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Ministry of Defence

Delivering multi-role tanker aircraft capability

Summary

Background

1 Multi-role tanker aircraft provide two vital operational services for the Armed Forces. Air-to-air refuelling enables other aircraft to stay airborne for longer, thereby extending their range or the length of time a mission can last. Tanker aircraft also transport military and other personnel to and from operational theatres, training exercises and overseas bases.

2 In March 2008 the Ministry of Defence (the Department) signed a contract with AirTanker for an air-to-air refuelling and passenger air transport service to replace 24 Tristar and VC10 aircraft. The service will be based around 14 Future Strategic Tanker Aircraft (FSTA), but will also include all the necessary infrastructure, maintenance and training. FSTA is being procured through a 27-year, £10.5 billion, private finance initiative (PFI) contract, under which AirTanker will own the aircraft and provide them to the Department. FSTA is due to enter service between October 2011 and September 2016, with the existing fleets leaving service between November 2010 and August 2016. This report examines:

- The procurement of FSTA (Part One)
- The provision of existing capability (Part Two)
- Planning for the transition to FSTA (Part Three)

Our methodology is summarised in Appendix One.

3 The FSTA project's long procurement timescale means that many of the problems associated with the deal arose some time ago. The Department has recognised these problems and is taking action to ensure the likelihood of their repetition is minimised (Appendix Two). Through our Major Projects Reports and other work, we will be monitoring whether the Department's actions are resulting in the desired improvements.

Key findings

The procurement of FSTA

4 In 1997 the Department for the first time included budgetary provision for FSTA as a PFI deal in its ten-year Equipment Plan. This assumption was driven by affordability pressures on the Department's capital programme and its prevailing policy to use PFI whenever possible unless a project could be demonstrated not to work, be inappropriate or be uneconomic. The Department's guidance stated that PFI offered the opportunity to fund capital projects which might otherwise have been unaffordable.

5 We have been unable to find any evidence that the Department undertook a sound evaluation of the alternative procurement routes when it took the decision to plan its future expenditure on the basis of a PFI solution in 1997. Although the choice of the PFI route provided the Department with short-term affordability benefits, it meant that any later decision to revert to a conventional procurement would have required the Department to make difficult trade-offs between projects in its capital programme, a generic challenge for PFI projects. Indicatively, in 2000, the Department estimated that it would have to identify £1 billion of capital funding over a four-year period later in the decade (equivalent to approximately five per cent of the total procurement budget over the period) if it did not follow the PFI option.[1]

6 The procurement proved more complex than anticipated, took over nine years to achieve contract signature and resulted in the FSTA in-service date slipping by five and a half years against the original plan. Despite problems during negotiations, and the project team's recommendation to cancel the project in 2004, the Department only seriously considered a fallback plan as it approached its main investment decision in 2007. This fallback work left major affordability issues to be resolved and never solved the challenge of avoiding a capability gap. The immaturity of the work reflected the Department's decision not to engage industry on fallback solutions which could have unsettled the market and increased the cost of the PFI deal. As a consequence, it became harder for the Department to switch to an alternative strategy should PFI prove unfavourable.

1 Our latest Major Projects Report shows that affordability remains a problem, with the defence budget currently overcommitted and the Department continuing to make decisions on individual projects which represent poor value for money in order to make the programme affordable. Comptroller & Auditor General, *Ministry of Defence, Major Projects Report 2009*, Session 2009-10, HC 85-I, National Audit Office, December 2009.

7 The Department's guidance noted that the key evaluation criterion to be satisfied was that of value for money, usually based on the transfer of risks to the private sector. After 2000, the Department assumed that FSTA would be "off-balance sheet"[2] and worked to ensure sufficient risk transfer to achieve this under the prevailing accounting rules. The contract certainly has the potential to transfer significant risk, as the Department identified in its planning, such as the delivery of the aircraft, infrastructure and training to the contractor. However, the Department never gained visibility of the sub-contractor costs for designing and modifying the aircraft, so was unable to determine whether it was paying an appropriate margin for the aircraft given the level of risk to which the sub-contractors were exposed.

8 During the negotiation of the deal, the Department tested the value of the solution against a Public Sector Comparator. This testing showed that the PFI solution was between 15 per cent better and 5 per cent worse than the Comparator depending on which aircraft, discount factor and delivery confidence level was selected, and offered better value for money in seven of the eight scenarios presented. Although the Treasury had granted FSTA an exemption from using the 3.5 per cent discount factor, in 2007 the Department's Senior Economic Adviser stated that, had this discount factor been applicable, the PFI solution would not represent value for money against a Comparator using an A330 aircraft. However, given the Treasury exemption, the project team recommended that the PFI solution should go ahead. This recommendation was based on a value for money judgement against a Comparator using the agreed 6 per cent discount factor and an A330 aircraft, together with affordability issues and the adverse operational implications of adopting an alternative procurement route at such a late stage.

9 The Department conducted some of the PFI-specific elements of negotiations well, making good use of advisers and ultimately acting with agility to close the deal in March 2008 before the full impact of the credit crunch was felt. The over-arching cause of delay was the unforeseen scale and complexity of the deal which in turn contributed to many of the problems encountered on the project. Specific difficulties stemmed from:

- **the limited competition** – the Department maintained competition for five years, in part by contributing to the losing bidder's costs, but was unable to close a deal within this period. One of the bids was only available within a limited timeframe and, once this had expired, it took the Department four years of non-competitive negotiation to agree an acceptable deal with AirTanker. The Department's view is that, although over that period there was no competition, it used the bidder's significant sunk costs as leverage to achieve further cost reduction and close the deal;

- **specifications continued to evolve until late in the procurement** – while the Department's top-level requirements remained broadly stable, difficulties in developing a complex new service delivery model caused delays;

2 Off-balance sheet classification meant that the capital value of the assets would not be included in the Department's accounts, and that the Department would not bear the Treasury's cost of capital charge on the aircraft.

- **poor access to full cost data** – the Department never gained visibility of detailed sub-contractor costs and margins for the aircraft and their modification; and
- **poor project resourcing and governance** – until 2004, the project team had insufficient staff with PFI experience and frequent changes of team leader. The Department did not appoint a Senior Responsible Owner until January 2007, eight years after the contract was advertised to industry.

The provision of existing capability

10 The Department is successfully fulfilling its highest priority roles of supporting the airbridge to Afghanistan and providing operational air-to-air refuelling with Tristar and VC10 aircraft. However, because there are insufficient aircraft available to undertake the full range of tasks required, and to address fluctuations in demand from deployed operations, the Department supplements the current fleets with chartered transport aircraft. This has risen markedly in recent years and totalled approximately £175 million between 2006-07 and 2008-09 for all passenger air transport.

11 The time taken to negotiate the FSTA contract has meant the Department has been forced to rely on the ageing and increasingly unreliable Tristar and VC10 aircraft. Despite the Department working more closely with industry to maintain aircraft performance, flying hours across both fleets have reduced by 21 per cent since 2002-03 due to planned fleet reductions, the need for essential operational modifications and the increasing maintenance work required to resolve structural and other obsolescence issues. As a result there has been no compensating reduction in the support costs for the Tristar and VC10 fleets, which stood at approximately £105 million in 2008-09.

Planning for the transition to FSTA

12 Since contract signature, the project has achieved its delivery milestones and is on budget. FSTA is likely to meet the overall requirements, provide a similar number of flying hours to the existing fleets and offer a capability comparable with other countries' new aircraft. Across the term of the contract, the Department will pay on average £390 million per annum for the baseline FSTA service, which includes the cost of related services and infrastructure. Of this amount, AirTanker expects the cost of operating the service to be £80 million, leaving £310 million to cover financing, profit and the capital cost of the project, including aircraft and infrastructure. In addition, the Department expects to spend a further £60 million per annum on personnel, fuel and other related costs, resulting in a total estimated spend over the life of the project of £12.3 billion.

13 The Department does not record the current equivalent costs of providing the full range of services included in the FSTA contract, making comparisons between the two sets of arrangements difficult. The available data suggest that in addition to the £105 million spent supporting the current fleets, the Department spent a further £117 million on related personnel, fuel and simulator training, giving a total spend of approximately £222 million in 2008-09. However, it is misleading to compare this figure with the projected £450 million annual cost of FSTA since the former does not include the sunk costs associated with the procurement of the current fleets, or related training and infrastructure.

14 There remain a number of issues for the Department to address. The original FSTA requirement did not envisage the aircraft flying directly into high-threat environments such as Afghanistan. When the need for possible additional platform protection measures became apparent, the Department sensibly did not alter its requirement for fear of prejudicing the ongoing commercial negotiations. Having established that these modifications are likely to cost several hundred million pounds, the Department is considering the costs and technical requirements in the light of other options. If the Department chooses to fit these modifications, it will take a number of years to do so.

15 The Department is undertaking a large scale re-development at RAF Brize Norton with the intention that new facilities are operational by 2012, shortly after FSTA's entry into service. However, there is little timescale contingency in these plans. At the same time, the Hercules C130 fleet will move to RAF Brize Norton. Any delays to the new infrastructure projects or problems in coordinating the various aircraft types operating from the base would mean that there is a risk to the efficient operation of the FSTA service.

16 FSTA is a complicated project and means that AirTanker will interface with a wide range of Departmental staff and RAF personnel. To achieve value from the project these staff will need to understand the contract's new service delivery arrangements, for example, by understanding how the components of the complex payment mechanism are calculated and the effects their own actions may have on charges which the contractor is able to make. The Department is taking sensible steps to address the continuity of knowledge and staffing that the complexity of the project demands, and is using a modelling tool to support better decision-making during the period of transition to FSTA.

Conclusion on value for money

17 The Department managed the later stages of the procurement of FSTA well, including making effective use of advisers and skilled Departmental staff in the latter stages of the negotiation, and transferring the risk to AirTanker for the introduction of the service. The Department did well to close the deal in difficult market conditions, particularly given the increasingly urgent operational need for the aircraft, and has done well to meet key operational tasks using the existing ageing aircraft.

18 In conducting the procurement, the Department followed Treasury rules but the test of value for money is not whether actions were taken within the rules but whether the outcome is the best use of public resources which could reasonably be expected. Against this benchmark we cannot conclude that the Department has achieved value for money from the procurement phase of FSTA. The Department's ability to get the best deal it could was undermined by the following:

- the selection of a PFI solution was made without a sound evaluation of alternative procurement routes to justify why the PFI route offered the best value for money;

- timescales more than doubled. After a five-year competition the Department was unable to close a deal and subsequently it took four years of non-competitive negotiation to agree an acceptable deal with AirTanker. Over this period the Department incurred additional costs both in conducting the procurement and running on the existing aircraft fleets;
- during the procurement the discount factor for assessing the Public Sector Comparator changed but the Treasury granted FSTA an exemption. If the revised rate had been applied the PFI solution would not have represented value for money against a Comparator using an A330 aircraft; and
- the lack of a mature fallback plan and the fact that any alternative would have required difficult decisions to find additional capital funding left decision-makers with limited alternatives to going ahead with the deal even when problems arose.

19 Looking ahead, if the Department is to maximise the value of the deal it has struck with AirTanker, it must develop, implement and maintain the management skills and working practices necessary to operate more commercially.

Recommendations

20 These recommendations build on the actions the Department has initiated, as summarised in Appendix Two.

Lessons from the procurement of FSTA

a **The Department chose a PFI strategy for FSTA with no realistic assessment of alternatives.** In future procurements, where PFI is an option, the Department should undertake a more robust appraisal of alternative options at the point where it makes the decision to programme the funding.

b **The Department was forced to narrow the field to one bidder while a number of significant issues remained.** As sustaining competitive tension is central to delivering value from competitions, the Department should:

- analyse the suitability of the procurement route at the outset, recording findings as a baseline for decisions, to assist any consideration of alternatives that may improve value for money; and
- develop a credible alternative commercial solution, which can be invoked if the bidders do not meet the Department's expectations.

c **The Department had access to AirTanker and AirTanker Services cost data but never gained visibility of sub-contractor costs and margins for designing and modifying the aircraft. Neither did the Department undertake any "should-cost" modelling.** To inform negotiations, the Department should:

- mandate an appropriate degree of openness and transparency from the bidders in its tender documentation, including access to key supply chain data; and
- develop a "should-cost" model to estimate how much it ought to cost bidders to deliver a contract.

d **The Department did engage with suppliers in accordance with its own PFI guidelines, but the complex nature of the deal made it difficult to establish clear specifications for the FSTA service and was a major factor behind the extended procurement timescale.** The Department should:

- seek to establish with potential commercial partners, as early as feasible in the procurement process, a common understanding of how the full service will be delivered in novel or complex arrangements such as FSTA; and
- if changes to the requirements are necessary, establish a robust and transparent mechanism to take into account the cost and timescale implications of proposed changes, as the project has implemented for the operational phase.

Delivering long-term value for money from FSTA

e **The project team has put in place a number of processes to help maintain knowledge and skills and manage the FSTA contract in future.** To build on these and maximise the cost-effectiveness of the operational phase, the Department must:

- incorporate updates of the contract manual into its existing document handling system on at least an annual basis; and
- continue its succession planning activity to ensure that knowledge is retained within the team, by implementing documented handover processes and ensuring the availability of staff with appropriate experience and expertise.

f **The Department has started planning how it will share information about the contract with stakeholders.** The Department should:

- implement its stakeholder plan, ensuring that it includes details of service levels and the implications of changes to the contract. This work should be led by the project team; and
- undertake ongoing tests of tasking and the payment mechanism against its existing process to help stakeholders understand the new arrangements and to identify mitigations to issues highlighted ahead of the introduction of FSTA.