

NAO VFM study on contracting practices at the Defence Procurement Agency and the Defence Logistics Organisation

CASE STUDY WRITE UP ON SENTRY

Project Title: Sentry Whole Life Support Programme

Value of contract: £32 million per annum

Planned In Service Date: Came into service in 1991-92

IPT name: Sentry



Background to the project

1. The Sentry aircraft was delivered in 1991-92. The aircraft provides an Airborne Warning and Control System (AWACS), operating on an extensively modified Boeing 707. It has a crew of 17 and can fly for 10 hours without refuelling. The aircraft has a "look-down" radar that can separate airborne targets from the ground and sea. Its radar "eye" has a 360-degree view of the horizon, and at operating altitudes can "see" more than 320 kilometers (200 miles). It also can detect and track both air and sea targets simultaneously. The aircraft are based at RAF Waddington.
2. The Sentry aircraft is the UK's principal airborne early warning and control aircraft, which gives vital strategic support in theatres of operation around the world. It plays a major role in communicating and exploiting information as part of the Department's Network Enabled Capability.

Background to the project

3. The original procurement did not look at long term support - there tended to be a focus on acquisition with less consideration for through life support. There

were 12 supply contracts for spares and repairs. The maintenance approach was that every 6 years each aircraft would return to industry for 6 to 9 months for deep maintenance. The result was that for 3 of every 7 years, only 5 aircraft were available to the RAF. The Sentry IPT realised that a change in the contracted maintenance regime would increase the availability to six aircraft. Good contracting practices used on the project are set out below.

Contracting approach

4. The Project Team looked at creative and innovative methods of contracting to achieve greater availability. It looked at combining Aircraft maintenance, the provision of spares and repairs, Design Engineering Support Services (DESS), Technical Publications and maintenance training. The Team proposed to adopt Single Track Maintenance (STM) whereby only one aircraft would be in maintenance at any time. The aircraft would undergo varying levels of maintenance every 18 months, reducing the time out of service for 3 months.
5. Industry was invited to express an interest in the programme and the 30 initial responses were whittled down to two serious contenders (Boeing and Northrop Grumman). Due to the complexities of the programme and the desire to allow industry to innovate and suggest their own creative solutions, the IPT issued an Invitation to Negotiate (ITN) to the two selected bidders. Detailed sessions were held with each of the bidders to clarify the requirement, share information and to discuss issues raised by the ITN.
6. The final evaluation of bids looked at three options: the Boeing proposal; the Northrop Grumman proposal; and an in-house maintenance option as a comparator. Initially, the external bids were significantly above the cost of the in-house comparator. Following a further round of clarification meetings the bidders were invited to revise their bids. The re-bids were below the cost of the in-house option and offered a considerable saving on the bidder's initial offers. The final decision to select Northrop Grumman was made on the full through-life cost.

Risk reduction contract

7. The time taken to let the contract meant that published timescales for delivery were at risk of not being met. In mitigation, the IPT let a risk reduction contract to allow the contractor to start work early on certain key areas which

would ensure that later deadlines were met. It is thought most unlikely that these deadlines could have been met without the risk reduction contract. Requirements under the risk reduction contract were tailored so that if the full maintenance contract was not let, outputs would benefit the in-house solution.

Pricing and incentives

8. The contract runs until 2025 and has firm prices agreed for the first five years. The remaining period is subject to a Target Cost Incentive Fee (TCIF) arrangement under which cost savings are split three ways; 50 per cent is retained by the contractor, 20 per cent is retained by the Authority and 30 per cent is retained in a savings pool.

Monies held in the savings pool are used to 'reward' the contractor if he meets certain performance criteria. If there is no money in the saving pool then, irrespective of the contractor's performance, no 'reward' is paid. The incentive arrangements under the contract are, therefore, 'self-funding'. Scope and length of contract

10. The contract requires the contractor to make six of the seven Sentry aircraft available at any time. The contractor is responsible for arranging maintenance, including spares and repairs, as they see fit to meet this requirement. Payments are made on the basis of aircraft availability as set out in the contract.
11. The Team hopes to increase the scope of the Whole Life Support contract and its ultimate goal is to have all Sentry support activities under one contract. The Team is moving toward contracting for maximum availability. The more contracts there are for different parts of the support work, the more dependencies there are that fall to the Authority under the project.
12. The contract length helps to mitigate the risks associated with the issue of obsolescence. Smaller parts suppliers are more likely to keep their manufacturing lines open if there is a long term contract for aircraft maintenance.

Partnering approach

13. The contract makes use of a partnering approach. This recognises that the Department cannot deliver the outputs that they require alone, and neither can

industry. Both sides must work together as partners to deliver the requirement. The difference with partnering is that both parties are working closely together with greater visibility of the desired outcome. For Sentry, a Partnering Principles document was generated after the final bidder was selected. This was an aspirational code of behaviour rather than a legally binding contract. Relationships between the Project Team and the contractor are very good and there is great teamwork throughout the supply chain. Many of the contractor's staff are located at RAF Waddington and find physical co-location with the Authority very helpful.

14. The method used to draw up the Sentry contract was totally different from previous methods. In the past, industry would be directed to the proposed solution, rather than agreeing the most appropriate solution, as in this case. The Team took an innovative approach to letting the contract, summarised as follows "There are no rules - only authoritative guidance. So long as we don't reduce the safety level of the aircraft, and we are not doing anything illegally, then anything is possible."

Sponsored reserve

15. If the aircraft is required to go to war, the contractor will deploy key employees and stock to the aircraft's new operating base. Selected employees of the contractor are sponsored reservists and, when required, will put on uniform and support the aircraft in theatre.