

## Monitoring Application

- Monitors application and adherence
- Published annual report

## Adjudication

- Appeal body for civil penalties on transparency
- Opinions and Determinations on pricing

## Analysis

- Issues independent defence benchmarks and Parametrics
- Issues supplier portfolio analysis on the basis of the standard reports

# Investment In CAAS / Project Controls

## Aston Martin



## Trabant



# DE&S Project Controls , Chapter- 2 (2015 – 2020)



Bespoke Trading Entity – 2014  
Managed Service Providers – Late 2014  
New Functions / Grading / Roles - 2016  
Transformed DE&S .....

# DE&S Project Control Chapter 2- DE&S Transformation

- We believe in the power of quality data & information – we want to keep informed and on the front foot.
- Improved Project Controls in DE&S will drive an improvement in Industry's own Project Controls performance.
- We want to reduce the variability in our performance.
- We want to make DE&S an easier business to manage.
- Budget pressure is driving the need for better control





# Project Controls Vision & Mission



Project Controls is the **Right** arm of Project Management providing the **Right** information at the **Right** time in the **Right** format to deliver better informed decisions.



Project Controls is making a difference to the Front Line Commands and Taxpayer by driving accountability, responsibility and efficiency in DE&S.

# Project Roles



## Finance & accounting

- Manages Corporate Management Information: consolidation, financial analysis and advice.
- Provides financial advice and services, for example: actuals, accruals, currency, tax treatment, accounting treatments, foreign currencies, and assurance of business cases.
- Manages the general ledger: responsibility for bank accounts and cash authorisation
- Provides oversight of financial delegations.



## Project Manager

- To lead and be the single accountable person for the delivery of DE&S equipment and support projects, programmes and portfolios, in order to meet agreed CASP outputs.
- Ensures baseline will deliver client requirements (scope) to PCT.
- Captures, schedules and costs of manufacturing / construction / procurement and support methods.
- Identifies resourcing / skills needs and identifies any shortages.
- Identifies other delivery constraints.
- Identifies risks and assesses for PC&T impact, mitigation identified with adequate contingency.



## Project Controls

- Prepares, compiles and maintains the integrity and configuration control of the baseline (scheduled, resource loaded and costed).
- Analyses performance information.
- Uses the baseline to inform PM of performance of PCT (actual vs planned stat using) and forecasts of project outcomes via EVM and impact analysis.
- Offers methods of recovery as required.
- Manages change control of baseline under PM instruction.

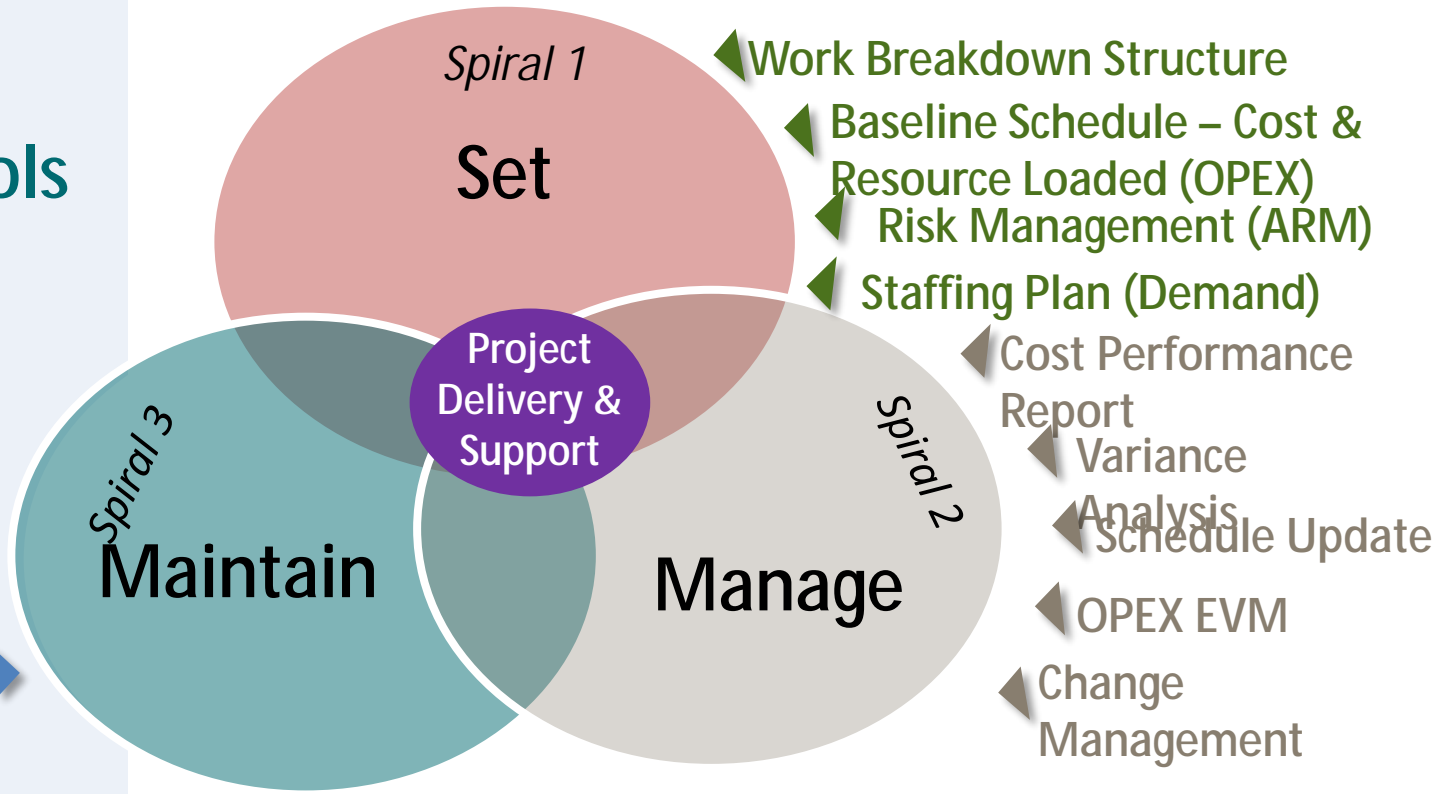
# Project Controls – Technical Capabilities



# Project Controls Implementation

## Project Controls

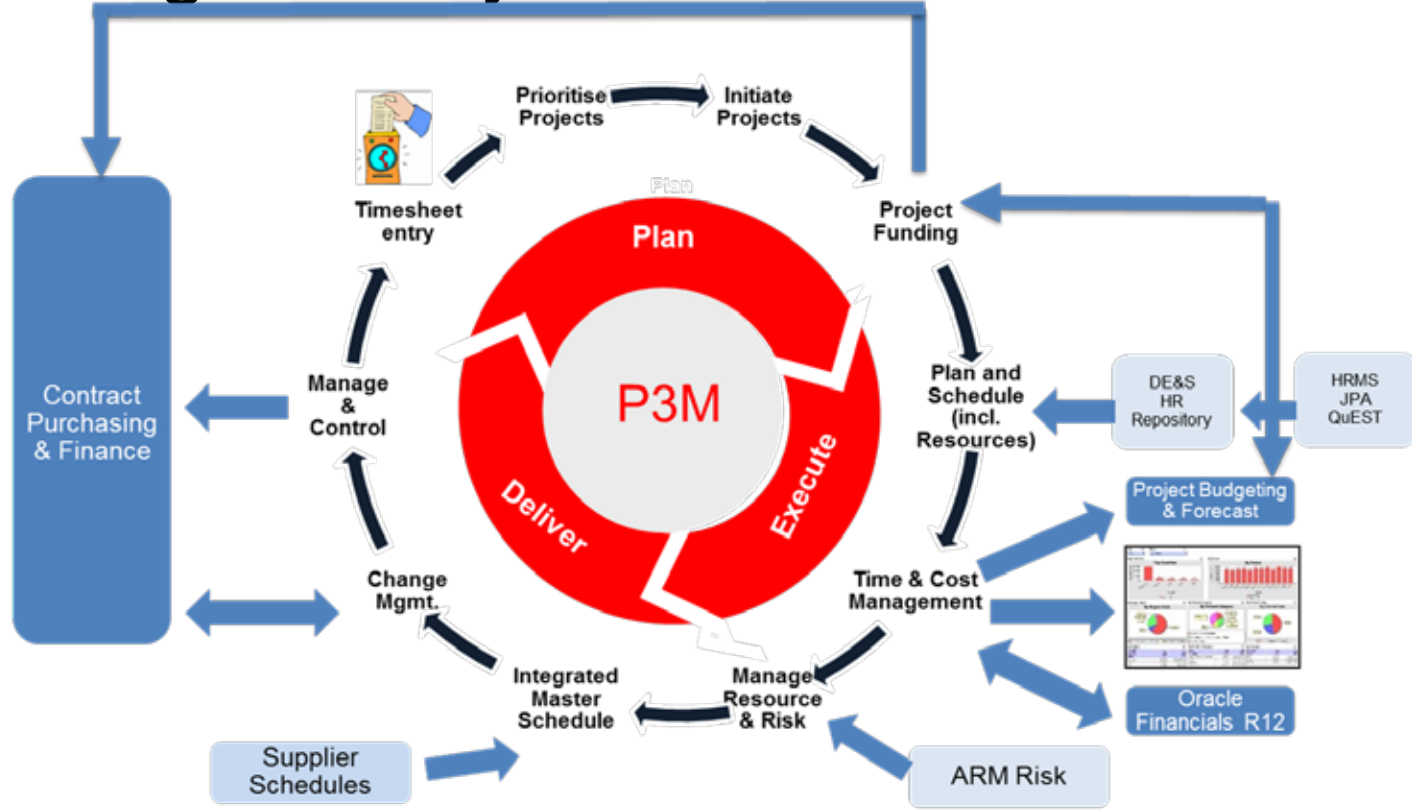
Integrated Tier 1  
Supplier EVMS  
Performance  
Management &  
Reporting



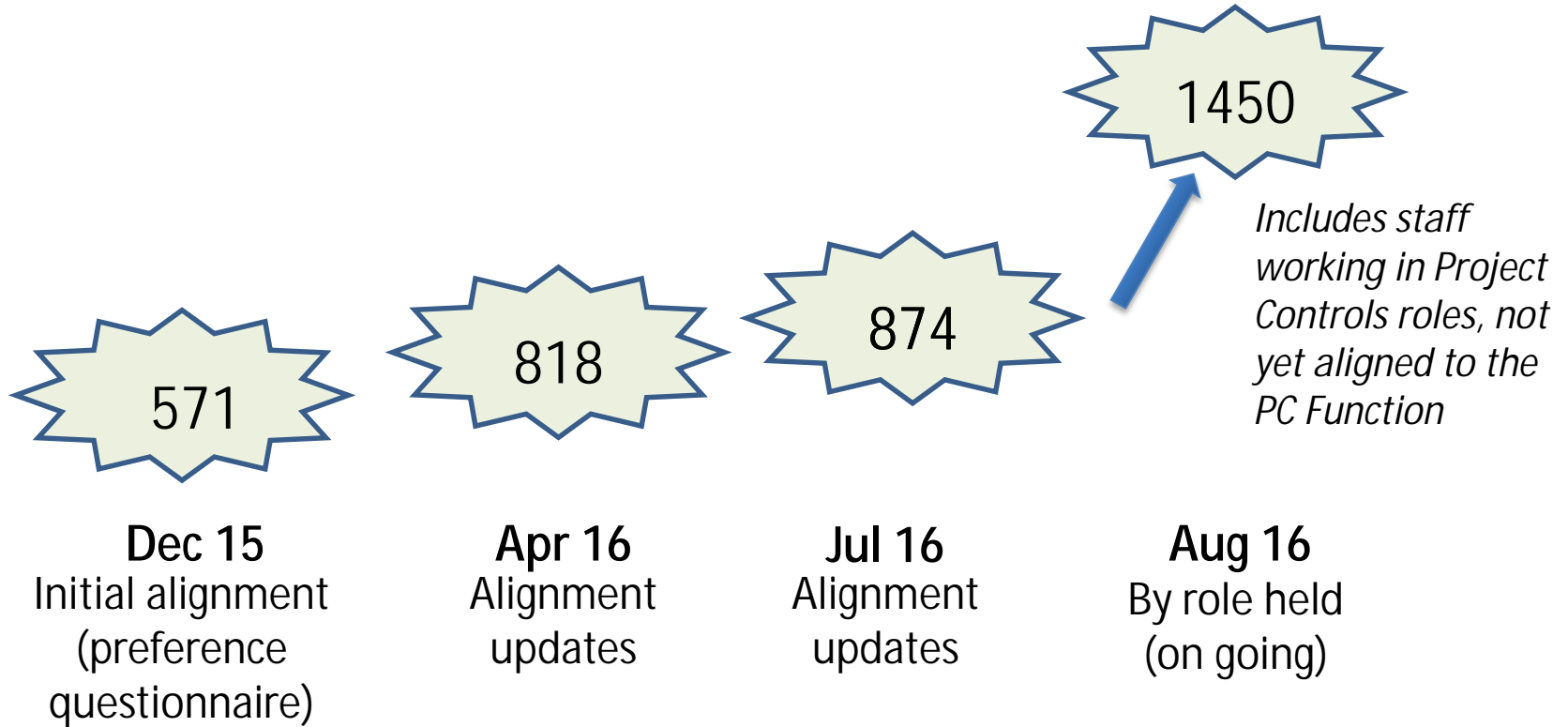
# DE&S Project Control-Tools

- Backdrop of Defence wide IT Systems improvement and rationalisation
  - Strategy for Defence core business systems integrating around an Oracle based ERP
  - Total infrastructure refresh 2016-2017
  - DII (Win7) to New Style of IT (Office365)
- P3M designed around minimal dependency upon other Defence initiatives
- Oracle based P3M Solution (Oracle Primavera) now approved by Cabinet Office
  
- P3M becomes backbone of Project Delivery for the next 10 years or more
- DE&S will be continuing P3M Maturity improvement over the period
- World class capabilities.... now and in 10 years
- P3M will be supporting global Defence Supply Chain relationships , including with NATO allies and world wide Defence Suppliers
- Mobile access becomes the norm

# P3M Integrated Systems



## Project Controls – Function size Dec 15 - Present



# Future Challenges

- Embedding Change
  - People
  - Process
- P3M Implementation
- Interface with Industry



# Questions?

