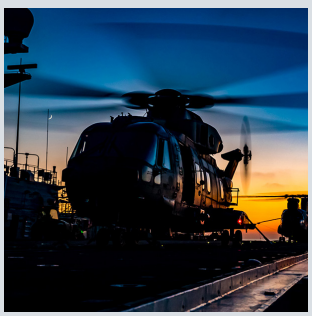
Ministry of Defence

The Defence Equipment Plan 2016



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List of abbreviations

ABC – Annual Budget Cycle
ABSV – Armoured Battlefield Support Vehicle
CAAS – Cost Assurance and Analysis Service
CBRN – Chemical, Biological, Radiological and Nuclear
DE&S – Defence Equipment and Support
EPP - Equipment Procurement Programme
ESP - Equipment Support Programme
FASGW – Future Anti-Surface Guided Weapon
FBLOS – Future Beyond Line Of Sight
FLAADS – Future Local Area Air Defence System
FLC – Front Line Command
GMPP – Government Major Projects Portfolio
ICE – Independent Cost Estimate
ICT – Information Communication Technology
ISS – Information Systems and Services
ISTAR – Intelligence, Surveillance, Target Acquisition and Reconnaissance
JFC – Joint Forces Command
MMCM – Maritime Mine Counter Measures
MOD – Ministry of Defence
MPA – Major Projects Authority
MPR – Major Projects Report
NAO – National Audit Office
PPST – Project Performance Summary Table
PR12 – Planning Round 12 (financial year 12/13)
PDG – Programme Delivery Group
QRPC – Quarterly Review of Programme Cost
SDSR – Strategic Defence and Security Review
SEPP – Submarine Enterprise Performance Programme
SSPR – Single Source Procurement Reform
SSRO – Single Source Regulations Office
WCSP – Warrior Capability Sustainment Programme

The Defence Equipment Plan 2016

Foreword

I am pleased to lay before Parliament this year's financial summary of the Defence Equipment Plan. This is the fifth consecutive annual publication of the equipment plan summary, and demonstrates MOD's continued progress in maintaining a realistic and affordable programme. Not least, I want to pay testament to the substantial work over the past few years, summarised in four previous iterations of this report. This built robust foundations for the 2015 Strategic Defence and Security Review which now sets the vision and future structure for our Armed Forces, taking us from Future Force 2020 and on to Joint Force 2025.

The National Audit Office (NAO) is publishing in parallel their independent assessment of the affordability of our equipment plan. Its report notes the size and financial complexity of the Defence equipment programme, and indicates the challenges ahead. I am grateful that the NAO also points out where we must continue to improve and refine our work in the future. We will continue to work openly with the NAO so as to demonstrate the financial robustness and affordability of the equipment plan. One consequence this year of the progress we have made is the agreement between the NAO and the Department to move from the NAO providing external assurance of the data in the Major Projects Report, to internal, but still independent validation by the MOD's Cost Assurance & Analysis Service.

With the Defence Equipment & Support organisation continuing its planned transformation further positive changes have been made to the procurement process, including improvements in forecasting accuracy and a focus on more efficient delivery of equipment support. There are still further improvements to be made in the ways that Defence procures and supports equipment, which the Defence Equipment & Support transformation programme and other MOD reforms are seeking to address. It is reassuring that the NAO acknowledges the enhancement the Department is making in managing the nuclear enterprise with the introduction of the Director General Nuclear organisation, as announced in the SDSR. In addition, we welcome Sir John Parker's contribution and look forward to delivery of a national ship building strategy.

The Government is committed to the Defence budget increasing by 0.5% above inflation for the remainder of this Parliament. This enables us to plan for the future with confidence. We are planning to spend £178bn on equipment and support over the decade out to 2025-26, which will provide our Armed Forces with the equipment they need to deliver the levels of military capability set out in the Strategic Defence and Security Review.

27 January 2017

Harriett Baldwin MP
Minister for Defence Procurement

Section A: Defence Equipment Plan 2016

Summary

1. This is the fifth annual published financial summary of the Defence Equipment Plan. It sets out the defence equipment budget and forecast expenditure to deliver and support the equipment the Armed Forces require to meet the objectives set out in the 2015 Strategic Defence and Security Review (SDSR). It covers the period from 1 April 2016 to 31 March 2026. In line with our commitment to transparency and assurance, the NAO has again reviewed our plans in detail. They have carried out an independent assessment of the robustness of our financial data and the assumptions that underpin the affordability of the forward equipment plan, as they have done for the previous four equipment plan statements. In this section we describe the overall equipment plan; Section B sets out the areas in which we are continuing to improve our processes, and Section C sets out the areas where we currently plan to spend the equipment budget over the next 10 years. For the first time this document includes an additional Section D, which contains the Project Performance Summary Table (PPST) that the Department has developed as the successor to the Major Projects Report (MPR). The PPST has been independently validated by the MOD's Cost Assurance & Analysis Service (CAAS).

Equipment Budget

2. The data summarised in this report, and reviewed by the NAO, is correct as at the end of the Department's 2016 Annual Budget Cycle (31 March 2016). This was finalised in April 2016 and covers the ten year period from Financial Year 2016/17 to 2025/26. It reflects the conclusions from the SDSR and the Spending Review 2015. The Defence budget has been agreed with the Treasury up until 2020/21 as part of the Spending Review settlement in 2015, consistent with the Government commitment to continuing to fund the equipment budget at 1% above inflation until the end of this Parliament. For internal planning purposes we have assumed that the budget will continue to increase at this rate until 2025/26. Any change in inflation or foreign exchange assumptions will be managed corporately by the Department.

3. The total ten year equipment plan at ABC16 (including contingency), is £178bn. The table at Figure 1 below shows a comparison of the budgets at ABC13 through to ABC16 for a rolling 10 year plan at nominal prices.

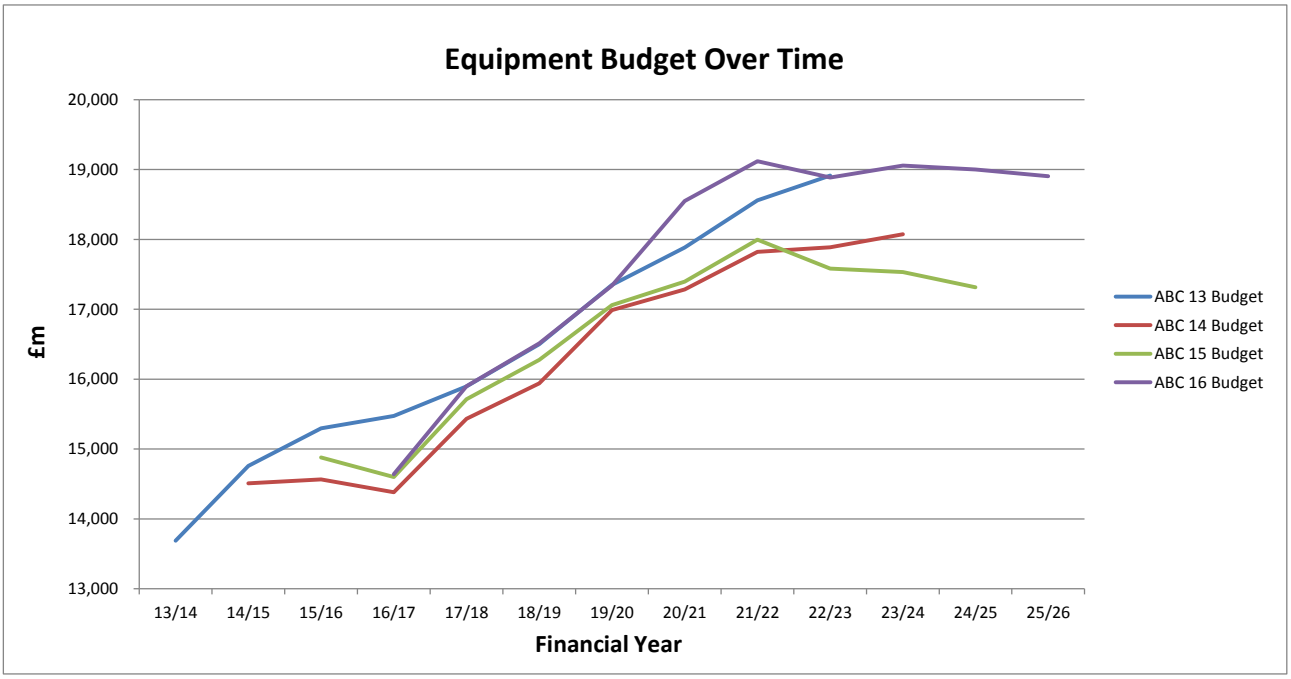
Figure 1 – Equipment budget over time

EP Budget	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	Total
ABC 13	13,688	14,758	15,295	15,472	15,897	16,501	17,348	17,884	18,559	18,914				**164,316**
ABC 14		14,511	14,566	14,381	15,434	15,939	16,987	17,283	17,822	17,887	18,074			**162,885**
ABC 15			14,880	14,600	15,714	16,277	17,059	17,397	17,997	17,582	17,532	17,314		**166,352**
ABC 16				14,639	15,901	16,511	17,340	18,550	19,120	18,888	19,059	19,000	18,904	**177,912**

4. A graphical representation of the table above is shown at Figure 2 below. This illustrates the uplift from the SDSR 15 investments and how investment remains higher throughout the 10 year period from ABC16 than for last year's plan. Once the Spending Review and SDSR had been completed, and the implications and outcomes were

understood, we were able to allocate the budget in those later years to meet the new commitments, and the new ABC16 profile illustrates this.

Figure 2 - Closing position of budget at ABC13, ABC14, ABC15 and ABC16

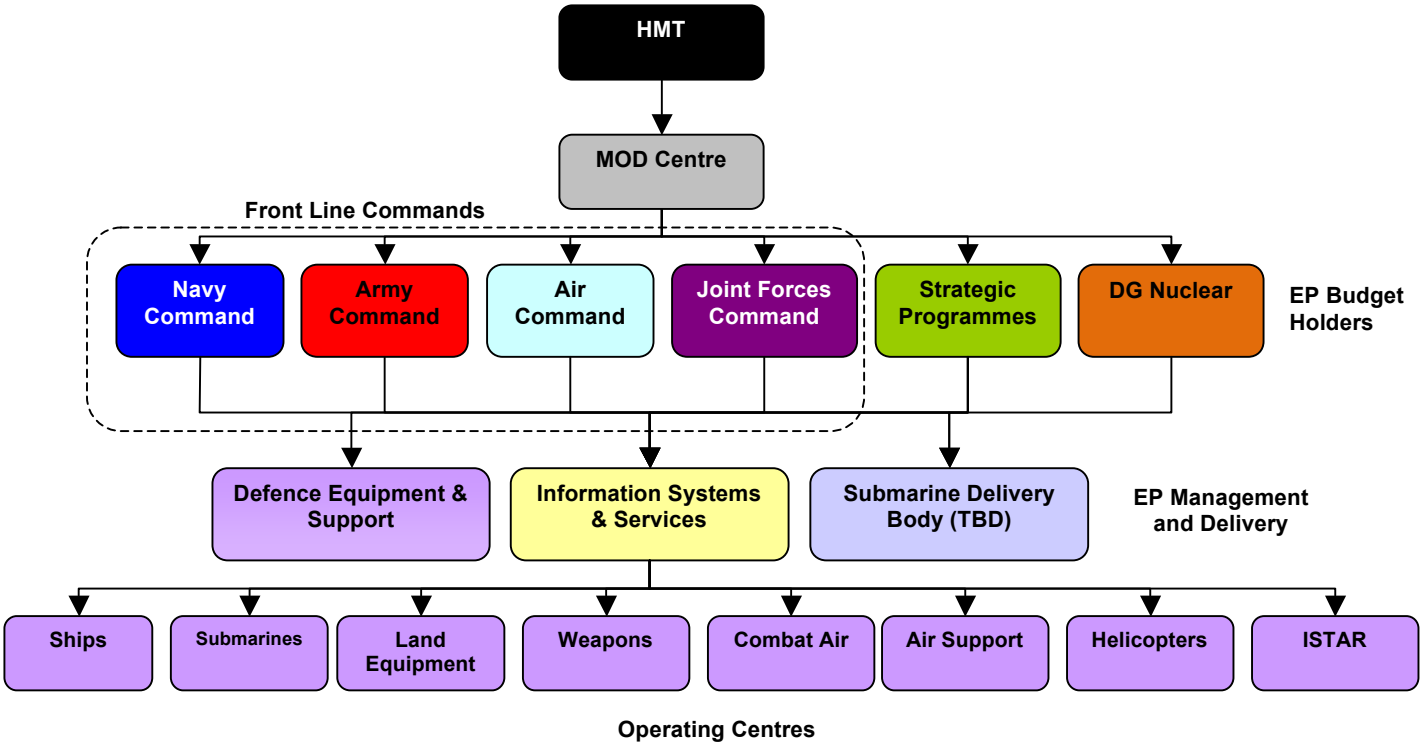


5. Since April 2013, the responsibility for managing the majority of the equipment budget has been delegated to the Front Line Commands (FLCs)[1] in line with the Levene Report recommendations. As of 1 April 2015, the Information Systems and Services (ISS) delivery organisation transferred out of DE&S and into the Joint Forces Command (JFC). As announced in the SDSR, we have established the new Director-General Nuclear organisation to be the single, accountable focus for nuclear-related business within the MOD including its associated equipment programme. As announced in the SDSR, in order to strengthen our arrangements for the procurement and in-service support of nuclear submarines, we will establish a new delivery body with the authority and freedom to recruit and retain the best people to manage the submarine enterprise. The department will announce further details once the relevant decisions have been made.

6. The diagram at Figure 3 below shows how the budget flows in the delegated model.

[1] For the purposes of this document, Front Line Commands includes the Royal Navy, Army, Royal Air Force, Joint Forces Command, and the Strategic Programmes directorate within the MOD Head Office. With effect from 1 April 2016 this also includes the Director-General Nuclear organisation.

Figure 3 – Budget flow in delegated model



Equipment Costs

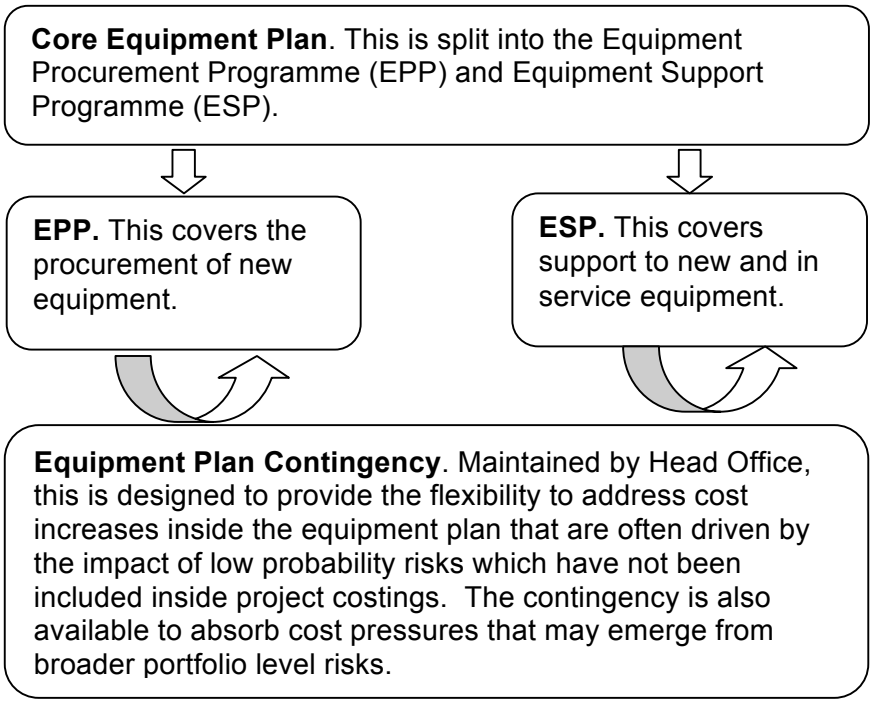
7. In contrast to the budget for the equipment plan, which is allocated top-down, the cost of the equipment plan is built up from cost forecasts generated by individual project teams within the Operating Centres of the delivery organisations, Defence Equipment & Support (DE&S) and ISS, who have responsibility for delivering the projects within approved time and cost parameters and delivering agreed performance criteria. Project teams produce these cost forecasts using quantitative risk analysis to model the range of cost outcomes for projects. The cost forecasts are made at a confidence level that estimates there to be an equal chance of outturn costs being above or below the forecast amount. In the first instance, any variance between the forecast cost and issued budget is the responsibility of the FLCs to manage.

8. DE&S and ISS are continuing to run the Quarterly Reviews of Programme Cost (QRPC), first introduced during ABC13. These reviews test the latest cost forecasts to provide assurance that current costings are taut and realistic. Each QRPC is followed by a Quarterly Customer Review where FLCs have the opportunity to review programme performance and costs, and instruct necessary mitigation actions to keep within overall budget limits. This governance mechanism ensures that the cost of every project in the equipment plan receives assessment and oversight at senior level. The reviews include consideration of the level and profile of risk funding held within the projects in the FLCs portfolio.

Equipment Plan

9. The Defence Equipment Plan is made up of a number of different elements, which are shown in the diagram below.

Figure 4 – Constituent elements of the equipment plan



10. As of the close of ABC16, the Department's plan for the constituent elements of the equipment plan over the next 10 years is to:

a. **spend £82bn on the procurement of new equipment.** This is an increase of nearly 20% over last year's £68.5bn and is necessary to fund the new SDSR commitments. It also includes the effects of budget roll-forward in 2025/26;

b. **spend £23.4bn on support arrangements for new equipment**. This is an increase of nearly 28% on last year's £18.3bn, which is driven by the impact of the SDSR commitments and budget roll-forward in 2025/26;

c. **spend £67.2bn on support for existing, in-service equipment.** This is an increase of over 2% on last year's £65.8bn, which is driven by the impact of the budget roll forward in 2025/26;

d. **maintain a corporately held contingency provision of £5.25bn.** This is an increase of 23% over last year's £4.3bn. A proportion of this contingency fund is ring-fenced for the Nuclear Enterprise in recognition that it accounts for a significant proportion of the equipment plan.

11. This includes the outcomes of the SDSR, where the Department plans to invest a further £24.4bn in equipment capability priorities over the next decade, than was

previously planned. An annotated graphical representation of the financial steps taken to reconcile the equipment plan from ABC15 (last year's) to ABC16 can be seen below at Figure 5. In order to meet these spending commitments the Department has taken the following action:

a. **formally allocated £7.3bn previously held as equipment plan headroom into the core equipment plan.** The headroom was a continuation of funding required to deliver the core equipment plan that allowed us to adjust funds (incrementally and flexibly) for a number of additional programmes that were a high priority for Defence, at a time when they were required, and when we could be sure that they were affordable;

b. **formally allocated £3.4bn of centrally held provision into the core equipment plan.** This was funding in the last three years of the plan that was indicatively earmarked for future investment, but had not been allocated to Commands or incorporated into the core equipment plan or other areas of investment. This was also required to fund the SDSR commitments. The ABC16 figure is a moderate increase in last year's figure of £2.2bn as a result of roll-forward in 2025/26;

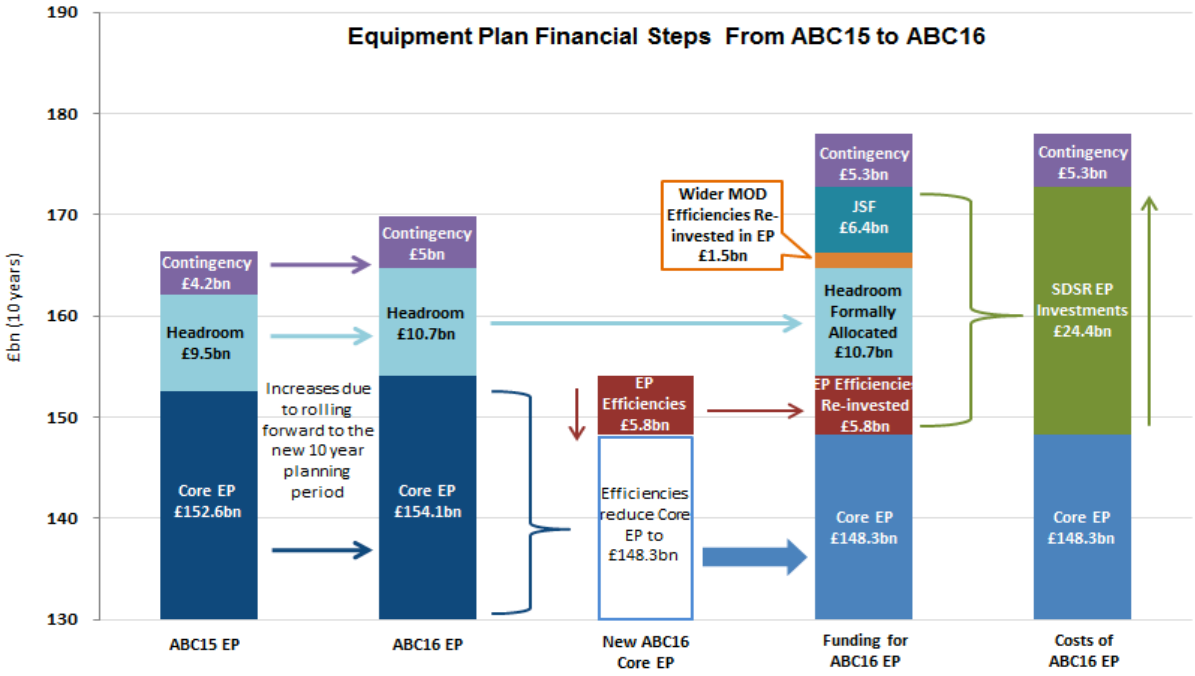
c. **plans to invest £6.4bn[2] from the Joint Security Fund.** This additional funding, made available during the SDSR, supports the Department in meeting its SDSR commitments. The funds have been incorporated in the Department's core budget;

d. **identified approximately £5.8bn of efficiencies from within the core equipment plan in addition of existing efficiency targets**. This has the effect of reducing the planned cost of the core equipment plan by £5.8bn allowing us to invest the funding released elsewhere in the programme over the next 10 years, see Figure 6 below, and further detail in section B, paragraph 27;

e. **reassigned approximately £1.5bn to the equipment plan from wider Departmental efficiencies.** We plan to reinvest these efficiency savings in the core equipment plan over the next 10 years.

[2] The JSF fund was agreed for the remainder of this Parliament, with £2.1bn allocated to MOD. The Defence planning cycle covers a ten year period, therefore for planning purposes the Department has assumed the continuation of the funding for the remainder of the planning period.

Figure 5 – Financial steps taken from ABC15 through the SDSR to ABC16 (numbers are rounded)



- ABC15 core equipment plan over ten years was £152.6bn, consisting of EPP (£65.8bn) and ESP (new equipment £18.3bn and in-service equipment £65.8bn). Headroom was £9.5bn and the contingency £4.2bn, making a total equipment plan of £166bn.
- Rolling forward by one year to the new ABC16 ten year planning period increased the core equipment plan by £1.5bn (to £154.1bn), increased headroom by £1.2bn (to 10.7bn) and increased contingency by £0.8bn (to £5bn).
- Efficiencies totalling £5.8bn were identified within the equipment plan, reducing the core equipment plan cost to £148.3bn.
- SDSR enhancements of £24.4bn will be met by investing funds that made available from: equipment plan efficiencies (£5.8bn), headroom (£10.7bn), Departmental efficiencies (£1.5bn), JSF (£6.4bn).
- This increases the core equipment plan to £172.7bn (EPP of £82bn, ESP new equipment of £23.4bn and ESP in-service equipment of £67.2bn).
- The equipment plan contingency is set at £5.25bn making a total ABC16 equipment plan of £178bn.

Figure 6 – Planned SDSR equipment plan efficiencies

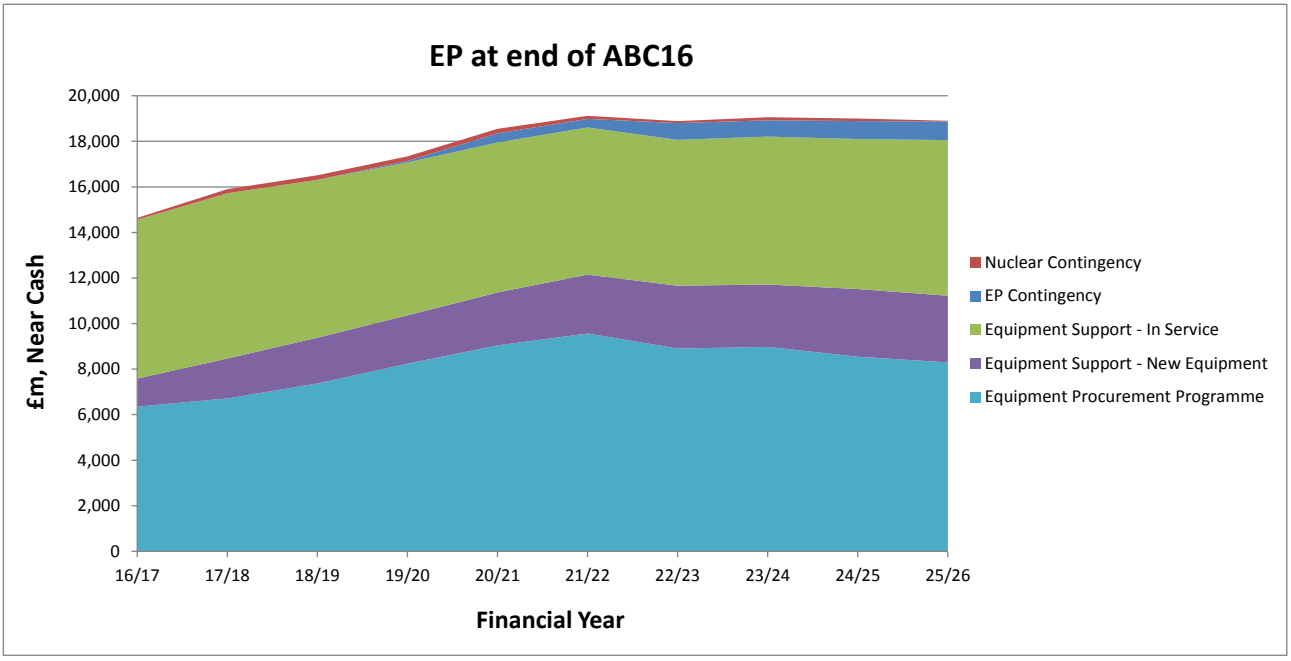
Efficiency Programme	Saving £M
Further Equipment Support Programme Efficiencies	285
DE&S Transformation Efficiencies	3,321
Single Source Contract Regulations - Savings associated with single source contract regulations	1,727
Equipment Plan Efficiency Measures - A number of more minor equipment plan efficiencies, including Testing and Evaluation, Logistics, and PFI savings	512
Total	**5,845**

12. Within the individual project costings that make up the core equipment plan, there is specific risk provision of £10.95bn over ten years. The overall level of funding held for risk at the end of ABC16 is an increase on the previous year's figure of £10.3bn. The QRPC process continues to provide a significant focus on whether project teams are holding the right level of risk provision and to ensure that they are retiring risk appropriately. When considered alongside the £5.25bn contingency provision, we have £16.2bn set aside to cover emerging risks and potential cost growth in the equipment plan, totalling over 9% of the core programme.

13. Funding allocated to the core equipment plan includes an adjustment in estimated costs to reflect a realistic assessment of likely actual spend in each of the first three financial years of ABC16. This judgement reflects the fact that planned financial expenditure often fails to materialise in-year due to slower than anticipated progress, for example because of challenges in recruiting Suitably Qualified and Experienced Personnel, or reductions in cost, and is described further in paragraph 16 below.

14. At the end of ABC16, the equipment budget broken down into the Equipment Support Programme (ESP), for both new equipment and in-service, the Equipment Procurement Programme (EPP) and taking the contingency into account, is illustrated in the graph and table at Figure 7 below.

Figure 7 – Equipment plan at the end of ABC16



ABC 16 EP Budget	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	Total
Nuclear Contingency	75	180	200	200	200	134	87	136	111	31	**1,354**
EP Contingency	0	0	0	67	400	376	736	714	789	819	**3,901**
Equipment Support - In Service	6,979	7,255	6,931	6,712	6,584	6,462	6,403	6,494	6,586	6,833	**67,238**
Equipment Support - New Equipment	1,233	1,752	2,011	2,123	2,324	2,585	2,759	2,741	2,971	2,928	**23,426**
Equipment Procurement Programme	6,353	6,714	7,369	8,238	9,042	9,563	8,902	8,974	8,544	8,294	**81,993**
Total	**14,639**	**15,901**	**16,511**	**17,340**	**18,550**	**19,120**	**18,888**	**19,059**	**19,000**	**18,904**	**177,912**

Annual Budget Cycle

15. During ABC16, the Department took action to reflect the SDSR and Spending Round outcomes, and ensure the stability and affordability of the investment packages that would form the new baseline equipment plan required to meet the Joint Force 2025 ambition. This was funded through the formal allocation of headroom and generation of efficiency savings across the Defence budget as a whole. Due to the size and complexity of the equipment plan, and the significant enhancements in capability investments resulting from SDSR decisions, it is recognised that there is an increased level of uncertainty within the ten year programme. This temporarily increases the level of

financial risk, which will require continued attention. The Department will continue to work to ensure delivery is on track, and that the financial risks and uncertainty in the programme are managed, and take programming action to respond where risks materialise.

16. To mitigate the risk of under spending caused by projects not progressing as swiftly as planned, some £703m of additional work was planned for financial year 2015/16 over and above the budgeted programme. This number took into account judgements made at both Operating Centre and DE&S corporate level. As well as this, a series of in year adjustments and transfers produced a net decrease in the budget and workplan of £174m to manage the in-year departmental financial position. Once these were taken into account, there was a small net underspend of £39m against the planned equipment budget in 2015/16.

Figure 8 – Financial Year 2015/16 Cost, Budget and Workplan

FY 2015/16 Budget, Workplan and Outturn	Near Cash, £m
Gross Workplan	15,583
Over Programming	-703
2015/16 Equipment Plan Budget	14,880
In Year Adjustments	-174
Final In Year Budget	14,706
Outturn	14,667
Variance	**-39**

17. The level of contractual commitment in the core equipment plan has remained broadly similar to that at the end of ABC15. Around 70% of the plan is contractually committed in 2016/17, (compared to 69% contractually committed in 2015/16) falling to around 12% at the end of the decade.

Figure 9 – Contractual commitment in core equipment plan at close ABC16

Contractual Commitment	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26
% Committed	70%	52%	42%	31%	24%	21%	19%	15%	13%	12%

Section B: Improvements in Ministry of Defence (MOD) Processes and Functions

18. Following engagement with the NAO during their four previous reports into the MOD's forward equipment plan, we have continued to take forward a series of improvements in our data, cost, and risk management processes.

19. The DE&S Forecasting Improvement Programme closed in February 2015 with residual actions being transferred to the Materiel Strategy programme. Under this programme, DE&S is establishing a process and controls framework to provide best-in-class processes and tools which will be used consistently and coherently across DE&S to improve overall delivery performance.

20. A key element of DE&S Transformation has been the creation of a new professional function of Project Controls. Project Controls comprises a suite of processes, skills and tools which support the gathering and analysis of timely performance data to understand, predict and constructively manage the time and cost outcomes of a project or programme. This will build an improved capability in the disciplines of Risk Management, Schedule Management, Cost Estimating and Cost Controls. These were the key areas identified by the Forecasting Improvement Programme as needing improvement, and these standardised ways of working are a key aspect of ensuring that DE&S staff are able to maximise the effectiveness of their time, reducing duplication and maximising efficiency. Transformation is also underway in ISS to ensure the organisation is better able to meet future demands including improved customer service, and the delivery of enhanced and better value for money core Information Communication Technology (ICT) services and networks.

21. CAAS continued to provide Independent Cost Estimate's (ICE) for EPP and ESP projects. During ABC16, CAAS further increased their coverage of projects, now equating to 58% of the whole equipment plan by 10-year value, and used extrapolation modelling techniques to provide an independent view for the remainder.

22. The CAAS independent view on equipment plan cost reflects the extent to which project teams may be underestimating the financial risks within project budgets. For ABC16, the CAAS realistic outturn view is projected at £2.4bn over the delivery team estimates for the EPP and £2.4bn for the ESP, which totals £4.8bn or 2.8% of the whole equipment plan. This is a smaller variance than that projected the previous year (£5bn). Comparing this to the corporately held contingency of £5.25bn, we judge the latter is sufficient to deal with any cost growth within the equipment plan and broader risks that may emerge.

Efficiency and Savings in Major Programmes

23. Following Spending Review 2013, private sector support helped identify cost savings across the largest ESP projects and develop enduring methodologies to reduce ESP costs while still delivering the required level of support. Having reviewed around 45% of the support programme, the ESP review identified most likely savings of £4.1bn over 10 years, to be delivered through a combination of net savings and cost avoidance (i.e. identifying opportunities to reduce future costs to bring them in line with budget). These

savings have been reflected in the 10 year equipment plan, and the FLC's budgets reduced accordingly. The review has also conducted several lessons learned exercises which will be taken forward by the MOD to support the Department's overall aim of delivering equipment support in a more cost-effective manner.

24. As part of the Department's drive to deliver continuous improvement in the equipment plan there are a number of large projects that are set to deliver efficiency targets. This includes the Complex Weapons pipeline and the Submarine Enterprise Performance Programme (SEPP).

25. The Complex Weapons pipeline is designed to meet the UK's enduring requirement to have battle winning complex weapons. It delivers the UK's complex weapons requirements through an innovative approach based on the development of families of weapons focussing on commonality, modularity and reuse. The Complex Weapons procurement approach will deliver estimated financial benefits of £1.2bn over 10 years from 2010. This represents the forecast net savings from the current "partnered portfolio management" procurement approach compared to what could be achieved from open competition. A review by CAAS in July 2016 judged that the target remained achievable, albeit highly dependent on successful execution of its component projects and the value and sequencing of the programme being broadly maintained. The majority of benefits will be realised towards the end of the 10-year period due to the principle of technology development in early projects being re-used in subsequent projects.

26. Along with the three Tier 1 suppliers (BAE Systems, Babcock and Rolls-Royce), the MOD is pursuing improvements in efficiency, performance and long term sustainability under the auspices of SEPP. This supports the acquisition and maintenance of submarines as well as delivering circa £900m of savings against the 10 years to FY20/21 of a stable submarine programme. To date, £638m of financial benefits have been delivered and more efficiency savings will continue to be identified and scored across the Enterprise.

Figure 10 – Efficiency savings in the equipment plan

	Savings Identified £bn	Total Forecast Savings £bn
Equipment Support Efficiencies	3.4	4.1
SEPP	0.64	0.88
Complex Weapons Pipeline	0.57 (gross)[3]	2.1 (gross, 1.2 net)
Total	4.61	7.08

[3] The complex weapons target is £2.1bn gross savings, which gives £1.2bn actual savings after netting off the notional additional cost of single-source procurement from the benefits of the extant procurement strategy.

2015 Spending Review Efficiency Savings

27. The department agreed to a significant efficiency programme in the 2015 Spending Review, with a target to deliver circa £5.8bn of efficiencies from the core equipment plan over the next decade (as set out earlier at figure 6). These efficiency savings will be re-invested into the equipment plan in order to fund SDSR commitments. The delivery of these savings is of the highest priority for the Department. A robust governance process has been put in place to ensure that delivery is carefully and accurately monitored, that challenges to delivery are identified early, and that remedial actions are taken where necessary to ensure successful delivery of the overall efficiency target.

Single Source Procurement Reform

28. Following Lord Currie's independent report (2011) into single source procurement, the MOD carried out a fundamental overhaul to the Department's approach to single source procurement. This has resulted in the establishment of a new framework, known as the Single Source Contract Regulations (SSCRs), which is based on greater transparency and standardised reporting, with stronger supplier efficiency incentives, underpinned by a stronger governance arrangement, and the creation of an independent body – the Single Source Regulations Office (SSRO). The SSCRs are underpinned by statute through Part 2 of the Defence Reform Act (DRA) 2014, which received Royal Assent in May 2014, and through secondary legislation, which came into force in December 2014. At the heart of the new approach is the principle that industry should receive a fair and reasonable price in exchange for providing the MOD with the protections needed to assure value for money.

29. These reforms represent a radical change to the way in which the MOD approaches single source procurement (which amounts to around 40% - or around £8bn per annum - of the Department's overall procurement budget). A number of contracts have already been let under these new arrangements, becoming Qualifying Defence Contracts, and a central MOD team, the Single Source Advisory Team (SSAT), has been set up to support project teams and to act as the Department's interface with the SSRO. A programme of training and guidance has been rolled out across the department to ensure the MOD achieves the maximum possible savings from the reforms. This training and guidance will be adapted in the light of lessons learned.

30. A key part of the reform lies in the creation of the SSRO as an independent, arms-length mediator between MOD and industry should disputes arise on the costs of qualifying single source contracts. The SSRO was set up in late 2014 and has been active in producing a range of statutory guidance for industry and MOD on how the reforms will work in practice. The SSRO is able to give opinions and make legally binding judgements on issues specifically referred to it by either the MOD or the supplier. The MOD is committed to making full use of the SSRO's expertise and has already referred the Astute Boat 5 contract to the SSRO for an opinion on pricing.

31. The SSRO is currently undertaking a fundamental review of the methodology used to calculate the baseline profit rate (BPR), which is used as the basis for profit calculations on all single source contracts. The current BPR methodology has been broadly unchanged since it was introduced in 1968, when the nature of the UK defence industry was very different.

Project Performance Summary Table

32. In their October 2015 publication of the Equipment Plan 2015 to 2025 and Major Projects Report (MPR) 2015, the NAO announced their intention to work with the MOD to develop a more cost-effective approach to keeping Parliament informed about the progress of major defence projects. This year sees the introduction of a new Project Performance Summary Table (PPST) which has been developed by the MOD to replace the MPR.

33. A fundamental part of the PPST was the introduction of an internal validation process which was undertaken independently by CAAS, replacing the activity previously undertaken by the NAO in the MPR. This has provided the department with assurance of the data included in the summary table which can be found in section D.

The Government Major Projects Portfolio

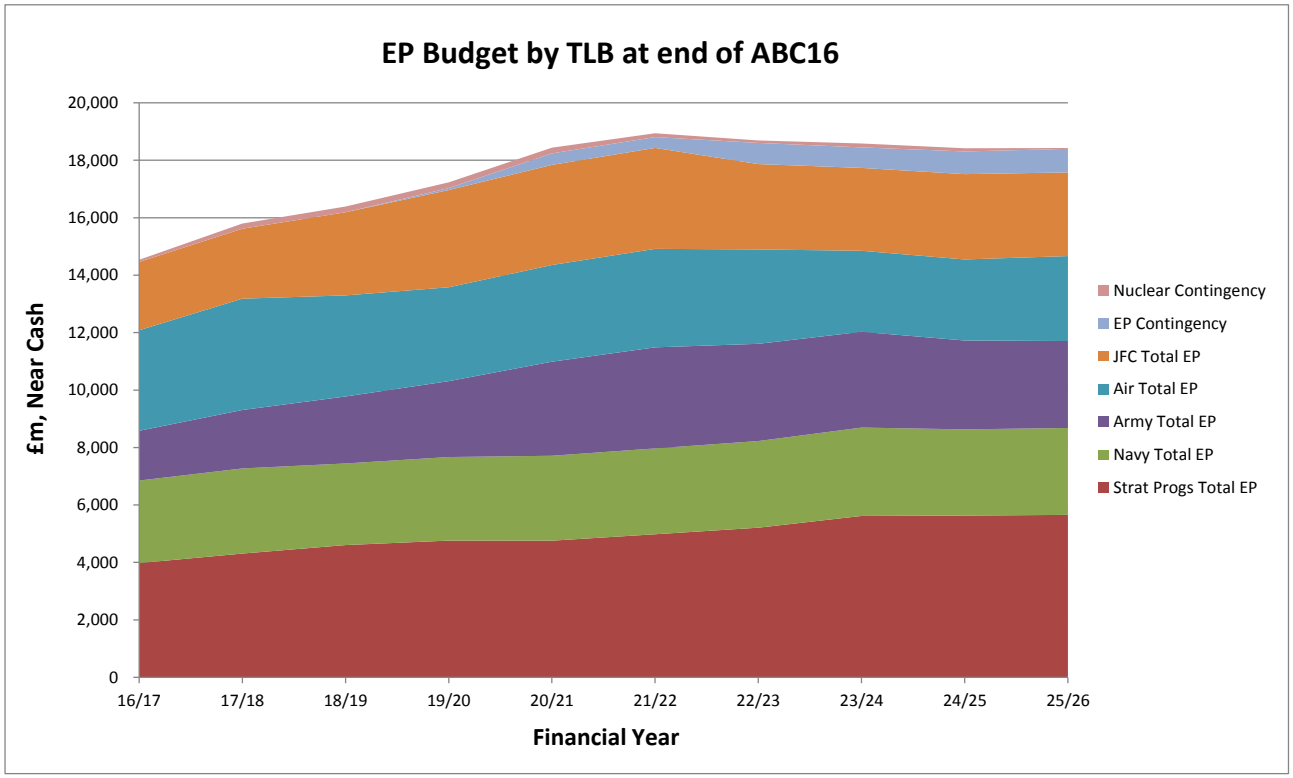
34. The most significant business change and capability change programmes in MOD are included within the Government Major Projects Portfolio (GMPP). The MOD reports on the performance of its GMPP programmes quarterly to the Infrastructure and Projects Authority (IPA) and selected performance data is published with the IPA's Annual Report. Though a number of the capability change programmes in the GMPP include equipment procurement projects reported on in the PPST, the scope of GMPP and PPST reporting is different and the two are not directly comparable. The PPST focuses on equipment procurement only, whereas GMPP reporting includes all Defence Lines of Development (DLOD i.e. equipment procurement plus infrastructure, training, manpower and other contributing areas) as well as some transformation programmes.

35. Information on the GMPP, including detail from MOD's reports, is published by the Cabinet Office on the GOV.UK website.

Section C: Sector Analysis – Where Does the Money Go?

36. The breakdown of the equipment plan by Top Level Budget (TLB) is shown in the graph below, along with contingency.

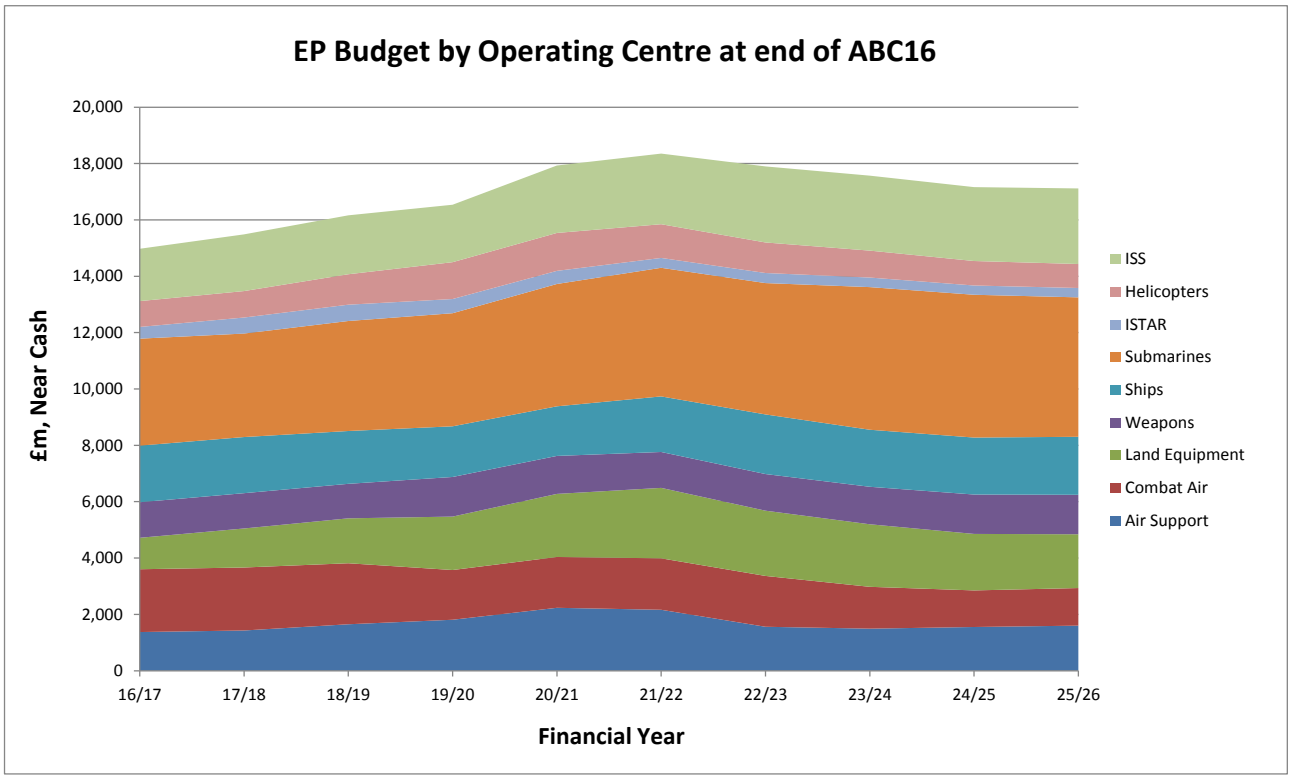
Figure 11 – Equipment plan by TLB/FLC[4]



37. The FLCs manage and distribute their equipment budget to the individual DE&S and ISS teams that are responsible for delivering equipment and support projects. In DE&S these project teams are grouped into 'Operating Centres' based on the type of equipment delivered. A breakdown of the budgets issued to the eight main DE&S Operating Centres (Submarines, Ships, Land Equipment, Weapons, Air Support, Combat Air, Helicopters and ISTAR (Intelligence, Surveillance, Target Acquisition and Reconnaissance)), and ISS is shown in the graph at Figure 12 below.

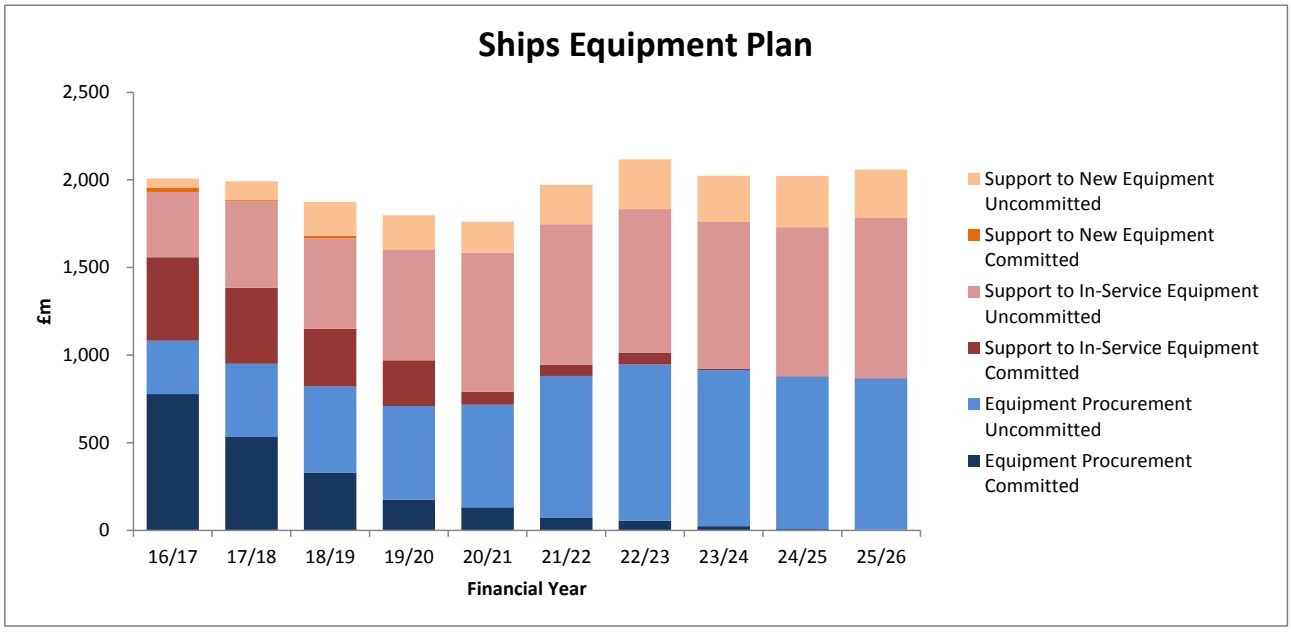
[4] At the time of the ABC16 planning cycle, the DG Nuclear equipment plan budget was still held within Strategic Programmes.

Figure 12 – Equipment plan by Operating Centre



Ships

38. We currently plan to spend around £19bn on surface ships over the next ten years, in line with projected spend at the end of the previous planning cycle.



39. This sector covers spending on the design, build and maintenance of surface ships together with the supply and maintenance of the equipment on-board. This includes investment in:

- the completion of the two Queen Elizabeth Class aircraft carriers;
- the design and development of the Type 26 Global Combat Ship, which will replace the Type 23 Frigate;
- four new Tide Class Tankers, to provide modern ships for the Royal Fleet Auxiliary. The innovative procurement strategy sees the initial build being undertaken overseas, prior to customisation and specialist trials in the UK;
- new Offshore Patrol Vessels, for which a firm price contract for three has been awarded to BAE Systems;
- the implementation of a Common Support Model, transforming support delivered to all complex warships through a converged, cost effective support model centred on an improved Surface Ship Support Alliance, with an optimum, sustainable mix of MOD and Industry skills.

40. During 2015/16 we:

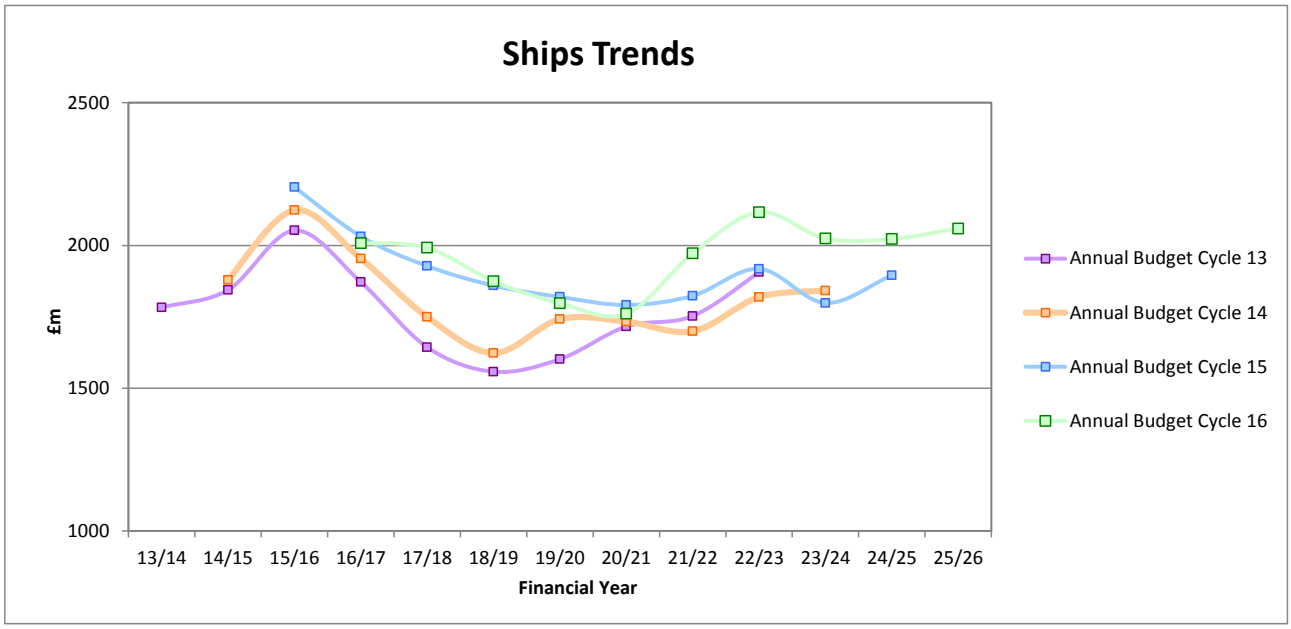
- put the final block for the Prince of Wales aircraft carrier into place, bringing assembly work on this ship significantly closer to completion;

- cut steel on the second and third Royal Navy Offshore Patrol Vessels;

- awarded contracts worth £80 million to upgrade Type 23 Frigates as part of their Life Extension programme, ensuring these adaptable frigates can continue to be deployed worldwide on Operations;

- awarded a £44 million contract to Lockheed Martin Integrated Systems UK, to fit new state-of-the-art navigation radars to more than 60 Royal Navy ships, submarines and shore facilities;

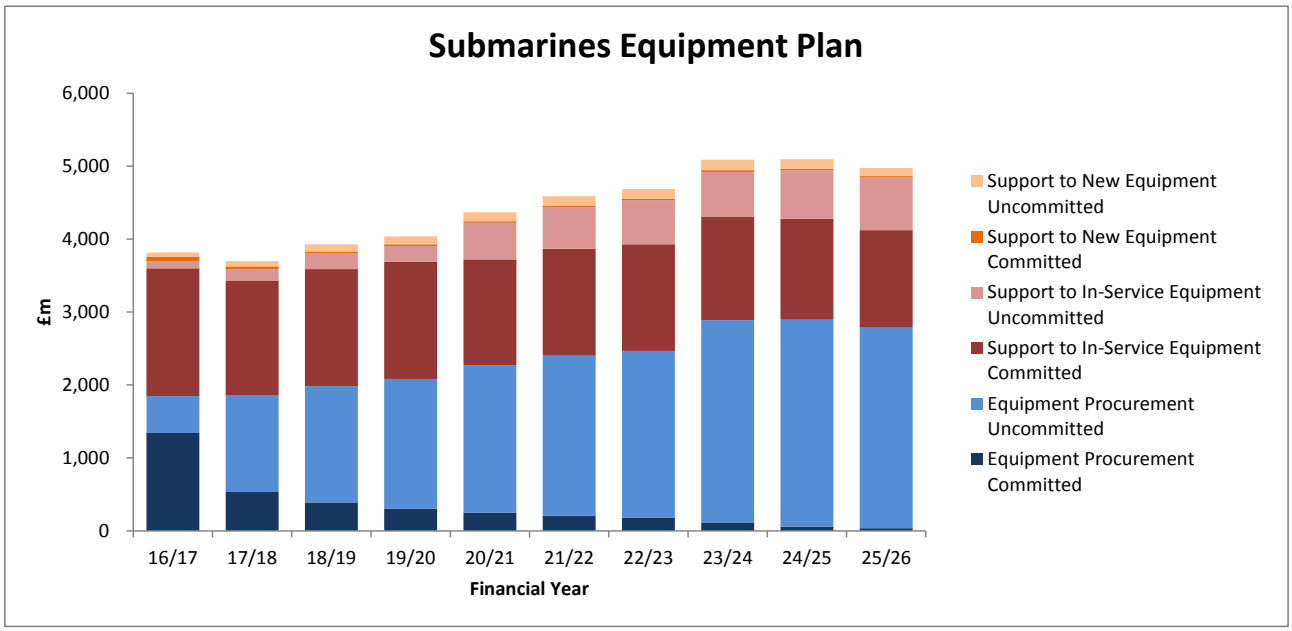
- awarded a £13.5 million contract for 60 new PACIFIC 24 Rigid Hulled Inflatable Boats with BAE Systems. These form a vital part of the Royal Navy fleet, deploying from ship to shore as a rapid response craft to perform fast rescue, anti-piracy and counter-narcotics missions.



41. The planned spend profile over the next 10 years for the Ships Operating Centre has increased slightly because of many small changes across what is a wide and diverse portfolio of programmes and projects. The peak in the early years reflects the current level of Surface Ships acquisition programmes, which spans the Queen Elizabeth Class aircraft carriers, Type 26 Frigates, Offshore Patrol Vessels and Tide Class Tankers.

Submarines

42. We plan to spend around £44bn on submarines over the next decade in comparison to £43bn at the end of the last planning cycle. This increase reflects the updates to current schedule assumptions and costs across a number of programmes.



43. This sector covers spending on all submarine procurement and support. This includes investment in:

- support to in-service submarines, including the provision of engineering and design authority support to the UK submarine flotilla to ensure that they remain safe, available and capable;

- the delivery of 7 Astute Class submarines, the initial support and training, as well as the delivery of the Astute Capability Sustainment Programme;

- the Dreadnought Class submarine design and build activities at Barrow, as successor to the current Vanguard Class nuclear submarines; the common missile compartment arrangements with the US; the command and control and naval base infrastructure upgrades required;

- the support, procurement and design of naval nuclear propulsion systems;

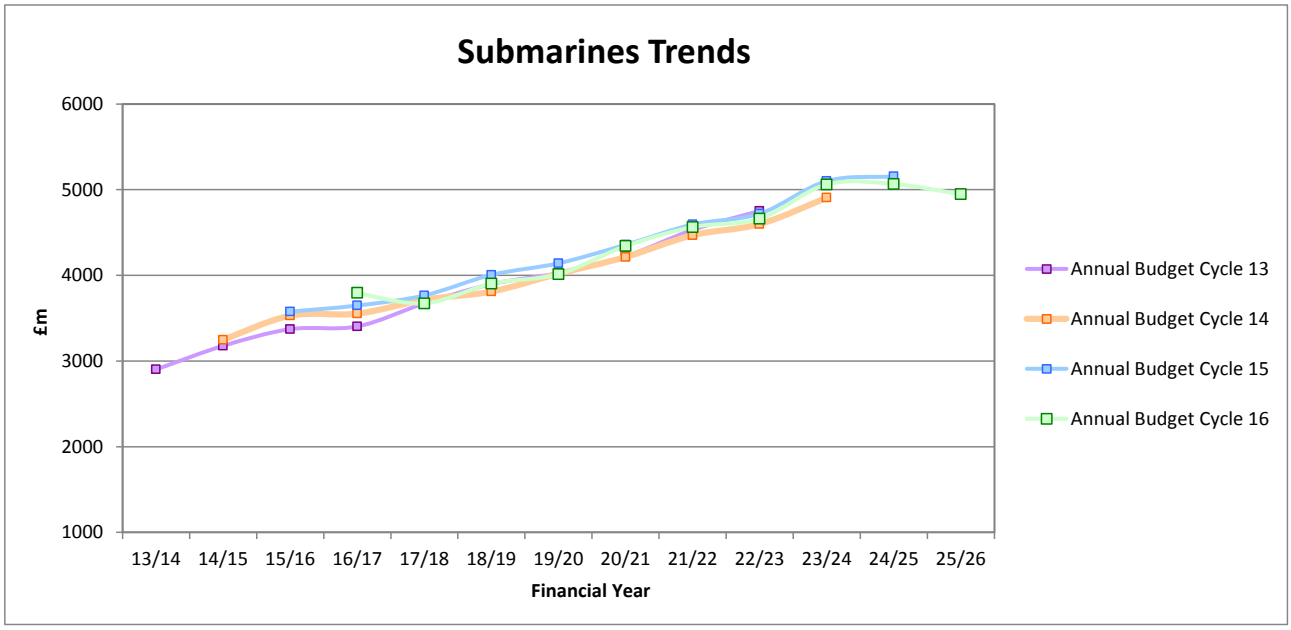
- the nuclear warhead capability sustainment programme, which covers the operation, maintenance and updating of the Atomic Weapons Establishment; the Trident D5 missiles with the US; the UK/French collaborative Teutates project, and the provision of other services and activities across the Strategic Weapons System.

44. During 2015/16 we:

- maintained Continuous At Sea Deterrence with the Vanguard Class submarines and provided Trafalgar and Astute Class submarines to support Fleet operations. This included ensuring that our plans for the ongoing operation of the submarines were robust;

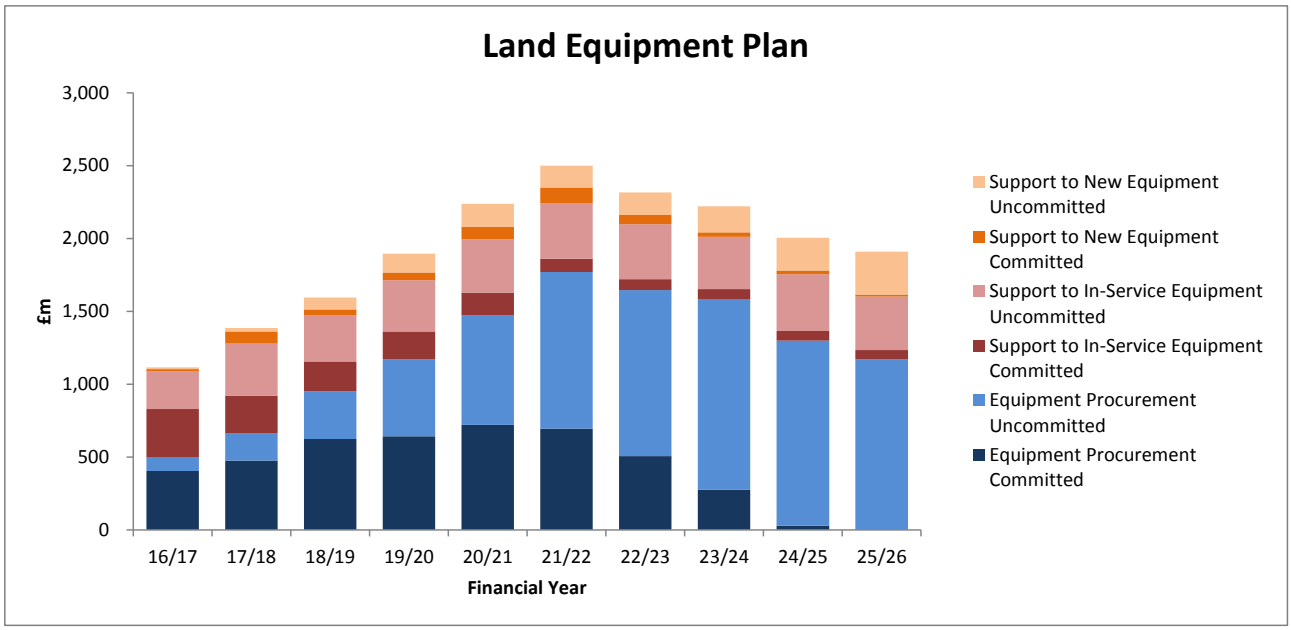
- increased the design maturity of the Dreadnought Class submarine and its nuclear propulsion plant, and incorporated lessons learned from other programmes;

- commissioned the third Astute Class submarine, HMS Artful.



Land Equipment

45. We plan to spend around £19.1bn on Land Equipment over the next decade in comparison to £17bn at the end of the previous planning cycle.

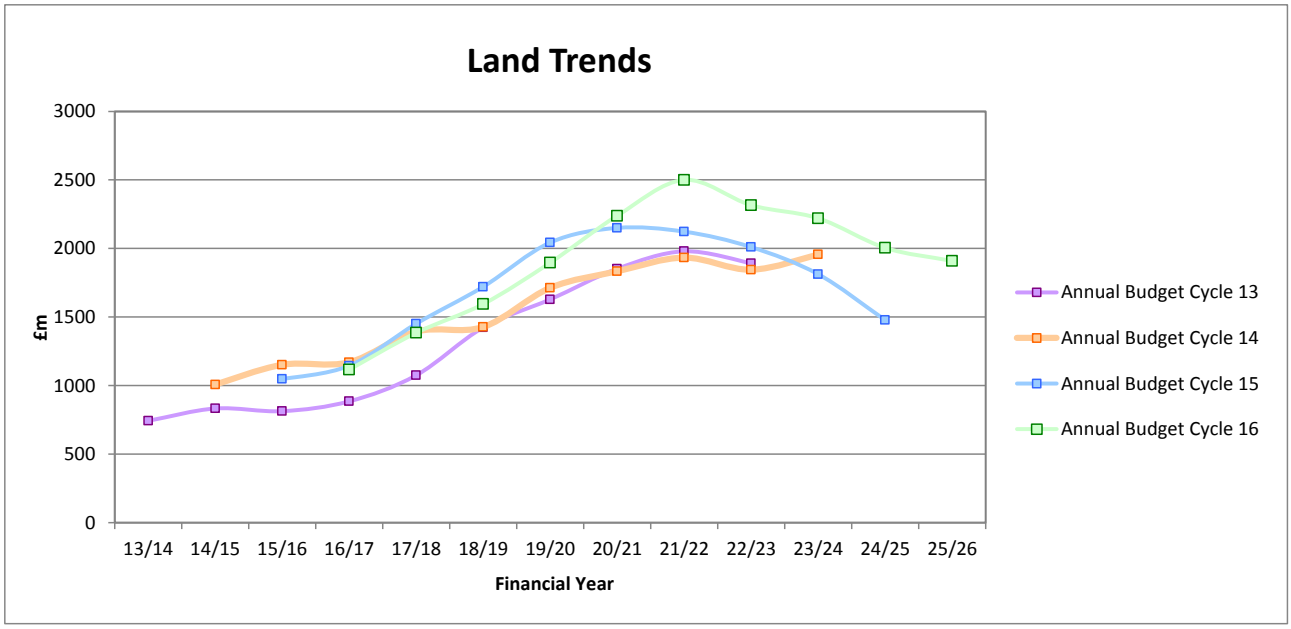


46. This sector covers spending on the delivery and support of armoured, protected and support vehicles; artillery systems; operational infrastructure; soldier fighting systems; and training solutions. It includes:

- the Warrior Capability Sustainment Project (WCSP), which will extend the life of the infantry fighting vehicle and deliver capability enhancements including a new target acquisition system, electronics and power management, and a modular protection system;
- the Challenger 2 Life Extension Programme, which will mitigate platform obsolescence and extend the life of the platform;
- the AJAX vehicle project, which will deliver a transformational armoured capability for medium within the war-fighting division, including the new STRIKE brigades;
- the Multi Role Vehicle Protected programme delivering a family of adaptable, protected general purpose vehicles for command and logistics;
- the VIRTUS programme delivering a personal protection and load carriage system for the individual soldier;
- the Mechanised Infantry Vehicle (MIV) project, to equip the mechanised infantry within the STRIKE brigades.

47. During 2015/16 we:

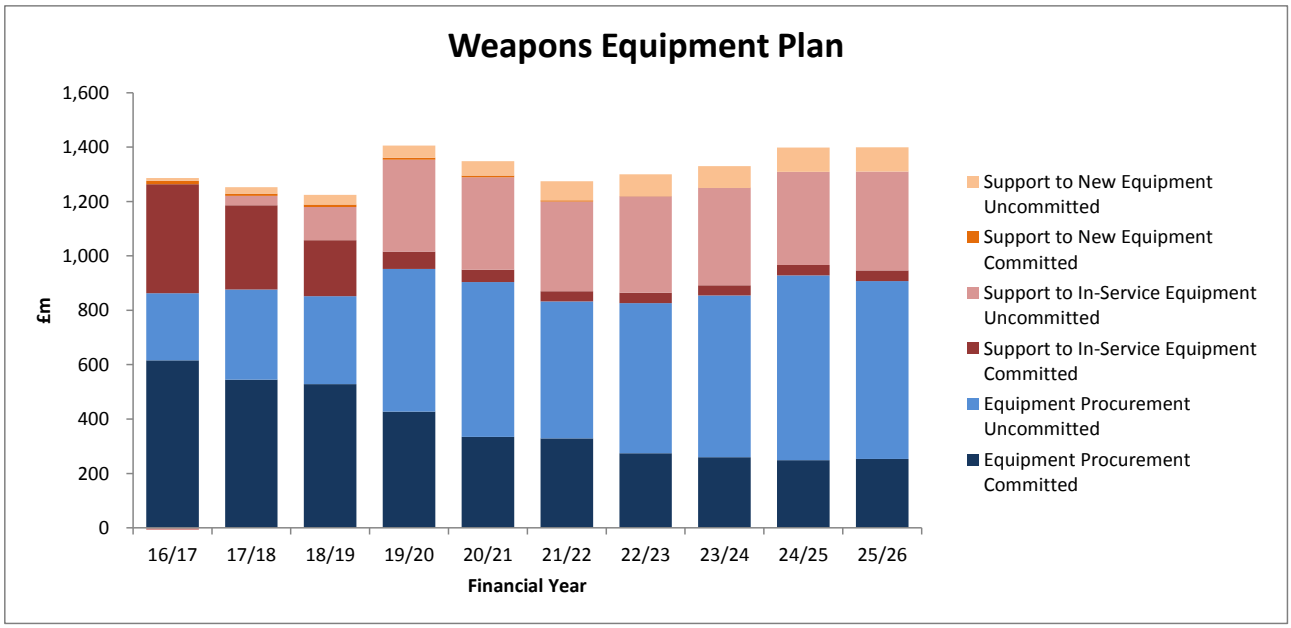
- concluded the AJAX Critical Design Review;
- agreed to move the manufacturing of AJAX into South Wales;
- concluded WCSP System Critical Design Review for the FV520/521 platforms;
- delivered VIRTUS pulse 1 (over 2,000 systems delivered to very high readiness force elements).



48. The increase in planned spending compared to last year's plan reflects two factors: the increasing profile over time for delivery and support of AJAX and other vehicles and additional work for new projects as a result of ABC16 options, in particular MIV.

Weapons

49. We plan to spend £13.5bn on the Weapons Programme over the next ten years, in comparison to £13.2bn at the end of the previous planning cycle.



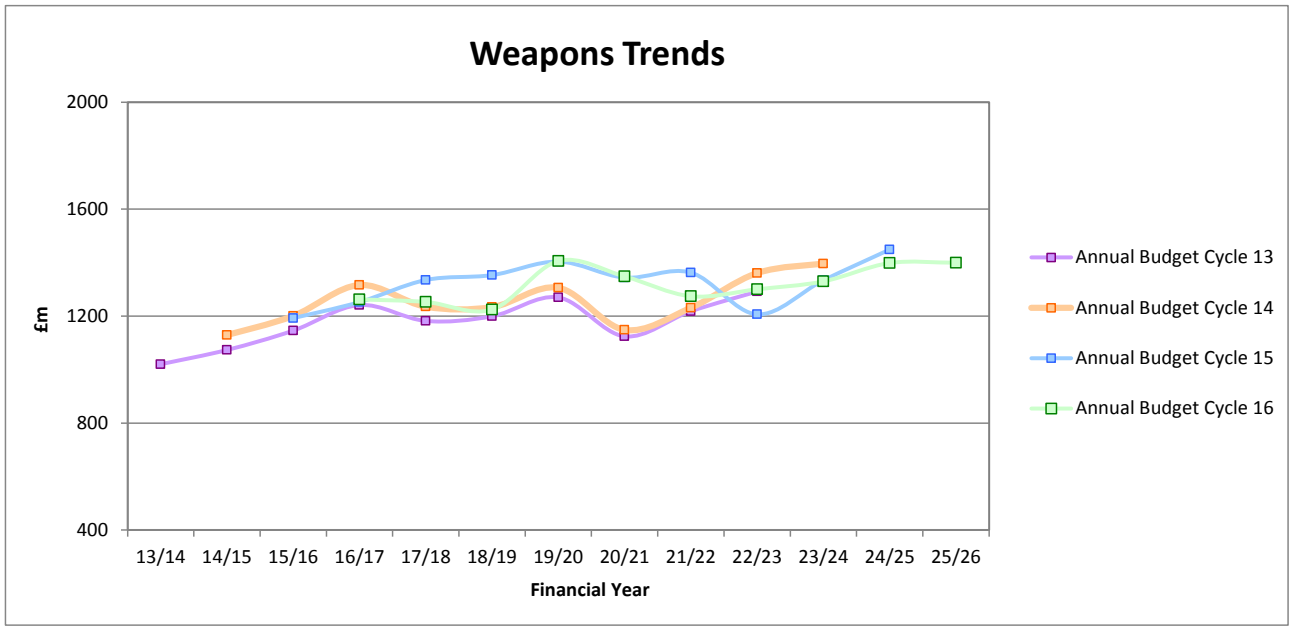
50. We plan to procure the majority of our more sophisticated weapon systems through a partnering agreement with industry, the Complex Weapons portfolio arrangement. Systems that we plan to deliver under this arrangement include:

- Brimstone 2, short-range precision strike capability for Tornado, Typhoon (with the potential to fit it to Protector and Attack Helicopter in the future);
- Sea Ceptor and Land Ceptor, both utilising the Common Anti-air Modular Missile to provide Future Local Area Air Defence capability in the Maritime (on the Type 23 and Type 26 Frigates) and Land environments;
- ASRAAM Block 6, short-range air-to-air air defence capability for Typhoon and Lightning II;
- Sea Venom and Lightweight Multirole Missile (LMM), helicopter-launched Future Anti-surface Guided Weapon Heavy and Light anti-ship capabilities for Lynx Wildcat;
- SPEAR Capability 3, medium-range precision strike capability on Lightning II (with the option to also fit it to Typhoon);
- Storm Shadow Mid-life Re-life, long-range precision strike capability for Typhoon;
- Meteor, a beyond visual range air-to-air air defence capability for Typhoon and Lightning II;

- Maritime Future Offensive Surface Warfare capability;
- Long range rocket system;
- Land precision strike capability.

51. During 2015/16 we:

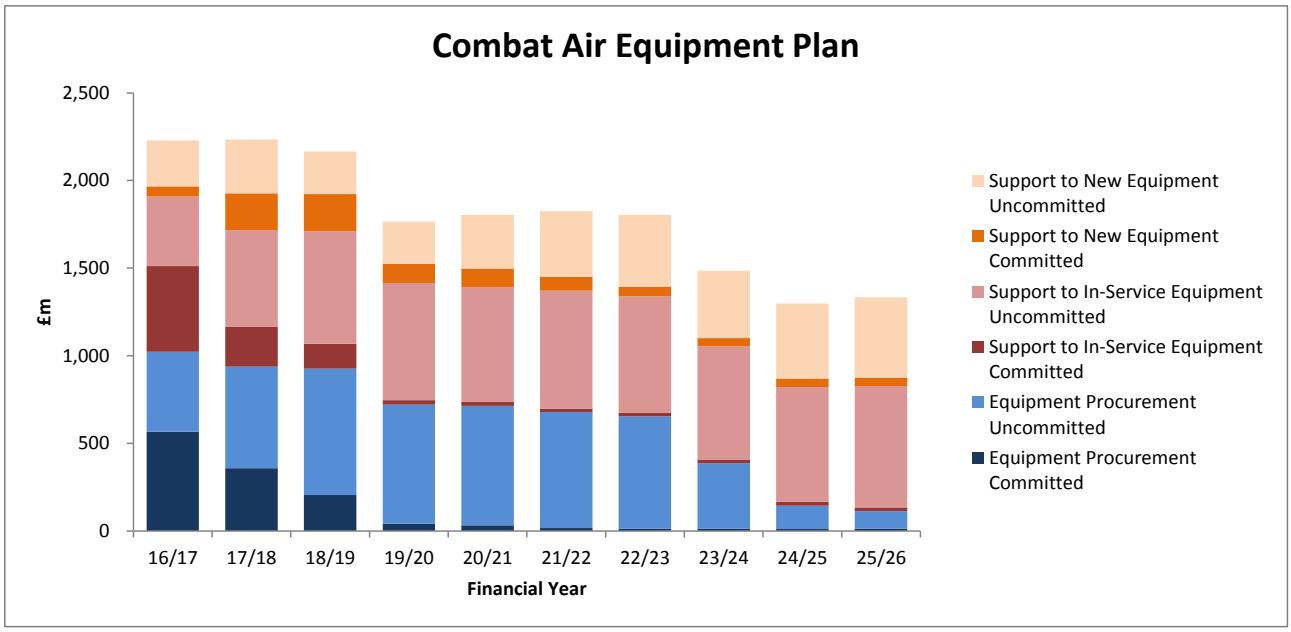
- endorsed the Sea Ceptor First of Class 'commitment to fit';
- awarded a contract for ASRAAM stockpile buy and Typhoon integration;
- awarded a contract for Storm Shadow Mid-life Re-life Assessment Phase;
- awarded contracts for Brimstone 2 and Storm Shadow under the Unified Support Environment initiative;
- awarded a 4-year contract for SPEAR Capability 3 Demonstration Phase.



52. The reductions in financial years 2017/18, 2018/19 and 2021/22 between ABC15 and ABC16 submissions are largely due to options and rebalancing measures across the Complex Weapons portfolio, to better align the programme of work with available funding.

Combat Air

53. We now plan to spend around £18bn in the Combat Air sector over the next ten years, in comparison to £17.4bn at the end of the previous planning cycle.



54. This sector covers fast jets, Unmanned Air Systems and Military Flying Training, including the procurement of training aircraft. This investment includes:

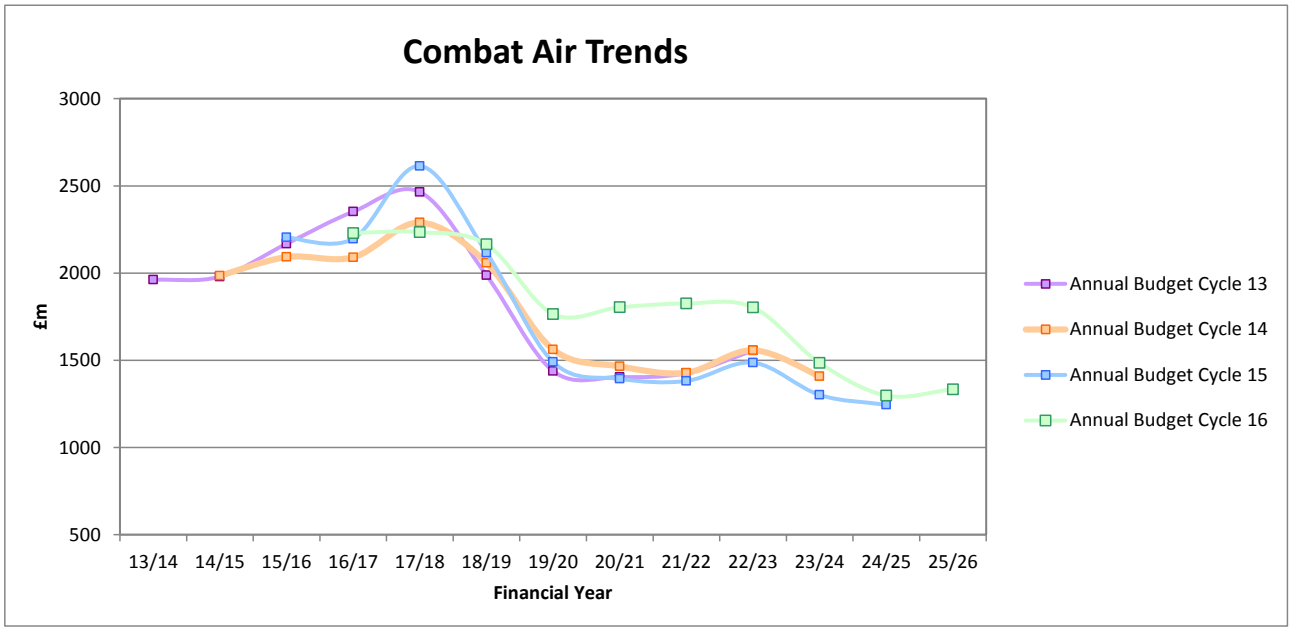
- Typhoon capability, including the integration of a suite of weapons and enablers that will enhance the Ground Attack and Air-to-Air roles;
- delivery of the F-35 Lightning II project, which will be a cornerstone of Combat Air operations for decades to come;
- Unmanned Air Systems, bring into core existing capabilities and investing for the future in replacement systems, including the SDSR commitment to more than double the existing Reaper fleet;
- Military flying training, including new aircraft systems and synthetic training environments to enhance delivery of trained aviators until 2033.

55. During 2015/16 we:

- took delivery of 8 Tranche 3 Typhoon aircraft taking the fleet from 125 to 133 aircraft;
- delivered enhancements to our Typhoon fleet including capability to meet Interim Force 2015 policy and the progression of Project CENTURION, the transfer of combat air capability from Tornado to Typhoon required by December 2018;

- took delivery of one F-35 Lightning II aircraft (BK4) and placed a contract for the construction of F-35 facilities (Integrated Training Centre, Maintenance and Finish facility, and the Logistics Operations Centre) at RAF Marham;

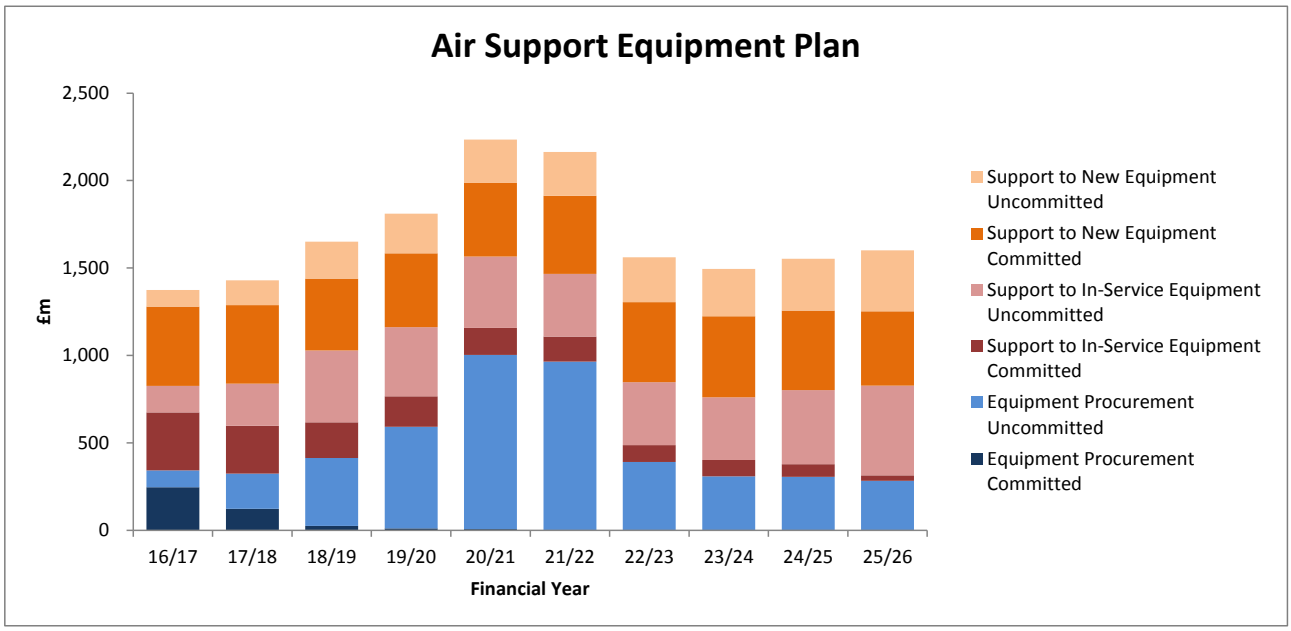
- committed to delivery of Future Fixed Wing and Rotary Wing flying training out to 2033 and enhanced safety of legacy training aircraft.



56. The change in the ABC16 budget profile over the financial years 19/20 to 22/23 is due to the impact of SDSR in earlier acquisition of F35 aircraft than previously planned.

Air Support

57. Following the 2015 SDSR we now plan to spend around £16.6bn in the Air Support sector over the next ten years, in comparison to £12.6bn at the end of the previous planning cycle.



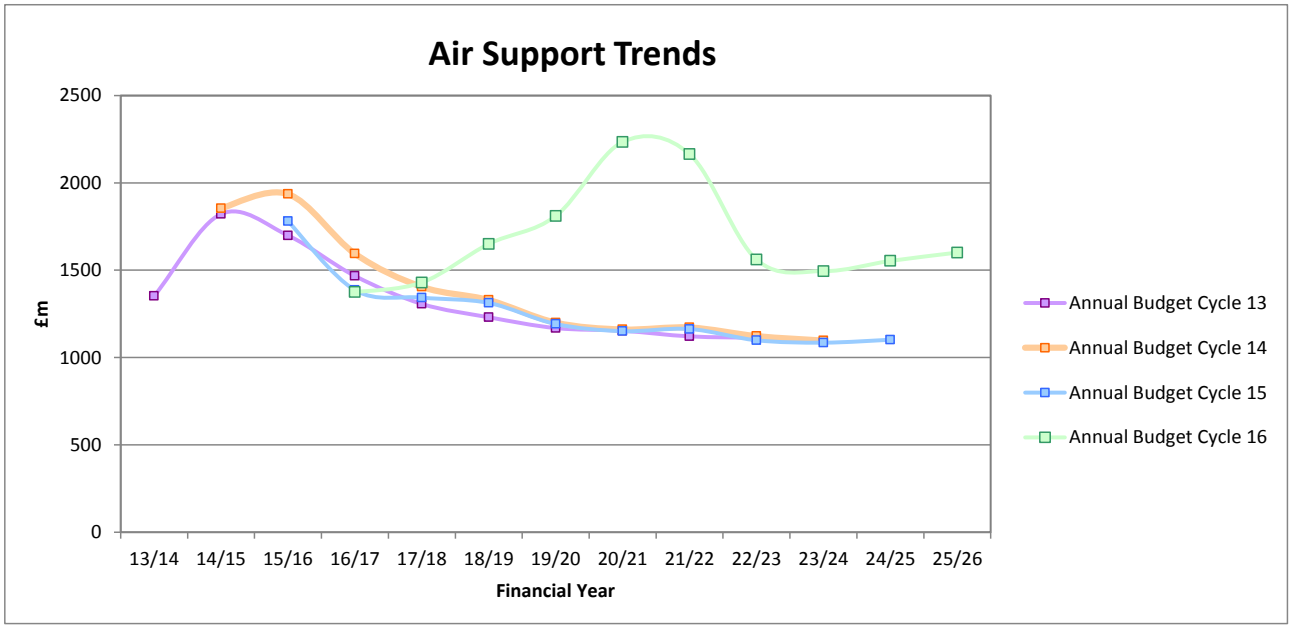
58. This sector covers all large aircraft, including transport, air-to-air refuelling and large ISTAR platforms. This investment includes:

- procurement of 9 Boeing P-8A Poseidon Maritime Patrol Aircraft;
- the A400M future generation of strategic/tactical air transport aircraft;
- the delivery of the Voyager air transport and air-to-air refuelling service;
- upgrades to the Sentry fleet to address obsolescence and sustain the fleet's capability to its extended out of service date of 2035;
- procurement of new Airseeker aircraft to a state-of-the-art airborne signals intelligence collection capability.

59. During 2015/16 we:

- continued progress growing the Voyager air-to-air tanker and passenger transport fleet taking delivery of the 12th and 13th aircraft. The total planned fleet size is 14 aircraft with the final aircraft delivered in July 2016;
- took delivery of the second (of three) Airseeker aircraft. The final aircraft is expected to be delivered in 2017;

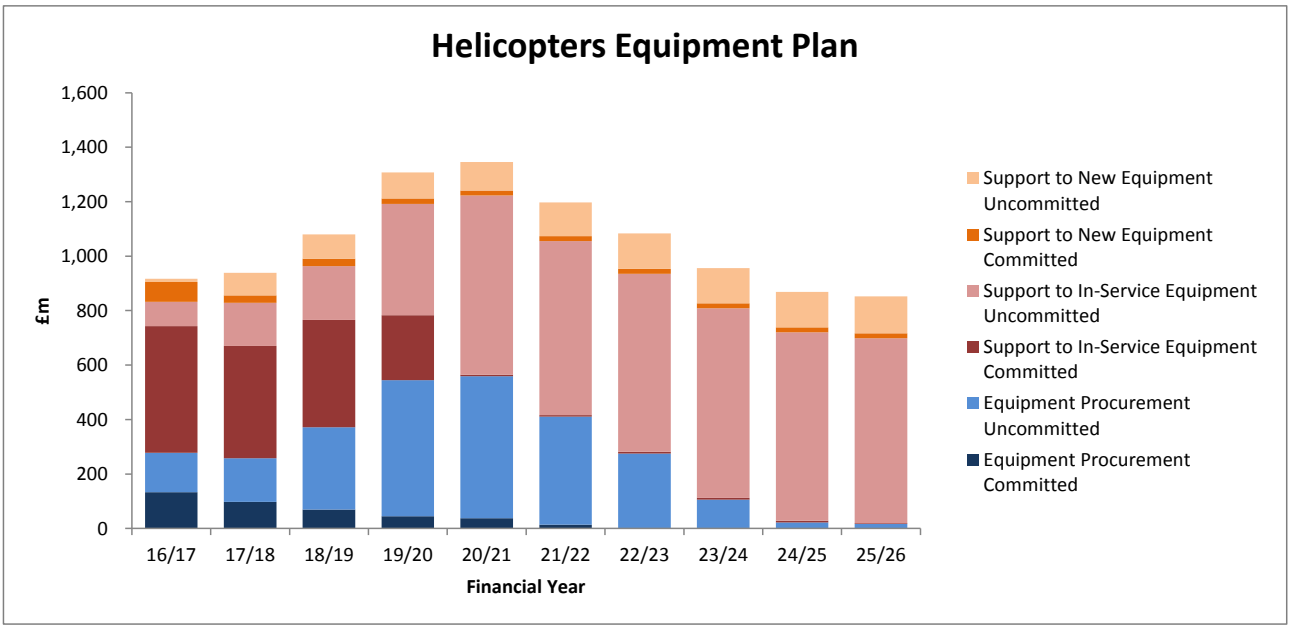
- continued growing the A400M fleet at RAF Brize Norton with a further 6 operational A400M aircraft delivered, including the two modified with UK-specific defensive aids.



60. The increase in funding is largely due to the plan to procure and support the Boeing P-8A Poseidon Maritime Patrol Aircraft, and extend the life of the Sentry fleet.

Helicopters

61. We plan to spend around £10.6bn on helicopter capabilities over the next ten years, in comparison to £11.1bn at the end of the previous planning cycle.



62. This sector covers spending on all helicopter procurement and support. This investment includes:

- upgrades to our existing airframes and investment in new ones that will allow Defence to sustain the core capabilities in addition to supporting the Maritime and Special Forces domains;

- support to our existing fleets: Chinook, Merlin, Apache and Wildcat, which we plan to sustain until at least 2040, and Puma, with a current Out-of-Service Date of 2025.

- conceptual development to examine the feasibility of a single Medium Multi Role helicopter capability to replace some of our current helicopter capabilities in the 2025-2035 timeframe.

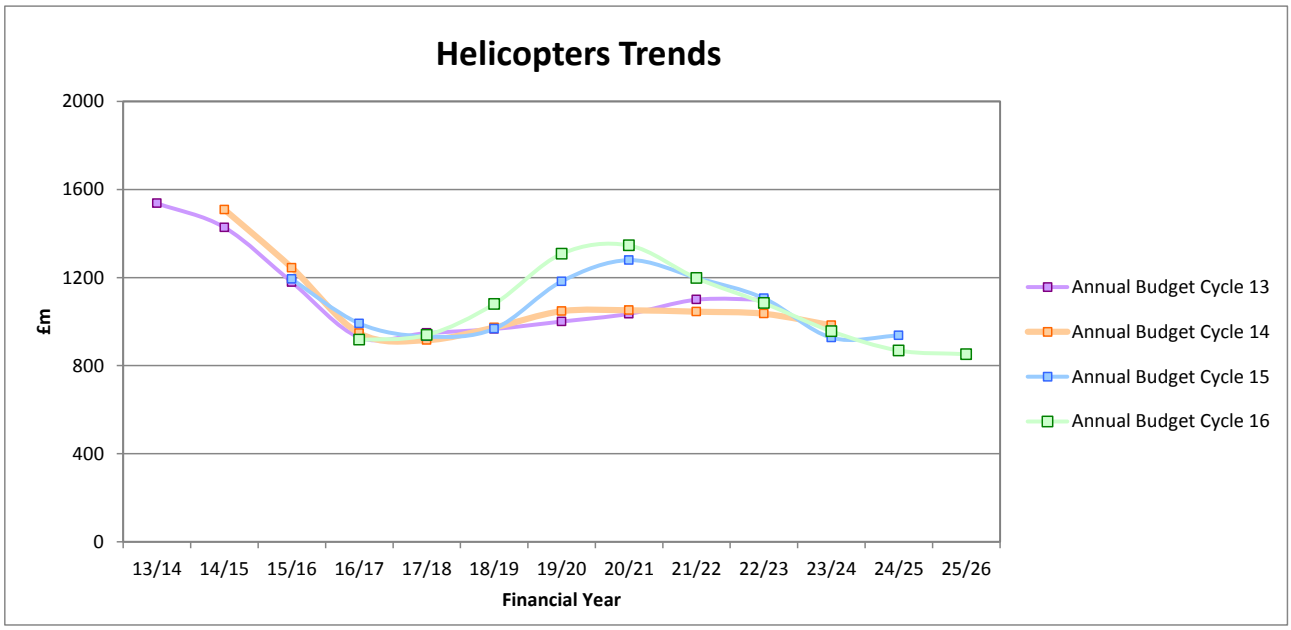
63. During 2015/16 we:

- continued to address the future sustainability of helicopter capability by re-directing investment and delivering an affordable whole-life solution;

- continued the delivery of new helicopter capabilities to our Armed Forces: the Full Operating Capability of JULIUS – the digitisation of the cockpit for the Chinook fleet; delivered the 14th and final new Chinook Mk6; achieved the Puma Mk2 and Merlin Mk2 FOCs; and the Falkland Island Search & Rescue and Support Helicopter service achieved its In-Service Date;

- achieved the Release to Service of the Wildcat Littoral Manoeuvre capability and the interim Littoral Manoeuvre Initial Operating Capability for Merlin Mk3; submitted the main gate business case for the Apache Capability Sustainment Programme (leading to agreement of a Foreign Military Sales agreement with the US Government for the delivery of 50 AH-64E aircraft); oversaw the down-selection to the preferred CROWSNEST Mission System solution; successfully retired from service the majority of the Sea King fleet and the Lynx Mk7;

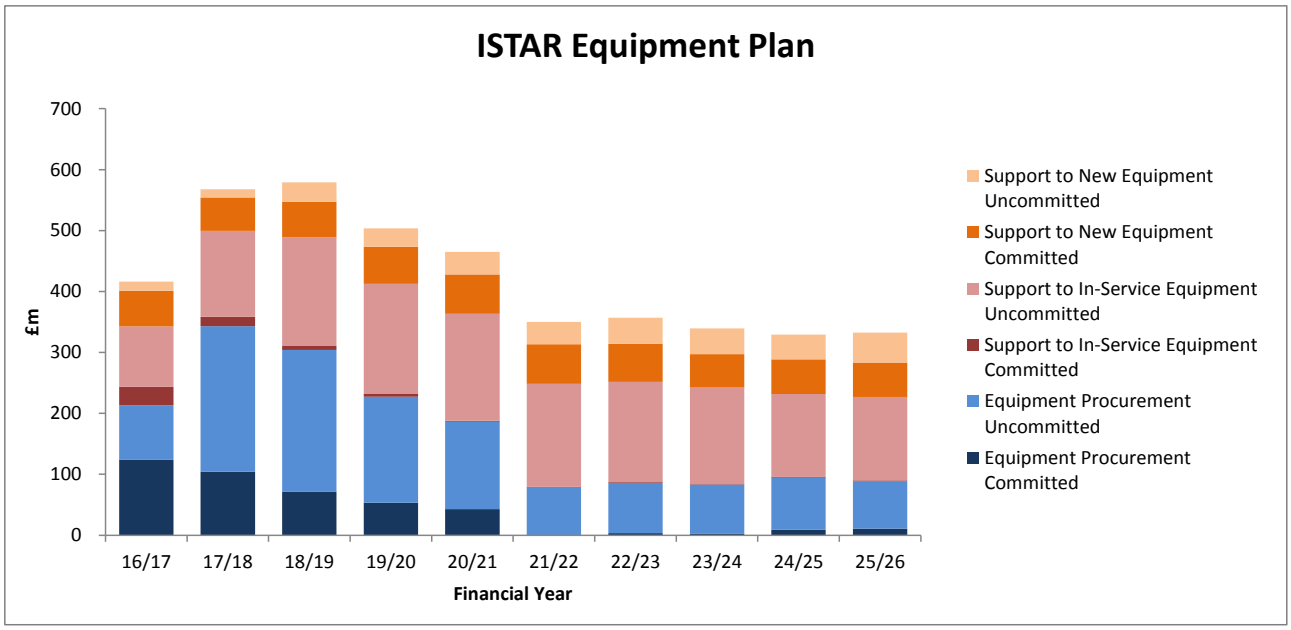
- negotiated the third Pricing Period for the Integrated Merlin Operational Support contract (delivering £140M in savings compared to pricing period two); expanded the Wildcat In-service Support and Training contract to include common items; awarded the Chinook Capability Sustainment Programme Extended Concept Phase contract.



64. There have only been minor adjustments to the equipment portfolio over the last four planning cycles as we have taken advantage of opportunities to bring forward Rotary Wing Strategy initiatives. The only significant change from ABC13 to ABC16 has been the re-baselining of the Apache Capability Sustainment Programme to reflect the current procurement strategy. This has resulted in the peak financial activity in 2019 to 2021.

ISTAR

65. We plan to spend £4.6bn through the ISTAR Operating Centre over the next decade, in comparison to £3.2bn at the end of the previous planning cycle.



66. This investment includes spend on Chemical, Biological, Radiological and Nuclear (CBRN) detection and countermeasures; electronic countermeasures; a range of equipment including communications, intelligence, surveillance and reconnaissance; air defence; air traffic management and tactical data links. It excludes expenditure on Air ISTAR platforms in the Air Support Operating Centre, including Airseeker and the Maritime Patrol Aircraft and other capabilities delivered by DE&S and ISS.

67. During 2015/16 we:

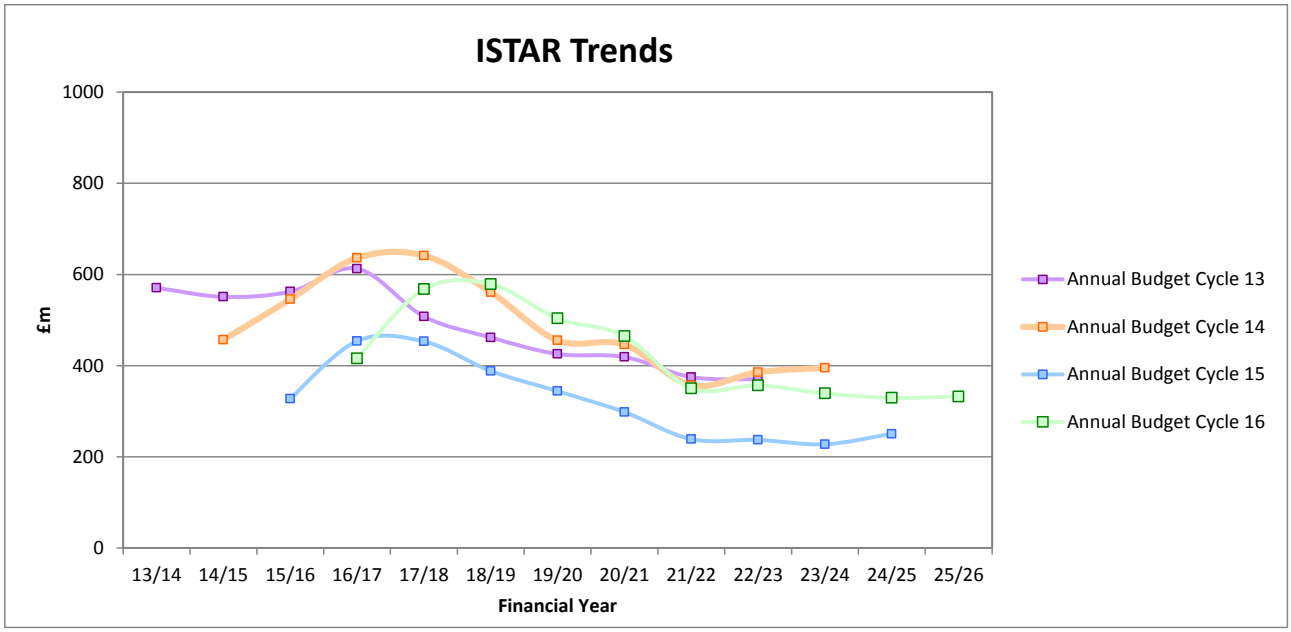
- managed the £1.5bn Project Marshall contract towards Initial Operating Capability. The 22 year contract will deliver modern, reliable and safe military Air Traffic Management services at some 65 MOD airfields and ranges in the UK and overseas. It will rationalise some 70 traditional contracts into a single service provision contract and realise almost £1bn in efficiencies over the 22 year life;

- delivered, at Defence Board direction, CBRN projects for aircrew protection systems, field hospital, reconnaissance vehicles, mass personnel decontamination systems, and safe staff working accommodation;

- delivered into service, early and under budget, the Cerberus air command and control system;

- achieved main gate approvals for the Biological Surveillance Collection System and Dismounted Electronic Countermeasures, which are both on schedule to deliver their respective capabilities;

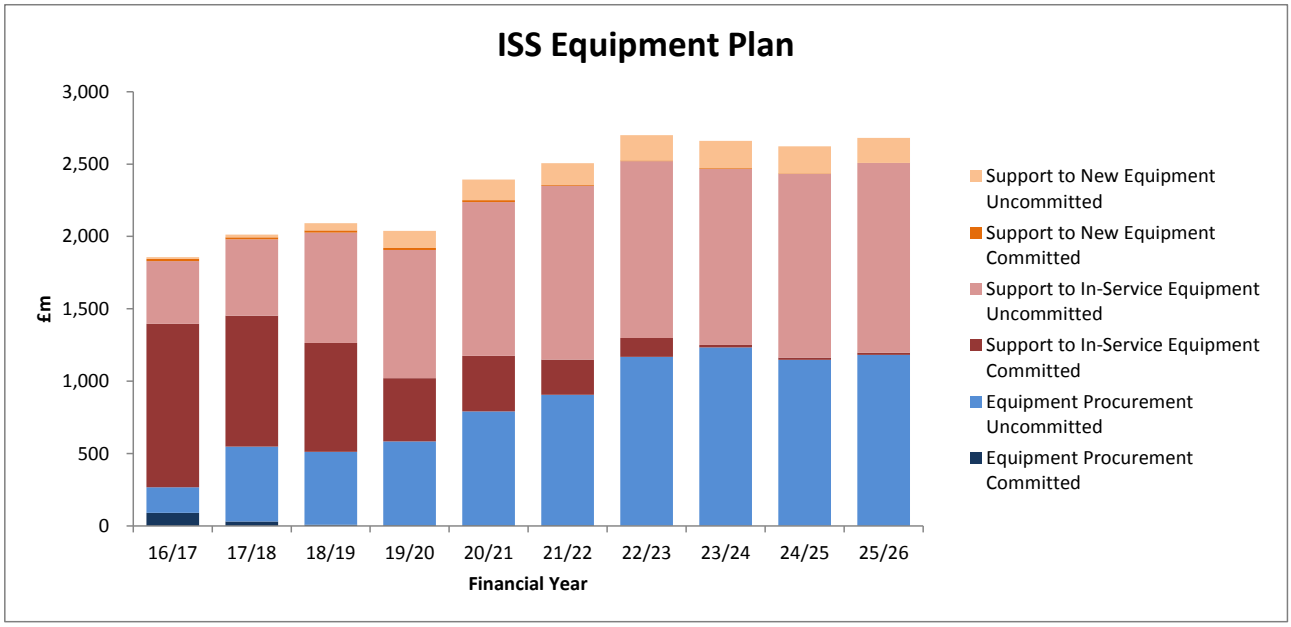
- delivered the full operating capability of a new wind farm-tolerant air defence radar.



68. The fall in ISTAR's forecast spend in ABC15 was the result of the transfer of the Intelligence networks and applications Programme Delivery Group to JFC Information Systems and Services. The subsequent increase in ABC16 of over £1bn is due primarily to the SDSR/ABC16 Options which introduced additional communications, intelligence, surveillance and reconnaissance capabilities. The ISTAR profile is dominated by Project MARSHALL which is planned to spend some £1.5bn (exclusive of VAT) over 22 years.

Information Systems and Services (ISS)

69. We plan to spend around £23.5bn with Information Systems and Services over the next decade. This is an increase from the planned spend of approximately £18.9bn at the end of the previous planning cycle. the main drivers of this increase in investment are: a change in procurement strategy for the Future Beyond Line of Sight (future satellite communications) programme from the previous funding profile based on a Private Finance Initiative to the acquisition of satellites by the Department increasing costs by £2.3bn over the initial 10 years but with savings anticipated in later years; the Dismounted Situational Awareness programme and acceptance of a number of SDSR enhancement options supporting Crypto, Cyber and Interoperability capabilities.



70. This sector covers all of our expenditure on procurement of data and voice communications and the development and upkeep of our entire supporting network infrastructure.

71. During 2015/16 we:

- delivered a number of quick wins to improve user experience of Defence's core ICT system (29 out of 30 successfully delivered), while securing significantly cheaper delivery of these existing core ICT services from April 2016 following contract renegotiation;

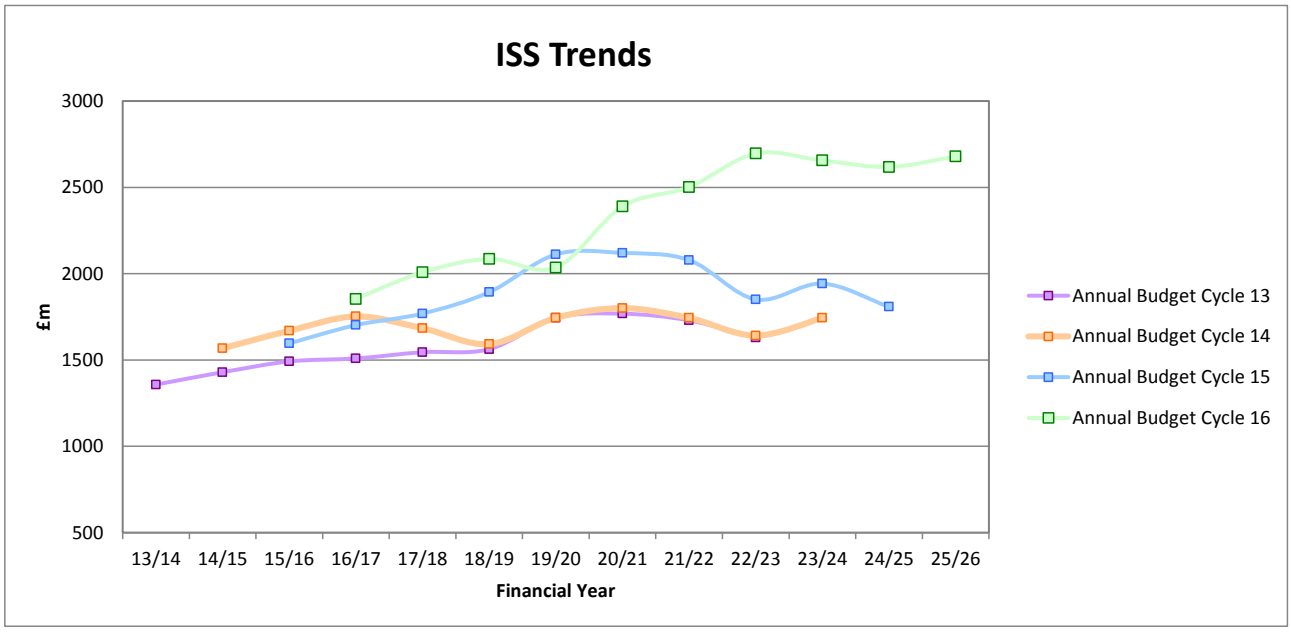
- set up of a 'Design Authority' within ISS to bring back in-house core ICT strategy, policy, architecture, standard-setting and customer service functions that had been out-sourced, with the aim of improving interoperability and cost-effectiveness;

- maintained the communications essential for operations and more routine activities, including the provision of satellite communications for deployed forces

from routine deployments of naval vessels to the support of forces in Operations around the world;

- successfully competed for the future delivery of Defence's core ICT networks, voice and video conferencing services;

- laid the foundations for transforming ISS to meet future demands including improved customer service, and the delivery of enhanced and better value for money core ICT services and networks.



72. The increase in the forecast cost of ISS in the later years of the plan is mainly driven by the change in procurement strategy for the Future Beyond Line of Sight programme from a Private Finance Initiative to the acquisition of satellites by the Department.

Other Elements of the Equipment Plan

73. Other elements of the equipment plan not individually broken down in this analysis total around £7.5bn, which is an increase from last year's £6.3bn largely due to increased spending on Logistics Delivery Operations. The largest individual section of this (£3bn) represents our planned spend on supporting our three naval bases. Also included in this area is spend on the Support Enablers, and other smaller areas of spend, including a line for the minor adjustments that FLCs make as part of managing their budgets. The total spend is broken down in the table at Figure 13 below.

Figure 13 – Other Elements of the Equipment Plan

Other Elements of the EP (£m, Near Cash)	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	Total
Naval Bases	342	298	287	288	294	292	300	307	316	324	3,049
Logistics Delivery Ops Centre	287	219	229	222	189	230	218	231	230	231	2,287
Support Enablers	137	155	158	162	159	167	198	200	203	176	1,715
Naval Authority Group	22	23	24	24	24	25	25	26	27	27	246
Director Technical	47	35	30	30	16	15	16	16	14	14	231
Total EP	835	730	727	726	681	729	757	780	789	772	7,528

Section D: Project Performance Summary Table

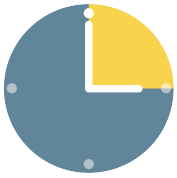
1. The NAO's MPR has for many years been the principal performance report on the Department's delivery of major equipment projects. This year, the Department has assumed responsibility for delivering this performance report with the NAO reviewing our processes and controls. We have introduced a new data collection and validation process utilising many of the principles of the MPR, but streamlined to focus specifically on the main areas of interest.

2. There are twelve major projects in the PPST population, where the main investment decision (known as the "Main Gate") to enter development and manufacture has been taken. The project population is largely unchanged from last year's MPR. The two exceptions are: the removal of Future Strategic Air Tanker (Voyager) as the In-Service Date (ISD) was achieved in 2014/15; and the introduction of a new Complex Weapons project, Short Range Air to Air Missile (SRAAM) Sustainment, following its Main Gate approval in 2015/16. In keeping with the MPR we report the forecast cost to deliver the project, the forecast timescales for achieving the ISD, and the forecast achievement of the Key User Requirements (KURs).

Figure 14 – PPST16 key findings

+£237 million

0.5 per cent increase in forecast costs, predominantly driven by two projects



+34 months

2% increase in forecast time from a total combined approved duration of 1,737 months

99 per cent

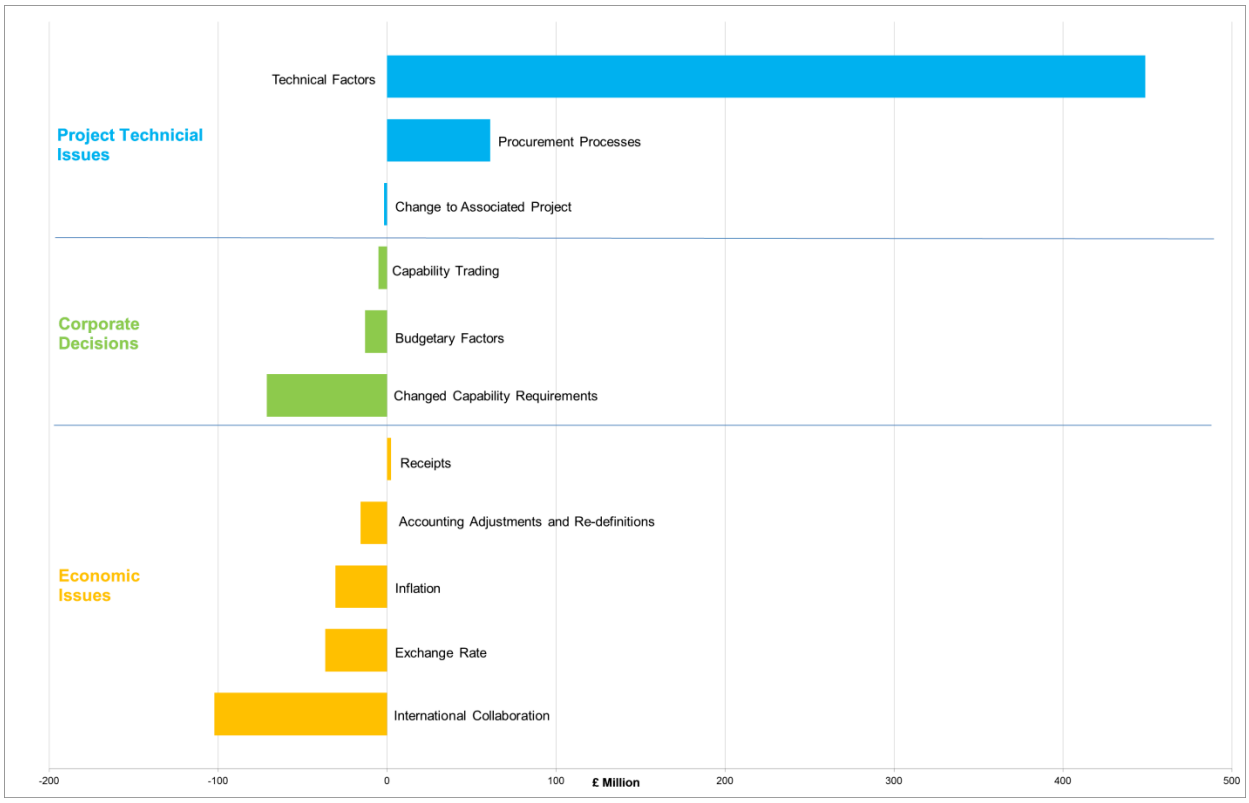
Of key user requirements (176 of 177) are forecast to be met

Cost

3. During 2015/16 the forecast costs of the twelve major projects increased by £237m (0.5 per cent of the total forecast procurement costs). Four projects reported an increase in their costs: Core Production Capability (£249m), Astute (£194m), Warrior Capability Sustainment Programme (£40m) and Typhoon (£10m). This has been offset by five projects forecasting a decrease in cost: Atlas A400M (£152m); AJAX, previously known as Scout Specialist Vehicle, (£50m); Complex Weapons (£27m); Lightning II (£24m); and MARS (£1m).

4. Forecast cost variations are attributed to a number of categories, consistent with those used previously by the NAO, and figure 15 presents the main reasons for these variations across the twelve projects. The principal causes come under the 'technical factors' category, comprising issues which are predominantly experienced by the supplier.

Figure 15 – In-year cost variations by factor

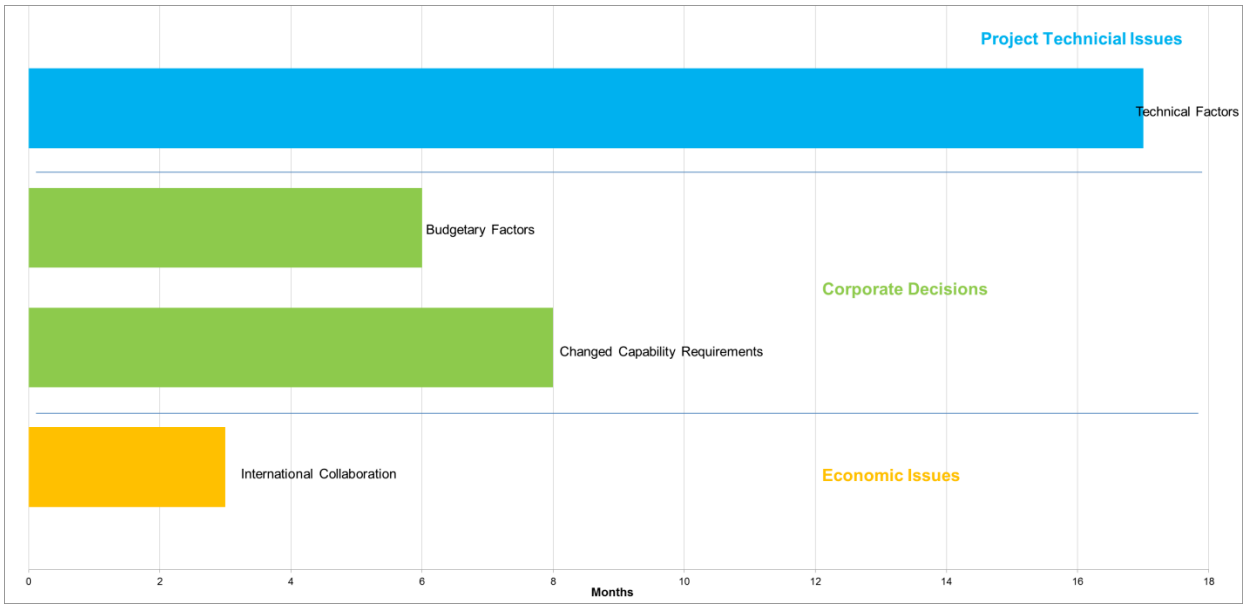


Time

5. Seven out of the eleven projects which have an ISD approved had stable time forecasts, reporting no variances to their forecast in-service dates[5]. There was an increase of 34 months across four projects which represents a 2 per cent change on a total approved duration of 1,737 months. The variances occurred on: Warrior Capability Sustainment Programme, (12 months), Astute (10 months), Complex Weapons (nine months) and Typhoon (three months). The main cause of time variances was technical factors.

[5] Type 26 Global Combat Ship does not yet have an ISD. The ISD will be set when the decision to manufacture the vessels is taken.

Figure 16 – In-year time variations by factor



Performance

6. Forecast delivery of key performance measures remains at 99 per cent (the same as 2014/15), with 176 of the 177 KURs forecast to be met[6]. The one KUR that will not be met is on Typhoon, which the Department accepted in 1995 would never be met[7]. This means that as long as Typhoon remains within the MPR population, 99 per cent represents the highest possible completion of KURs the Department can achieve.

Comparison with Performance in MPR15

7. In 2015/16 there were twelve post-Main Gate projects in the PPST population which is a decrease of one project when compared with MPR15.

Figure 17 – Comparison with MPR15

Year	Cost forecast variation	Time forecast variation	Forecast delivery of performance measures KURs	Number of projects in post-Main Gate population
PPST 2016	+£237M	+34 months	99%	12[8]
MPR 2015	-£247M	+60 months*	99%	13

* 52 months was attributable to the decision to refuel HMS Vanguard announced by the then Secretary of State in March 2014 and could not have been foreseen by the project team.

[6] Type 26 Global Combat Ship does not yet have KURs approved. The KURs will be approved when the decision to manufacture the vessels is taken.
[7] The MOD Equipment Approvals Committee accepted in 1995 that in the most adverse weather conditions the specified landing distance for Typhoon would not be achieved.
[8] Type 26 does not currently report time or performance.

Figure 18 – Project Performance Summary Table 2016

		COST				TIME				Key User Requirements					
Project	Description	Expected Cost to completion at approval (£m)	Current forecast cost to completion (£m)	Total cost variation (£m)	In-year change on costs to completion (£m)	Expected In-service date at approval	Current forecast in-service date	Total time variation (months)	In-year change to in-service date (months)	number of Key Users Reqts	To be met	To be met, with risks	Not to be met	In-year change, to be met, with risks	In-year change - not to be met
A400M ATLAS	Large Transport Aircraft	2,238	2,557	319	-152	Feb-09	Sep-15	79	0	9	9	0	0	0	0
AJAX (formally Scout Specialist Vehicle)	Armoured fighting vehicle	5,479	5,429	-50	-50	Jul-20	Jan-20	-6	0	11	11	0	0	0	0
Astute	Astute Boats 1-3	2,233	3,822	1,589	3	Jun-05	Apr-10	58	0	9	9	0	0	0	0
	Astute Boats 4-7	5,859	6,182	323	191	Aug-15	Nov-18	39	10	10	10	0	0	0	0
Complex Weapons Pipeline	Brimstone 2	166	166	0	0	Oct-12	Jun-16	44	1	9	9	0	0	-1	0
	Sea Ceptor	850	849	-1	0	Nov-16	Jul-17	8	8		10	5 0	10	0	0	0
	FLAADS GBAD Phase 1 - Land Ceptor	384	361	-23	0	Mar-19	Mar-19	0	0	9	9	0	0	0	0
	Future Anti Surface Guided Weapon (Heavy)	392	351	-41	-23	Oct-20	Oct-20	0	0		5	0	0	0	0
	Future Anti Surface Guided Weapon (Light)	311	307	-4	-4	Oct-20	Oct-20	0	0	5	5	0	0	0	0
	SRAAM Sustainment	415	414	-1	0	Nov-18	Nov-18	0	0	8	8	0	0	0	0
Core Production Capability	CPC	1,372	1,609	237	249	May-21	Jun-26	61	0	2	1	1	0	1	0
Lightning II	Fighter or attack aircraft	5,667	4,968	-699	-24	Dec-18	Dec-18	0	0	7	6	1	0	-1	0
MARS Tanker	Naval logistics support	596	550	-45	-1	Oct-16	Oct-16	0	0	11	11	0	0	0	0
Marshall	Air traffic control system	1,890	1,890	0	0	Feb-17	Feb-17	0	0	7	7	0	0	0	0
Queen Elizabeth Class Aircraft Carriers	Aircraft carrier	3,541	6,102	2,561	0	Jul-15	Feb-18	31	0	9	7	2	0	-1	0
Type 26 Global Combat Ship	Demonstration phase and long lead items	1,822	1,822	0	0	ISD to be set at Main Gate			-	-	KURs to be set at Main Gate				
Typhoon	Fighter aircraft	15,173	17,348	2,175	7	Dec-98	Jun-03	54	0	10	9	0	1	0	0
	Future Capability Programme 1	403	406	3	5	Jun-12	Dec-13	18	0	7	7	0	0	0	0
	Meteor integration	130	102	-28	-7	Jun-18	Jun-18	0	0	10	10	0	0	0	0
	Storm Shadow integration	172	109	-63	-44	Aug-18	Aug-18	0	0	10	10	0	0	0	0
	Brimstone 2 integration	186	235	49	49	Dec-18	Mar-19	3	3	10	10	0	0	0	0
Warrior Capability Sustainment Programme	Capability Sustainment Programme	1,319	1,352	33	40	Nov-18	Jul-20	20	12	9	9	0	0	0	0
		50,598	**56,931**	**6,334**	**237**	**-**	**-**	**409**	**34**	**177**	**172**	**4**	**1**	**-2**	**0**

Total

99%

Publication Notes.

Differences between PPST and MPR:

Astute Boats 4-7. The Expected Cost to Completion consists of the initial approvals of each Astute Boat 4-7. MPR15 included the cores for boats 5 and 6, but these costs were not approved under the main Astute Boats 4-7 approval. The initial budget has been adjusted accordingly to align project scope to extant approvals.

AJAX. In MPR15 the NAO reported a 'Budgeted for Cost' of £5,480m. This was £1m higher than the figure reported here and is due to rounding of numbers.

Complex Weapons - Fire Shadow. The project was discontinued so it has been removed from the population. Brimstone 2 remains part of the Complex Weapons Portfolio and is now reported separately.

Complex Weapons - SRAAM Sustainment. New to PPST population.

Lightning II PSFD. In line with the Memorandum of Understanding, the UK's annual contribution to the F-35 programme Composite Share Ratio was made through an agreed uplift of £45m to the approved budget position.

MARS Tanker. The current in-service date of Oct 16 is in the process of being reapproved.

Type 26 Global Combat Ship. A second investment in March 2016 extended the Demonstration Phase and committed to almost all the equipment for the first three ships. The In-Service Date and KURs will be approved when the decision to manufacture the vessels is taken at Main Gate.