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# The NAO's audit of the MOD's Equipment Plan

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# What we will cover

- An introduction to the MOD's Equipment Plan;
- The background to our work on the Equipment Plan;
- Our approach to testing the assumptions underpinning the affordability of the Equipment Plan; and
- The key findings from our work.

# Background to the Equipment Plan

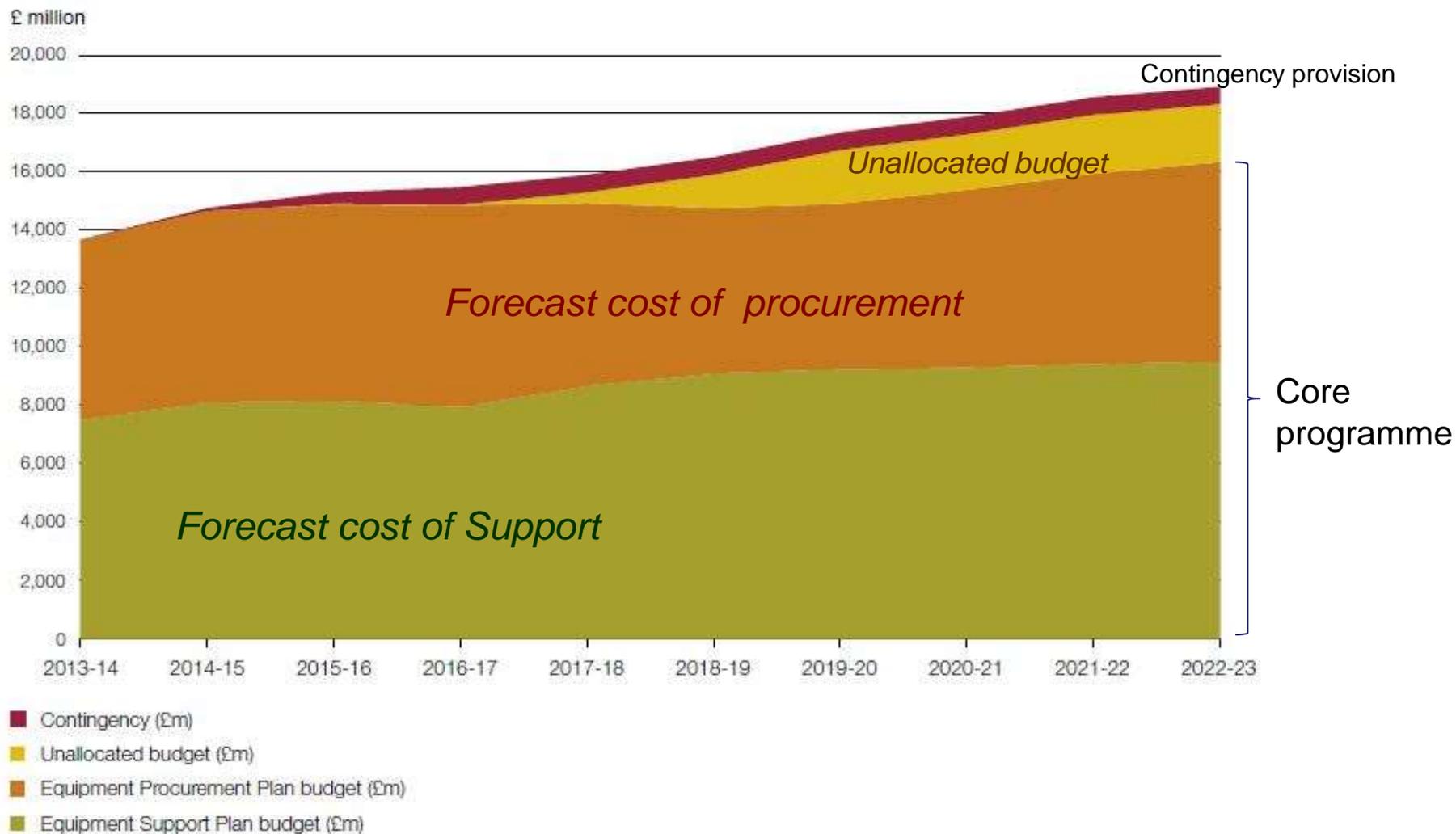
- 10 year forecast cost of procuring and supporting the military equipment that the Armed Forces needs
- A diverse portfolio of hundreds of individual projects; highly diverse in value, maturity, risk profile and the nature of the equipment
- The forecast costs form the basis on which the MOD plans and budgets for its future spend to ensure affordability
- The Equipment Plan is divided into **procurement and support** elements
- It includes projects and programmes at all stages of the project life-cycle from pre-concept phase to in-service equipment

# Anatomy of the Equipment Plan

- As at March 2013 the 10 year forecast cost was £164Bn. This consisted of:
  - equipment procurement budget of **£63 billion**
  - equipment support budget of **£87 billion**
  - a contingency provision of **£4.7 billion**
  - an unallocated budget of **£8.4 billion**
- The Equipment Plan is a significant part of the MOD's budget
- In 2013-14 the Equipment Plan was forecast at £13.7Bn, or 40% of the MOD's planned budget

# Unallocated budget and contingency provision

- To be able to claim that its budget was affordable, the MoD had to take a new approach to its planning:
  - Created a **core programme** of equipment procurement to which the MoD is definitely committed; and
  - Created an unallocated budget of £8bn.
  - Created a centrally held contingency provision of £4.7Bn for cost growth.
- The MoD intends that this new approach to its planning will provide the following advantages:
  - manage cost increases and / or timescale slippages on individual projects independently
  - fund additional projects incrementally and flexibly, as soon as it can be sure that they are affordable; and
  - allocate funds to projects not yet in the core programme only at the point when they need to be committed to be delivered on time, and only in accordance with the military assessment of priority at the time.



# Background to the Audit

- Since 2009 the Ministry of Defence (MoD) had acknowledged a gap between its estimated funding and the forecast cost of defence over the next ten years
- A 2009 Report on Defence Acquisition recommended MoD should commit to publishing a Statement to Parliament each year on the cost and affordability of the Equipment Plan
- Following the 2010 Strategic Defence and Security Review the MOD committed to bringing the Equipment Plan within budget
- In May 2012 the Secretary of State for Defence announced in Parliament that the Defence budget was balanced and invited the Comptroller and Auditor General to review the Equipment Plan
- The MoD's first Statement and our first review were both published in January 2013
- The Department's second Statement and our second review were published in February 2014

# Approach to auditing the assumptions underpinning the Equipment Plan

## Audit Questions on the Equipment Plan

- Are the assumptions underpinning the costings in the Equipment Plan reasonable and consistent?
- Are the assumptions underpinning the funding in the Equipment Plan reasonable and consistent?
- Does the Department's affordability statement on its Equipment Plan contain sufficient and appropriate disclosures so that the user is aware of the key assumptions and risks and the extent to which the assumptions would need to change for the plan to become affordable?

The Equipment Plan review and the Major Projects Report scrutinised a sample of 16 major procurement projects, 11 of which had passed the major investment decision point.

The MOD breaks a project down into the activities or resources that are needed and assigns them a cost – these are the **cost inputs**, and if there is uncertainty then the cost is given as a minimum, most likely and maximum (**3 point estimate**).

**Cost inputs sources:**

- Subject matter experts
- Contracts
- Work Breakdown Structure (WBS)
- Cost/Resource Breakdown Structure (CRBS)
- Top down estimates

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**Risk sources:**

- Subject matter experts
- Lessons from experience
- Industry

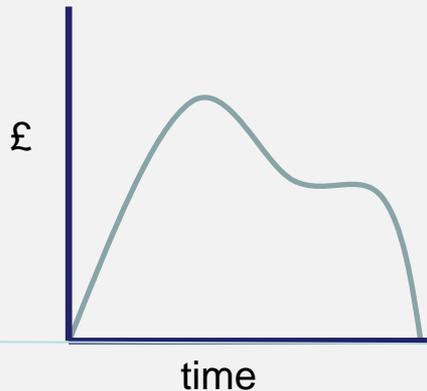
Input

Cost inputs and risks are input into a cost model which uses the 3 point estimates and probabilities to run simulations and produce thousands of possible outcomes.

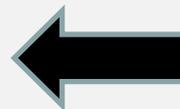
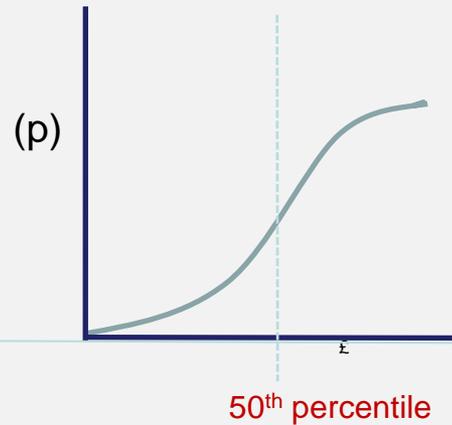
**The Cost Model:**  
simulation run using the cost inputs and risks to give an output of the cost ranges

**Risks** are the same as cost inputs, only they also have a probability of occurring or not occurring.

**50<sup>th</sup> percentile cost profile**

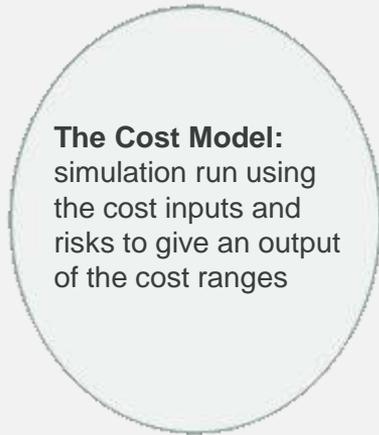


**Cumulative distribution function**

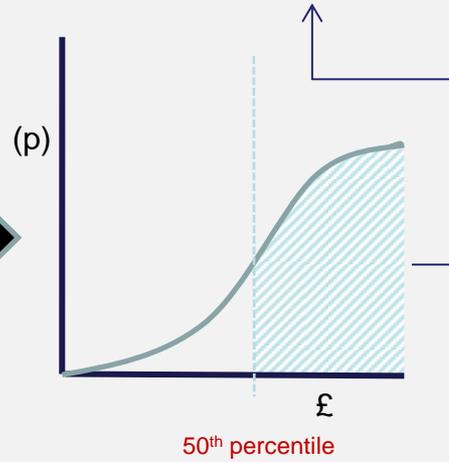


# RIC/ROC

1.



$90^{th} \text{ percentile} - 50^{th} \text{ percentile} = \text{ROC}$



2.

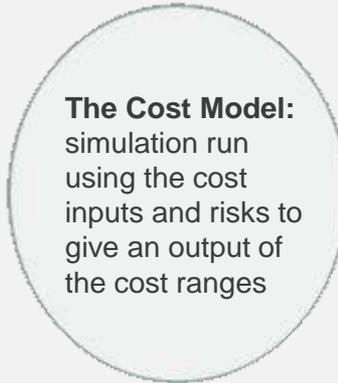
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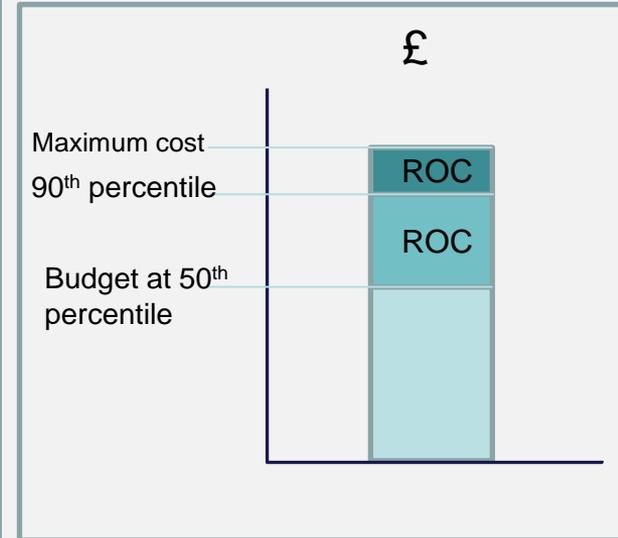
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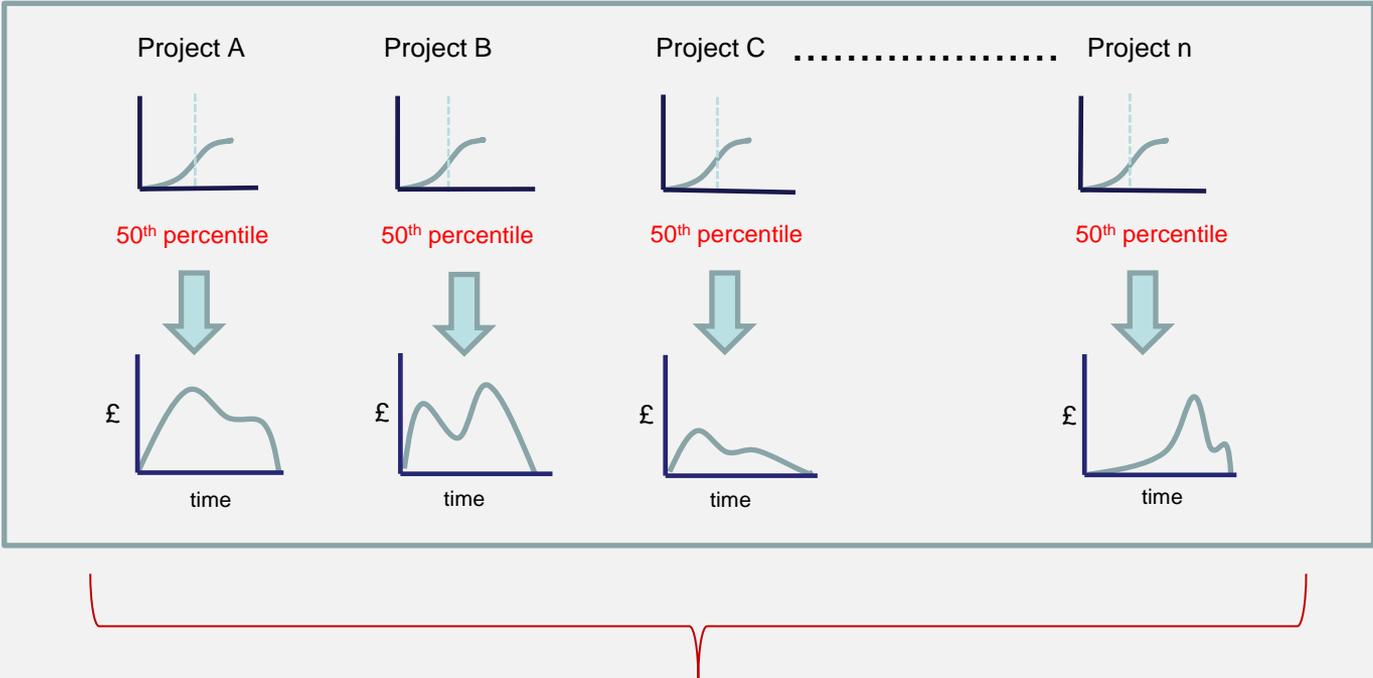


**Excluded risks**

**ROC**



There are over 400 projects and the MOD adds together the 50<sup>th</sup> percentile costs to get a total cost line.



+ contingency + unallocated budget

# Observations from project sampling

- The theory of the costing techniques is sound and good practice
- Variability in how well these techniques were applied
- Inconsistency in how often these techniques were applied
- Inconsistency in the treatment of risk between project teams
- Costing at 50<sup>th</sup> percentile reasonable *if* the risk outside costing is managed well at portfolio level and *if* the modelling produces the genuine 50<sup>th</sup> percentile cost.
- Lack of cost and time modelling at portfolio level – total Equipment Plan costs expressed as single line estimate

## Overall findings: the positives

- The EP report concludes that the Department's work appears to have had a positive effect on the Department's ability to maintain an affordable Equipment Plan
- The MoD has improved its control over the costs of its largest projects and its financial management of equipment procurement
- Improved scrutiny and challenge of costs
- Costs have remained stable from 2011-12 to 2012-13
- Excluding Carriers, there was a net cost decrease of £46 million across the ten remaining projects within MPR
- The Department had work underway to review accuracy of the equipment support costs for the 2013-23 review but had not completed this by the time we finished our review

## Overall findings: areas for concern

- *The impact of a legacy of large complex projects:* The cost increase on Carriers shows there remains a legacy of large complex projects that continues to have a significant impact on the portfolio as a whole;
- *The requirement to achieve substantial savings on some cost lines:* The largest savings built into the Equipment Plan are £1.2 billion in relation to Complex Weapons and £0.9 billion relating to the Submarine Enterprise Performance Programme (SEPP); and
- *The underspend in 2012-13:* The Department underspent its approved spend on the Equipment Plan by £1.2 billion in 2012-13 but is unsure why this has occurred.
- The contingency provision provides a degree of protection to affordability, but there is currently insufficient data for the MoD to evidence whether or not the contingency provision is set at the right level.

# Funding and the unallocated budget

- Treasury has set out its funding for the Equipment Plan to 2020-21 and the Department has assumed funding will continue on the same basis for the rest of the planning period;
- The Equipment Plan budget is not ring-fenced and remains vulnerable to cuts that affect the wider departmental budget;
- The MoD has left £8.4bn unallocated over the period 2013-23. It will fund equipment according to military priority as soon as it is sure that it is affordable;
- £4.7bn of the unallocated budget has been provisionally apportioned to Land Command who will suffer the greatest capability gaps if funding does not become available; and
- Unallocated budget also needs to be used to support equipment purchased under UORs coming back from Afghanistan.