



National Audit Office

## **MINISTRY OF DEFENCE**

# Using the contract to maximise the likelihood of successful project outcomes

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**30 May 2006**

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This report can be found on the National Audit Office web site at [www.nao.org.uk](http://www.nao.org.uk)

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## SUMMARY



**1** Over the past 20 years the annual Major Projects Report has highlighted the variable performance of the Ministry of Defence's (the Department) highest value defence equipment procurement projects. This performance has been a matter of concern for both the Department and Parliament, and the Department has introduced a large number of reforms designed to improve project performance. To help understand why sustained improvements in performance are proving so difficult for the Department and its industry partners to deliver, we analysed the complex cultural and systemic drivers which need to be managed if military capability is to be delivered faster, cheaper and better. The initial results of this work were published in March 2004.<sup>1</sup>

**2** Working with the Department and defence industry, we are undertaking a series of studies examining some of the drivers identified by our initial modelling in more detail. Each study examines practical evidence of how well a specific driver is being managed in the defence environment and explores how that driver is addressed by overseas and commercial comparators. Each study compares current defence performance to a theoretical "gold standard" developed from this comparator work, against which no individual organisation is likely to perform consistently well in all areas. The recommendations in our reports are intended to bring improvements in defence acquisition performance to help ensure all defence projects routinely adopt practices closer to the gold standard.

**3** The first report in the series *Driving the Successful Delivery of Major Defence Projects: Effective Project Control is a Key Factor in Successful Projects* identified the contract as a key component of project control.<sup>2</sup> Building on this conclusion, this report examines how the Department and its industry partners can best use the contract to maximise the likelihood of successful project outcomes. We have taken as our reference point the start of negotiations with the preferred supplier, regardless of whether that point was reached by competitive or other means. The study does not, therefore, examine the methods – whether competitive or otherwise – the Department might pursue to select a potential supplier. We will consider the effective use of competition in a future study. Our methodology is described in Appendix 1 and details about our case studies are given in Appendix 2.

**4** The outcomes of the study are available in two main formats. This report focuses on recommendations to help ensure all defence projects routinely adopt practices closer to our gold standard. The evidence included in the report is not exhaustive but provides an indication of current practices and the beneficial effects on projects where the approaches we recommend have been applied. Given the richness of the evidence we have gathered, we are publishing it all on a website ([www.naodefencevfm.org](http://www.naodefencevfm.org)) to enable those interested to explore the evidence underpinning our recommendations in more detail and to better understand the gold standard criteria we have developed.

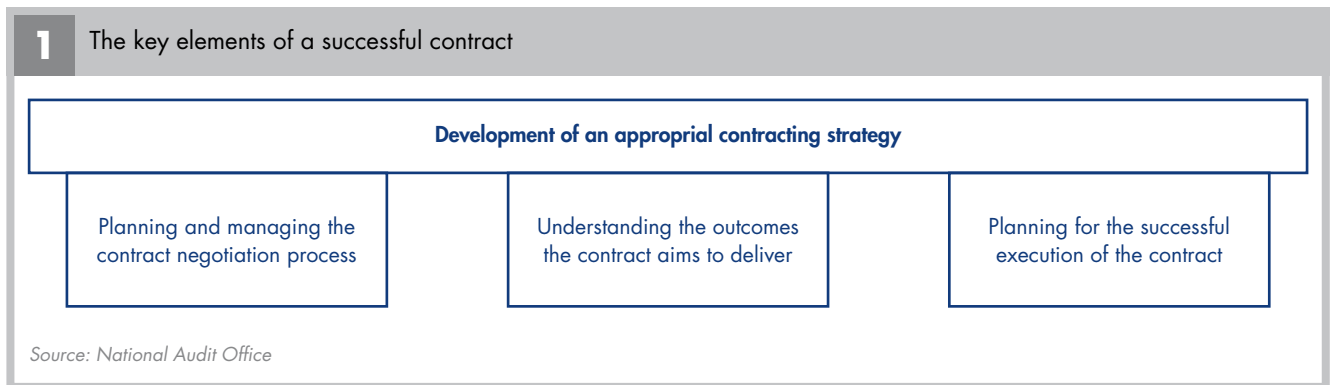
<sup>1</sup> *Driving successful delivery of major defence projects: drawing on wider practice in tracking the progress of major projects*. A Briefing and Consultation Document by the National Audit Office, March 2004.

<sup>2</sup> *Driving the successful delivery of major defence projects: effective project control is a key factor in successful projects*, HC 30, Session 2005-06, May 2005; Major Projects Report 2005, HC 595-I, 25 November 2005.

5 Our analysis shows that some defence projects are at the forefront of good contracting practice; however, overall performance is not consistent. The challenge for the Department and its industry partners is to learn from their own good experiences and the success of others and to incorporate those approaches more consistently, appropriate to the specific circumstances of projects so as to motivate both parties to perform effectively.

6 **Figure 1** provides a schematic representation of our gold standard for the timely agreement of contracts which will support the achievement of successful project outcomes and help to underpin constructive long-term working relationships. The gold standard recognises there is no ‘one size fits all’ contract or contracting strategy and that varying approaches are likely to underpin achievement of the desired outcomes on specific projects. The pillars, as shown in Figure 1, represent the generic enablers likely to underpin the agreement and application of contracts which will support the successful delivery of projects. Full details of the good practice criteria within each pillar are given in **Figure 2**.

7 The precise form of the contract will depend on the specific circumstances of the project and the aspirations and roles being assumed by stakeholders with the Department and key elements of the industry supply chain. We have worked with the Department to draw up a methodology to allow its commercial and project staff and, potentially, their industry partners to identify influences and consider relevant factors and past experiences to develop contracting strategies appropriate to the circumstances of a project. Our work to date has developed a contracting strategies tool to “proof of concept” level. Both the Department and industry have recognised the potential utility of the tool to help inform the development of appropriate contracting strategies and, potentially, to provide a systematic way to learn lessons from past experiences. The Department is now considering how best to evolve the tool. An overview of the tool is given in Appendix 3 with further details in the handout included at the end of this report.





## 2 Our gold standard for a successful contract

### Planning and managing the contract negotiation process

#### Good practice criteria

Having the right portfolio of skills and experience

Setting clear ground rules for the negotiation and subsequent application of the contract

Active strategic analysis of the portfolio of contracts and application of lessons learnt

#### Enablers

Adopting a 'whole team' approach to the negotiation and management of the contract

A suitable level of commercial training and expertise among staff

Ensuring continuity of staff expertise throughout the contracting process

Actively planning the contracting process and communicating this to those invited to tender

Clearly establishing stakeholder roles and responsibilities

Collection of accurate and timely information on contracting practices, their application and outcomes

Active corporate management of the portfolio of contracts

Evidence based development of commercial policy

### Understanding the outcomes the contract aims to deliver

#### Good practice criteria

Negotiating from a common baseline

Ensuring all parties understand the contract negotiated

#### Enablers

Common analysis of risks and opportunities undertaken early on in the process by all parties and with subsequent reviews

Ensure full and real time access to common information

Understanding the aims, aspirations and driving factors behind other parties in the negotiation

Ensuring an effective communication process between parties

Test understanding of the contract

### Planning for the successful execution of the contract

#### Good practice criteria

Link the contract to the agreement of desired behaviours in executing the project

Use the contract to incentivise the achievement of the full range of desired outcomes with intelligent use of contract terms to protect the contracting parties

#### Enablers

Negotiate the contract and principles underpinning the behaviours expected of all parties to the contract as part of a coherent package

Establish formal or informal codes of behaviour

Include provisions in the contract to resolve disputes quickly and in a non-confrontational manner

Applying contractual remedies on the basis of an assessment of their cost, effect and likelihood of being used in the specific circumstances of the project

## PART ONE

### Planning and managing the contract negotiation process



**1.1** The timely agreement of a contract is akin to managing a mini-project in its own right. As such, the contracting process should be well planned, agreed and understood. It should be resourced with suitably experienced and trained commercial staff and involve all stakeholders in the contracting process, not just commercial officers and project leaders.

**1.2** **Figure 3** reiterates our gold standard criteria (set out fully in **Figure 2**) as they relate to successful planning and management of the contract negotiation process. Against these, we found that, in general:

- Commercial staff are generally regarded as suitably skilled, though every effort should be made to avoid a high turnover of staff at critical decision points as it can lead to a lack of understanding which adversely affects the application of specific contracts;

- The Department has pockets of good practice but is not consistent in its planning of the contracting process and communicating this to tendering parties; and
- Whilst there are pockets of good practice, the Department could be more proactive in learning from past experiences and applying these and gathering information on its contract portfolio.

**1.3** **Figures 4 to 8 on pages 6 to 8** provide examples of the evidence upon which our conclusions are based. Details of our methodology and the case studies we looked at are shown in Appendix 1 and Appendix 2. Full details of all of the evidence are available on our website [www.naodefencevm.org](http://www.naodefencevm.org). **Figure 9 on page 9** presents our recommendations to help ensure all defence projects routinely adopt practices closer to the “gold standard”.

### 3 Criteria for planning and managing the contract negotiation process

#### Criteria

Having the right portfolio of skills and experience

Setting clear ground rules for the negotiation and subsequent application of the contract

Active strategic analysis of the portfolio of contracts and application of lessons learnt

#### Enablers

Adopting a ‘whole team’ approach to the negotiation and management of the contract

A suitable level of commercial training and expertise among staff

Ensuring continuity of staff expertise throughout the contracting process

Actively planning the contracting process and communicating this to those invited to tender

Clearly establishing stakeholder roles and responsibilities

Collection of accurate and timely information on contracting practices, their application and outcomes

Active corporate management of the portfolio of contracts

Evidence based development of commercial policy

**4** How the Department compares against the gold standard criteria of having the right portfolio of skills and experience

Commercial staff are generally regarded as suitably skilled, though a high turnover of staff at critical decision points can lead to a lack of understanding which adversely affects the application of specific contracts.

**Examples of the Department’s current approaches**

Our surveys showed that the legal, financial, commercial and negotiation skills of the Department project teams were rated highly by the Department and slightly less highly by industry (Figure 5). In general though both parties felt the Department had sufficient contracting skills.

Our survey highlighted problems caused by a high turnover of staff meaning commercial staff were managing contracts without an adequate understanding of how terms and conditions were negotiated.

In planning and negotiating the AS90 Equipment Support Agreement the Field Artillery Systems Support Project Team actively sought out staff, including commercial specialists, with experience from similar earlier projects.

At the central level the Department provides Key Supplier Management information to inform project teams on the performance of suppliers along with procurement specific training which includes negotiation training aligned with the Office of Government Commerce certificate of competence. Commercial conferences and meetings with Senior Commercial Officers are held regularly to spread good practice and introduce new initiatives.

**Examples of comparator organisations’ approaches**

At Virgin, the procurement department adopted a ‘whole team’ approach in assessing suppliers and negotiating contracts, in recognition of the insights that employees were able to bring, for example in assessing how well a potential supplier would be able to work with them.

Sainsbury staff undergoes in-house negotiation skills training appropriate to the circumstances in which they operate.

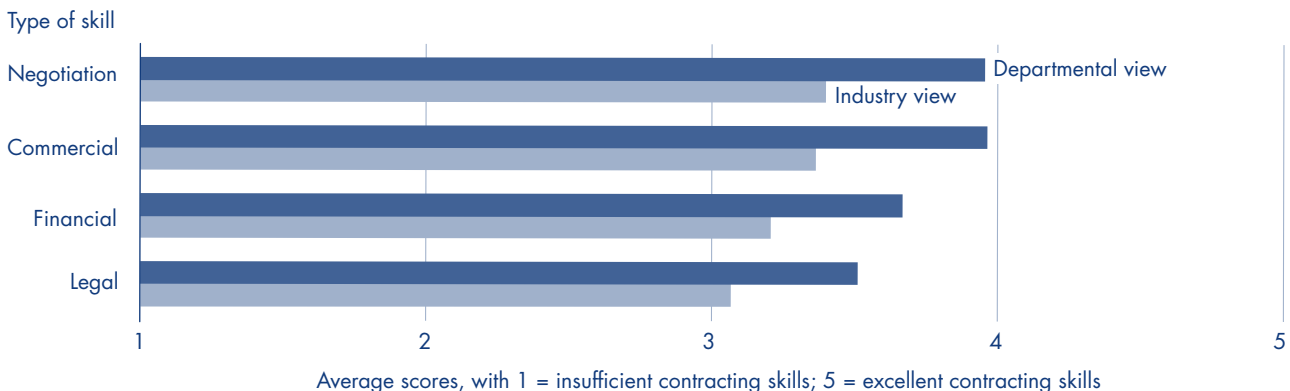
The Defence Contract Management Agency in the United States uses contracting officer forums and monthly acquisition forums to maintain commercial expertise.

The Defence Materiel Association in Australia is currently assessing the skill set within the organisation. It highlighted the following skills as important: project management; commercial acumen; commercial and business management; logistics; writing skills; disciplined communications; planning; the ability to form meeting plans; and people skills.

*Source: Details of our methodology, including our survey of Departmental project teams and industry contractors are set out in Appendix 1. Details of the case studies referred to above are set out in Appendix 2.*

**5** Both industry and the Department scored the Department highly as regards skills levels in project teams

Industry and Departmental views on project team contracting skills.



*Source: Results based on representative National Audit Office surveys of Departmental project teams and industry contractors (details in Appendix 1)*

## 6 How the Department compares against the gold standard criteria of setting clear ground rules for the negotiation and subsequent application of the contract

There are pockets of good practice but the Department is not consistent in its planning of the contracting process and communicating this to tendering parties.

### Examples of the Department's current approaches

The Field Artillery Systems Support Project Team held regular team, stakeholder and business case meetings which helped to communicate the contracting process of the AS90 Equipment Support Agreement to stakeholders.

57 per cent of the Department respondents to our survey had sought early agreement from suppliers about how discussions would be held and 62 per cent agreed how changes to the requirements and any processes would be disseminated to the parties.

However, 17 per cent of those that had planned the negotiation phase considered they had not allowed sufficient time for negotiations.

Both the Department and industry were generally unaware of, or held conflicting views about, the other party's approvals process. 15 per cent of the Department responses and 39 per cent of industry responses did not know the other parties' approval process. 45 per cent of industry and 43 per cent of Department responses did not know how much time the other party had to negotiate.

The Maritime Gunnery and Missiles Systems Project Team agreed the nature and timing of the role of the Pricing and Forecast Group early on in the process and gave advanced briefing to other scrutineers prior to the Approvals process.

### Examples of comparator organisations' approaches

Virgin's positive business culture is reflected in its core values; sparkling, positive, adventurous, friendly and passionate. The culture and the values they encourage in all staff make Virgin's interaction with suppliers both positive and open.

The BAA Plc Terminal 5 project team has developed the T5 agreement – a unique and specially designed agreement that clearly sets out the conditions of contract for everyone working on the project. It covers legal aspects as well as defining scopes of work, support plans, execution plans, and work package plans all underpinned by core processes that define the commercial environment.

*Source: Details of our methodology, including our survey of Departmental project teams and industry contractors are set out in Appendix 1. Details of the case studies referred to above are set out in Appendix 2.*



## 7 How the Department compares against the gold standard criteria of actively analysing the portfolio of contracts and application of lessons learned

Whilst there are pockets of good practice in the informal sharing of lessons, the Department could be more proactive in the use of its formal methods of learning lessons. The Department also needs to be more rigorous in gathering information on its contract portfolio.

### Examples of the Department's current approaches

Around four-fifths of project teams we surveyed did not consult the Department's Learning From Experience database for any lessons that might be applicable to their contract (see Figure 8). Of those that did, a quarter did not find any lessons they considered applied to their project. Our evidence however does suggest a strong element of informal sharing of experiences between project leaders. This suggests that the Department's formal guidance on good practice could be amalgamated into a form that is more useable and understandable.

47 per cent of Departmental survey respondents said they had learnt lessons from their own project which they would apply in future. Lessons included choice of contract type, the use of remedies and penalties and performance measurement.

The Sentry Whole Life Support Project Contractor has drawn upon lessons learnt on the JSTARS programme for the United States, who had an intimate knowledge of the 707 airframe and the associated risks.

The Department uses Key Supplier Management information to assess the performance of its top 18 suppliers. Among other things the initiative canvasses the views of project teams on the strength of the commercial relationship.

The Department lacks comprehensive, accurate and up to date information on its contract portfolio. The Department does not have a comprehensive record of all 'live' contracts, with many details missing or incorrect.

### Examples of comparator organisations' approaches

The Australian Defence Materiel Organisation is using third party reviewers to learn from emerging good practice and to assess the continuing applicability of its standard terms and conditions to the evolving commercial environment.

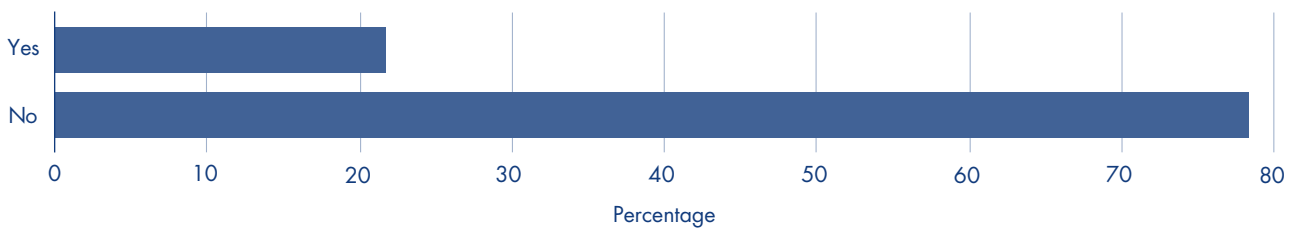
The scale of BAA Plc's Terminal 5 project, with the large number of contractors, meant there was a considerable challenge to monitoring the contract. The project paid special attention to data collection processes in setting up the commercial arrangements.

The procurement organisation in the Netherlands – the Defence Materiel Organisation – is in the middle of a major reorganisation, due to be completed by 2007. Previously there were separate procurement teams for each of the services (land, sea and air). There were also separate teams for procurement and logistic support. The re-organisation will merge these different teams to ensure a more consistent approach is taken to contracting.

Source: Details of our methodology, including our survey of Departmental project teams and industry contractors are set out in Appendix 1. Details of the case studies referred to above are set out in Appendix 2.

## 8 Extent to which Project Teams consulted the Department's Learning from Experience database for any lessons that might be applicable to their contract<sup>1</sup>

Did teams consult the Learning From Experience database for any lessons that might apply to the project?



Source: Results based on a representative National Audit Office survey of Departmental project teams (details in Appendix 1)

### NOTE

<sup>1</sup> The Learning from Experience database is provided by the Defence Procurement Agency via its intranet. The database identifies lessons learned from past projects and appropriate contracts.

## 9 Recommendations to help the Department routinely move closer to the gold standard criteria for planning and managing the contracting process

### Recommendation

Ensure continuity in post of commercial staff for the key stages of a project without this adversely affecting their career development

Set realistic parameters, agreed with all stakeholders for the negotiation process

Explicitly set out and agree with staff and potential suppliers the ethos and behaviours they expect to underpin the contracting process

To facilitate evidence-based 'evolution' of commercial policy and practices and to inform ongoing management of the contract portfolio:

- Firmly embed the application and sharing of lessons learnt throughout the commercial function; and
- Collect more accurate and timely information on contracting practices, their application and outcomes

### Good practice example

In the Sentry project team one factor that helped the team develop the contract was the fact that its key members, in terms of the negotiation team, stayed in post. This longevity helped maintain an understanding of the main issues on the Department's side.

The Watchkeeper project team set and agreed to a demanding timetable with the preferred bidder as part of the contract negotiation phase.

Toyota's Japanese business ethos of developing long-term relationships with suppliers underpins the entire culture across all levels of the workforce. Staff understand clearly how they are expected to behave in the contractual environment.

Before embarking on the construction of Terminal 5, BAA Plc looked at a number of major United Kingdom construction projects to ascertain lessons learnt particularly where they had gone wrong and how this should influence their approach to the contracting process.

At Sainsbury's all contracts are negotiated centrally using an e-procurement system. This allows contracting practices to be monitored and has eliminated any variance in its contract letting procedure.

*Source: Details of our methodology, including our survey of Departmental project teams and industry contractors are set out in Appendix 1. Details of the case studies referred to above are set out in Appendix 2.*

## PART TWO

### Understanding the outcomes the contract aims to deliver



**2.1** Contracts are mostly likely to support successful project delivery if they are negotiated against a common information base and with an understanding of stakeholders' aspirations. In applying the contract it will be important that all parties understand the way in which achievement of the desired outcomes is incentivised and the position of each stakeholder is protected.

**2.2** **Figure 10** reiterates our gold standard criteria (set out fully in Figure 2) as they relate to the development by the Department and its industry partners of a common understanding of the environment within which they are negotiating and the contracts finally agreed. In general against these, we found that:

- There are examples of good practice, notably in the early identification of risks to inform contract negotiations. The Department and industry also

consider they have a good understanding of each others motivations, although little use was made of formal analyses to underpin this understanding; and

- The Department demonstrates good practice in ensuring parties' understanding of the contract.

**2.3** **Figures 11 to 16 on pages 12 to 15** provide examples of the evidence upon which our conclusions are based. Details of our methodology and the case studies we looked at are shown in Appendix 1 and Appendix 2. Full details of all of the evidence are available on our website [www.naodefencevm.org](http://www.naodefencevm.org). **Figure 17 on page 15** presents our recommendations to help ensure all defence projects routinely adopt practices closer to the gold standard.

## 10 Our criteria for understanding the outcomes the contract aims to deliver

### Criteria

Negotiating from a common baseline

Ensuring all parties understand the contract negotiated

### Enablers

Common analysis of the risks and opportunities undertaken early on in the process by all parties with subsequent reviews

Ensure full and real-time access to common information

Understanding the aims, aspirations and driving factors behind other parties in the negotiation

Ensuring an effective communication process between parties

Test understanding of the contract

## 11 How the Department compares against the gold standard criteria of negotiating from a common baseline

There are examples of good practice, notably in the early identification of risks to inform contract negotiations. The Department and industry also consider they have a good understanding of each other's motivations, although little use is made of formal analyses to underpin this understanding.

### Examples of the Department's current approaches

Some 74 per cent of project teams surveyed had a risk register at the time of the Invitation To Tender/Invitation To Negotiate. The extent to which the different types of risks identified were considered to be comprehensively defined ranged from 37 per cent for environmental risks to 66 per cent for programme risks.<sup>1</sup> Respondents considered that the early formal identification of risks made a significant contribution to the outcome of the contracting process in management, agreeing pricing terms, the negotiation phase and in enhancing relationships.

The Air Defence Availability project aims to provide support to High Velocity Missile and Rapier systems to their out of service dates in 2020. The project team is engaging industry early in the contracting process by inviting them to input to the contractual statement of requirements.

The Design Support Alliance project is an overarching agreement relating to design support activities which were previously covered by Lead Yard Services (ship mature system design, safety documentation and production of working drawings for installation of alterations and additions). The project team created a collaborative working environment which assisted the provision of open-book accounting which in turn helped ensure all Alliance members were working from a common baseline.

Figure 12 shows that in general the Department and industry consider they have a good understanding of what is driving the other party during negotiation. Figure 13 shows that profit was not necessarily the main driver in contract negotiations.

### Examples of comparator organisations' approaches

Virgin recognised the risk of complicated single-source contracts and organises the requirements into distinct packages of work which can be sourced from alternate suppliers on a case by case basis if the single source supplier fails in some way or seeks to exploit its monopolistic position. This mitigation against the risk of losing the balance of power in the contract deals with risk in a manner suitable to circumstances of the buyer. It also adds the risk of bringing together the procured elements to the 'whole'. The Department mitigates against these risks through the use of prime contractors who manage the integration risk on their behalf.

BAA Plc recognised that it was the final owner of most contract risks and that trying to apportion these to members of the construction alliance could lead to individual members not behaving in the best interests of the project. The Authority therefore removed a key commercial constraint on contractors by negotiating a unique insurance policy whereby it owns the risk.

The builders of the Queen Mary 2 has developed a shared comprehensive database of risks which informed contract negotiations.

In Australia the Military Satellite project documented thousands of analyses of requirements; their meaning, what assumptions had been made and the dependencies. This enabled the project team to trace a requirements document to its conclusion in the final design solution.

Also in Australia the Defence Materiel Organisation developed a project dictionary to clearly define terminology and so avoid confusion between parties during negotiation.

*Source: Details of our methodology, including our survey of Departmental project teams and industry contractors are set out in Appendix 1. Details of the case studies referred to above are set out in Appendix 2.*

#### NOTE

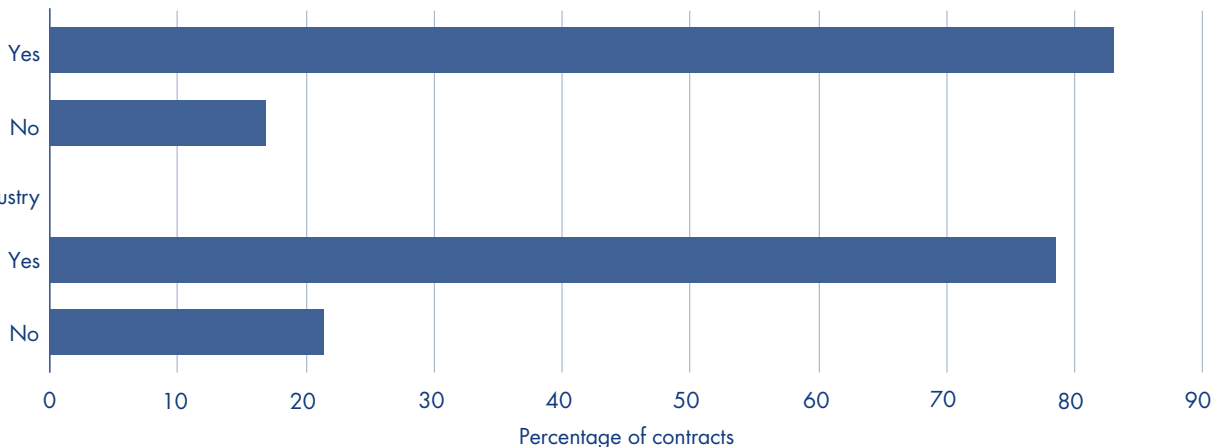
<sup>1</sup> The comprehensiveness of risk registers was assessed across six areas (industrial, management, environmental, political, programme and relationships) on a scale where 5 = Comprehensive and 1 = Not at all comprehensive.



**12** The Department and industry consider they have a good understanding of what is driving the other party during negotiation

Did you understand what was driving the other party during the contract negotiation?

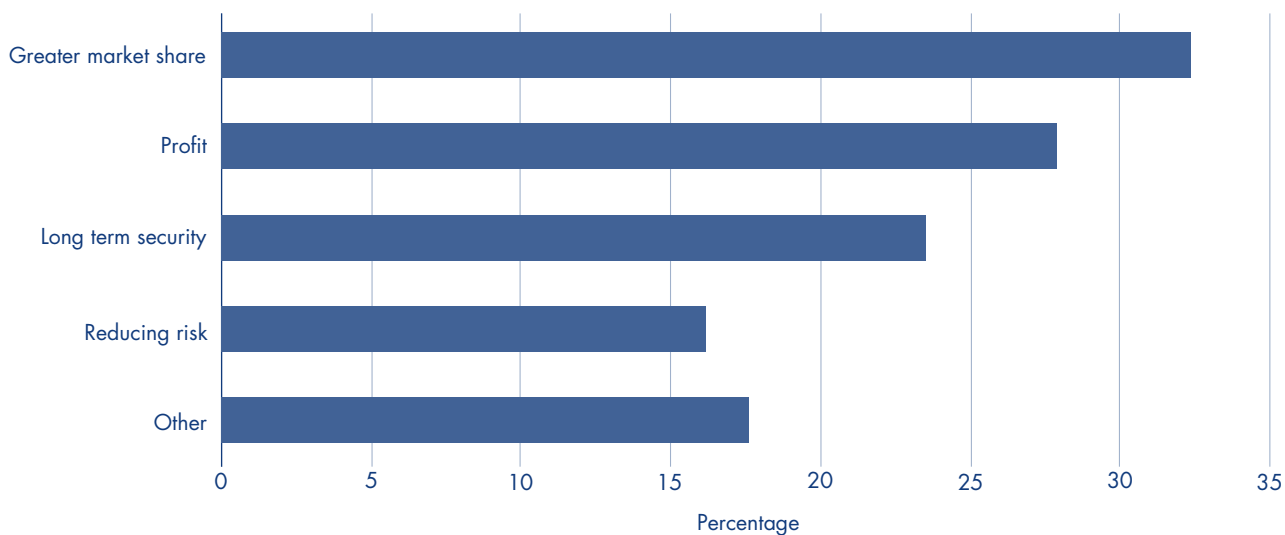
Department



Source: Results based on representative National Audit Office surveys of Departmental project teams and industry contractors (details in Appendix 1)

**13** Profit was not always the main driving factor behind the negotiation of the contract<sup>1</sup>

What was driving the contractor during the negotiation?



Source: Results based on a representative National Audit Office survey of industry contractors (details in Appendix 1)

NOTE

<sup>1</sup> Percentages in the chart do not sum to 100 as some contractors were driven by more than one factor.

## 14 How the Department compares against the gold standard criteria of ensuring all parties understand the contract negotiated

The Department demonstrates good practice in ensuring parties' understanding of the contract.

### Examples of the Department's current approaches

The Watchkeeper Project Team spent a lot of time ensuring good communications with all stakeholders, including contractors and Departmental scrutineers, throughout negotiations to ensure a common understanding of the contract.

The need for flexibility and good communication during negotiations was highlighted by survey responses. Some 92 per cent of contracts surveyed had had an amendment, with the number of clarification questions asked ranging from none to over a thousand. And, as Figure 15 shows, changes to the contract specification were the main reason for amendments in the contracts surveyed. The Department's approach is to avoid, where possible, making changes to specifications. However, changes to the operational environment do sometimes make this necessary.

The survey revealed that good communications with contractors in the contracting stage was viewed as a significant aid to the project as a whole (see Figure 16).

### Examples of comparator organisations' approaches

The Tornado Project Team understood that industry was driven by long-term contracts as much as by profit.

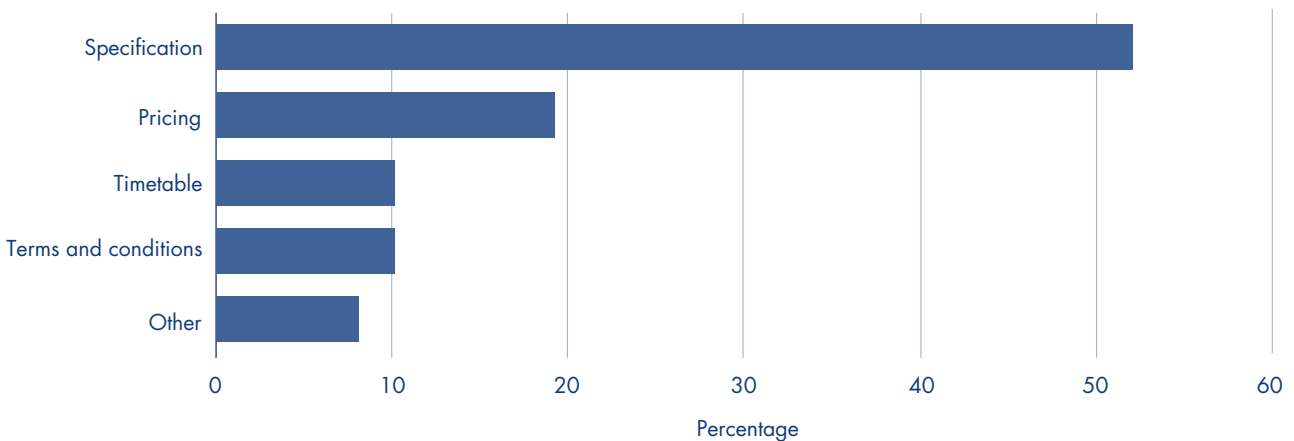
The Defence Contract Management Agency in the United States advocates a flexible and agile structure to its contracting processes and posts procurement plans on the internet which help industry to understand their contracting processes.

On the Advanced Medium Range Air to Air Missile project in the United States they used pop quiz style meetings to test the understanding of contractors.

Source: Details of our methodology, including our survey of Departmental project teams and industry contractors are set out in Appendix 1. Details of the case studies referred to above are set out in Appendix 2.

## 15 Changes to specifications were the main reason why contracts were amended

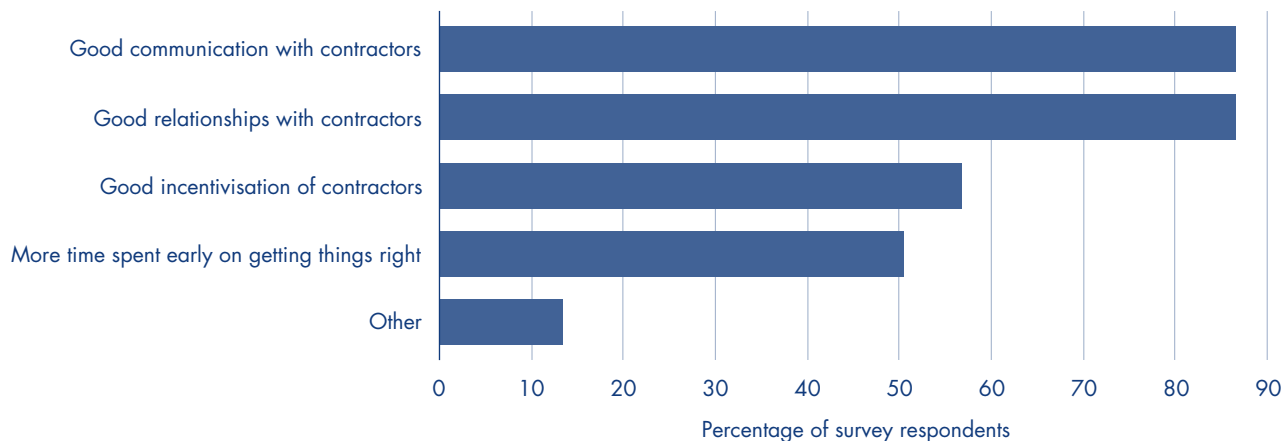
Which aspect of the contract was amended?



Source: Results based on representative National Audit Office surveys of Departmental project teams and industry contractors (details in Appendix 1)

## 16 Project Team views of how contract negotiation helped the project<sup>1</sup>

How the contracting approach aided the project



Source: Results based on a representative National Audit Office survey of Departmental project teams (details in Appendix 1)

### NOTE

<sup>1</sup> Percentages in the chart do not sum to 100 as some teams felt contract negotiation helped the project in more than one way. It should also be noted that in two thirds of the projects responding, the item of equipment to which the contract related was in service.

## 17 Recommendations to help the Department routinely move closer to the gold standard criteria for improving understanding of the outcomes the contract aims to deliver

### Recommendation

To inform understanding of the implications of the commercial approach and how changes will affect behaviours and likelihood of delivering the desired outcomes, routinely map and share the roles and responsibilities of all stakeholders

Actively test all parties' understanding of the contract before final commitment

Where appropriate, trial innovative commercial arrangements, before making major contractual commitments

### Good practice example

The Australian Military Satellite project formally mapped the roles, responsibilities and aspirations of all stakeholders within the Department of Defence and its principal industry suppliers. They used the maps to understand the implications of the proposed commercial approach and how changes would affect the behaviours of stakeholders and likelihood of delivering the full range of desired outcomes.

The AS90 project provided bespoke training to their contractors to ensure understanding of the application of the pricing mechanisms. They also used scenario-based questioning to ensure contractors understood the contract in general.

On the Tornado support project the move toward Contracting for Availability is being tested by using tightly scoped contracts to de-risk the contracting approach. Each of these contracts has stand alone business cases to demonstrate value for money. This approach has also ensured all stakeholders understand the contract before engaging in the legal arrangement.

Source: Details of our methodology, including our survey of Departmental project teams and industry contractors are set out in Appendix 1. Details of the case studies referred to above are set out in Appendix 2.

## PART THREE

### Planning for the successful execution of the contract



**3.1** Our earlier report on Effective Project Control concluded that “successful working relationships are characterised by soft factors such as team working, trust and honesty”.<sup>3</sup> The contract should provide suitable incentives to underpin such constructive working relationships and reward achievement of project outcomes, whilst adequately protecting parties in case of problems.

**3.2** **Figure 18** reiterates our gold standard criteria (set out fully in Figure 2) as they relate to the Department’s and its industry partners’ plans for the successful execution of the contract. In general against these, we found the Department:

- shows examples of agreeing codes of behaviour with suppliers in parallel with the contract negotiation but these are seldom formally linked to the terms of the contract; and

- uses incentives that are mainly financially orientated with an emphasis on remedies in the event of failure to perform.

**3.3** **Figures 19 to 24 on pages 18 to 20** provide examples of the evidence upon which our conclusions are based. Details of our methodology and the case studies we looked at are shown in Appendix 1 and Appendix 2. Full details of all of the evidence are available on our website [www.naodefencevm.org](http://www.naodefencevm.org). **Figure 25 on page 21** presents our recommendations to help ensure all defence projects routinely adopt practices closer to the criteria identified.

## 18 Our criteria for planning for the successful execution of the contract

### Criteria

Link the contract to the agreement of desired behaviours in executing the project

Use the contract to incentivise the achievement of the full range of desired outcomes with intelligent use of contract terms to protect the contracting parties

### Enablers

Negotiate the contract and principles underpinning the behaviours expected of all parties to the contract as part of a coherent package

Establish formal or informal codes of behaviour

Include provisions in the contract to resolve disputes quickly and in a non-confrontational manner

Applying contractual remedies on the basis of an assessment of their cost, effect and likelihood of being used in the specific circumstances of the project

3 HC 30, Session 2005-06, May 2005, Paragraph 1.1.



**19** How the Department compares against the gold standard criteria of linking the contract to the agreement of desired behaviours in executing the project

There are some examples of the Department agreeing codes of behaviour with suppliers but these were not always formally linked to negotiating the terms of the contract.

**Examples of the Department’s current approaches**

The Watchkeeper, Air Defence Availability, Armoured Vehicle Support Initiative, Marine Environment Survivability and Habitability and NITEworks® Project Teams have all either used, or are planning to use, a code of behaviours negotiated at the outset of the project.

Nearly 80 per cent of project teams surveyed considered they had a good relationship with their contractor (see Figure 20). On the same basis, a similar proportion of industry contractors thought they had a good relationship with the Department (see Figure 21).

**Examples of comparator organisations’ approaches**

BAA Plc recognised at the outset the importance of encouraging different contractors on the Terminal 5 project to forge good working relationships and work towards a commonly understood goal, particularly given some of the contractors were also potential rivals. To underpin this objective they agreed a Charter at the outset in parallel with negotiating the contract.

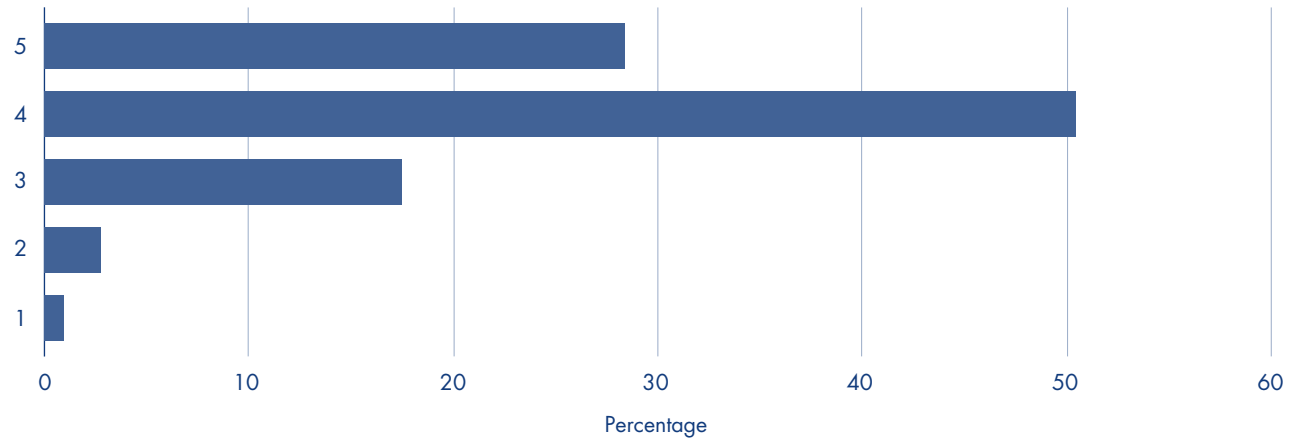
Carnival Shipbuilders required potential suppliers to work together to develop ideas in their bids.

On the Australian Air Warfare Destroyer the Department of Defence appointed a commercially astute and entrepreneurial project manager with experience of both public and private sector who was able to encourage positive behaviours among members of the shipbuilding alliance.

*Source: Details of our methodology, including our survey of Departmental project teams and industry contractors are set out in Appendix 1. Details of the case studies referred to above are set out in Appendix 2.*

**20** Nearly 80 per cent of Departmental Project Teams considered they had a good relationship with their contractor

Departmental project teams' views of relationships with contractor  
Relationship score: 1 = very poor, 5 = very good

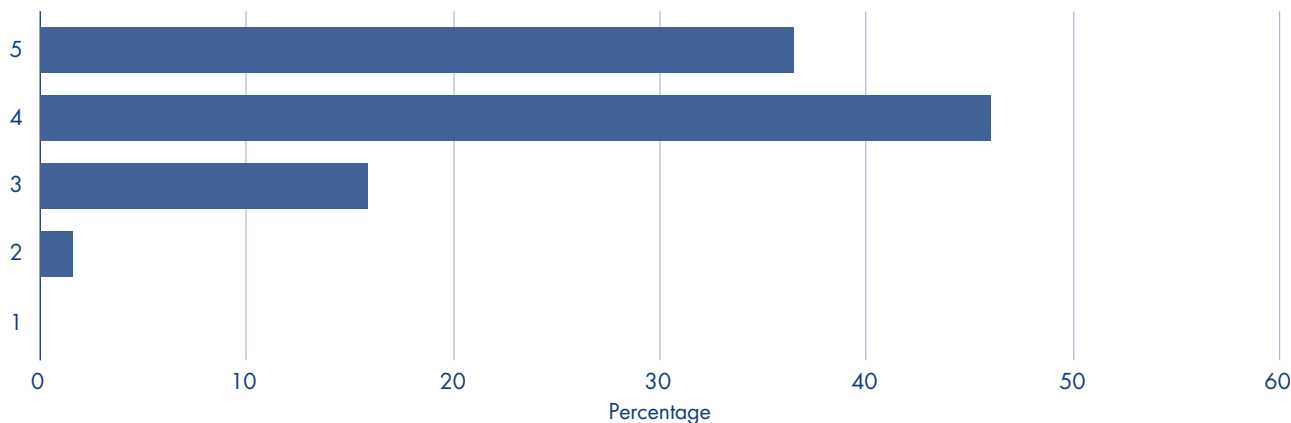


*Source: Results based on a representative National Audit Office survey of Departmental project teams (details in Appendix 1)*

**NOTE**  
Good relationship defined as a relationship score of 4 or 5.

## 21 Over 80 per cent of industry contractors surveyed considered they had a good relationship with the Department

Industry views of relationships with Departmental project teams  
Relationship score: 1 = very poor, 5 = very good



Source: Results based on a representative National Audit Office survey of industry contractors (details in Appendix 1)

### NOTE

Good relationship defined as a relationship score of 4 or 5.

## 22 How the Department compares against the gold standard criteria of using the contract to incentivise the achievement of the full range of desired outcomes and making intelligent use of contract terms to protect the contracting parties

Department incentives are mainly financially orientated with financial remedies where there is failure to perform.

### Examples of the Department's current approaches

The Department uses a range of techniques which could incentivise contractors, the most common being default and milestone payments (Figure 23). Rather than incentivising, though, the emphasis was on protecting the Department in the case of poor performance, with milestone payments largely referred to as a means of withholding payments if certain standards were not met.

Over 50 percent of contracts surveyed included liquidated damages clauses, with the clauses invoked on 10 per cent of contracts. Both Departmental and industry survey respondents considered the utility of liquidated damages clauses to be minimal. In 15 of the 16 cases where the liquidated damages clause had been invoked, there was concern that the adversarial nature of such action could adversely affected the relationship with their contractor and had not helped in addressing the underlying problems in performance.

The Air Defence Availability Project, the Armoured Vehicle Support Initiative, the AS90 Equipment Support Agreement, Merlin and Tornado projects are pioneering 'Contracting for Availability' arrangements whereby the Department contracts for an agreed level of equipment availability with the incentive on suppliers to deliver cost-effectively.

Firm price was the most commonly used pricing mechanism in the contracts surveyed (Figure 24). Reflecting differing levels of risk and uncertainty within projects, the survey also revealed that 43 per cent

of contracts had at least two pricing mechanisms, 13 per cent employed three or more and 3 per cent employed four or more. For example, the AS90 Equipment Support Agreement makes use of firm price, a Target Cost Incentive Fee and pricing based on usage (distance driven).

A high percentage of the contracts surveyed include a defined dispute resolution with the most commonly cited being Defcon 530, stating that in broad terms the parties will agree in good faith to attempt to resolve any dispute or claim through negotiation. Around 37 per cent of contracts have a narrative dispute process. Only 2.4 per cent of contracts surveyed had called upon the defined dispute resolution clause.

### Examples of comparator organisations' approaches

On the Terminal 5 construction project, BAA Plc set up an incentive fund to encourage performance above and beyond 'business as usual'.

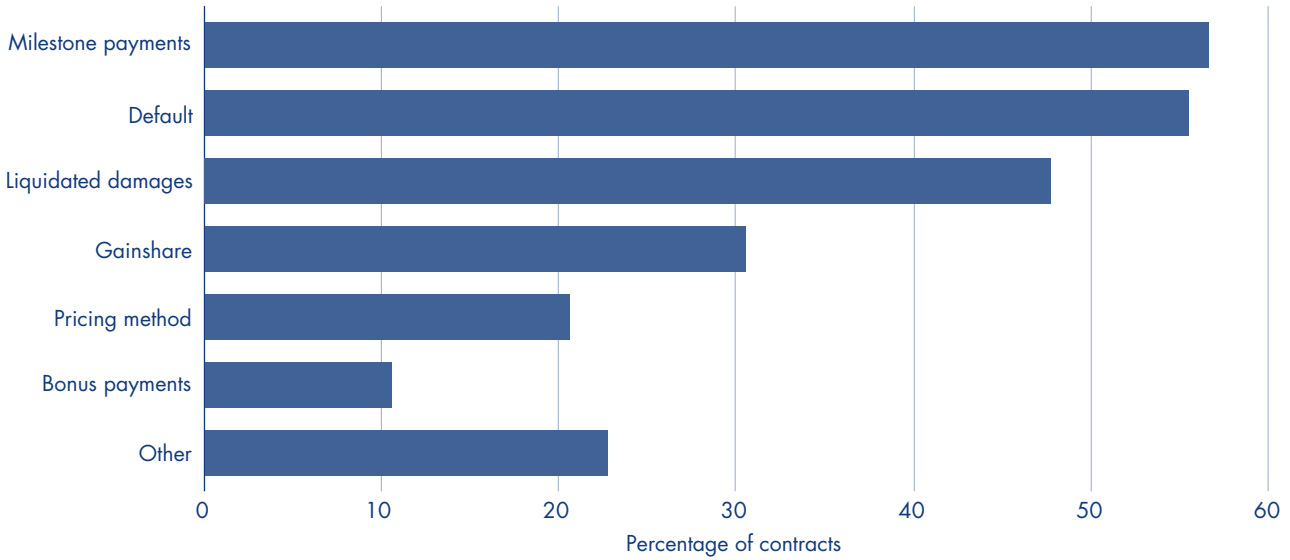
Toyota ring-fences supplier profit margins as an incentive to perform and focuses on reducing costs.

When Hong Kong International Airport was constructed a Disputes Review Group was formed to operate throughout the life of the contract. The group attended quarterly review meetings which provided a non-contractual forum in which all stakeholders could speak their minds. The group tempered proceedings and helped to resolve issues before they became disputes.

Source: Details of our methodology, including our survey of Departmental project teams and industry contractors are set out in Appendix 1. Details of the case studies referred to above are set out in Appendix 2.

**23** The Department use a range of performance parameters in its contracts, the most common being milestones and default sharing arrangements<sup>1</sup>

Performance parameters used in Departmental contracts



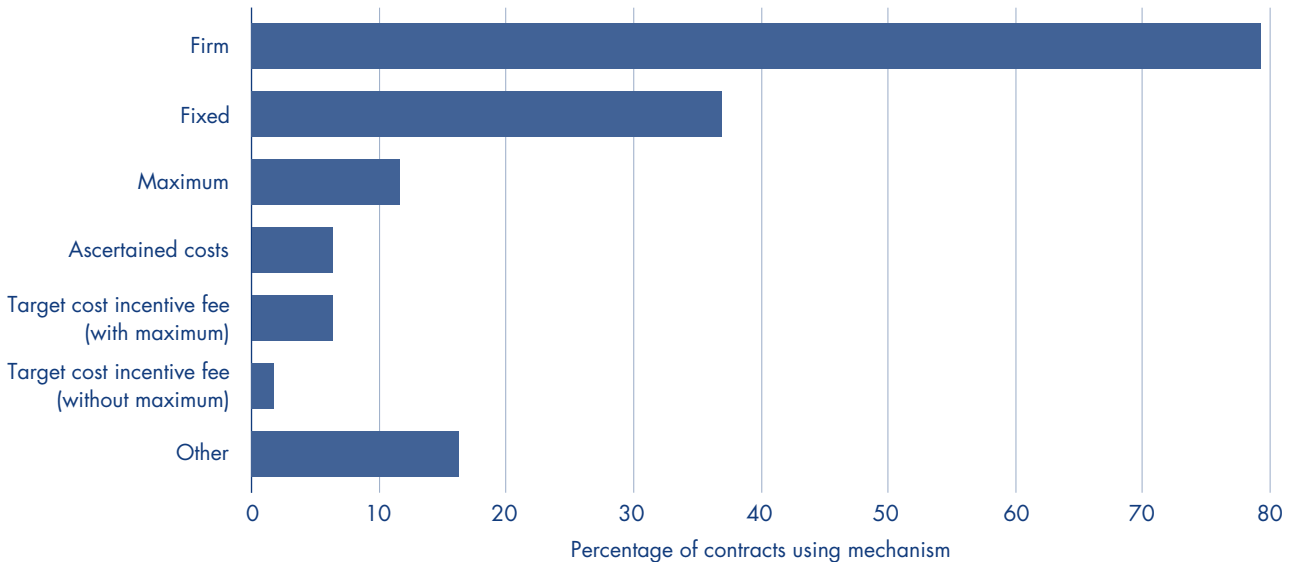
Source: Results based on representative National Audit Office surveys of Departmental project teams and industry contractors (details in Appendix 1)

NOTE

<sup>1</sup> Percentages in the chart do not sum to 100 as some contractors used more than one form of incentive.

**24** Firm price is the pricing method most commonly used in current Departmental contracts<sup>1</sup>

Pricing mechanisms used in current Departmental contracts



Source: Results based on a representative National Audit Office survey of Departmental project teams (details in Appendix 1)

NOTE

<sup>1</sup> Percentages in the chart do not sum to 100 as some contractors used more than one pricing mechanism.

## 25 Recommendations to help the Department routinely move closer to the gold standard criteria for planning the successful execution of the contract

### Recommendation

Encouraging the development of codes of behaviour, either formal or informal, as part of a coherent package with the contract to underpin the conduct of the project.

The Department and its suppliers should jointly and explicitly consider the balance of contractual terms to underpin behaviours likely to lead to successful project outcomes and to protect both parties in case of problems.

### Good practice example

In developing the umbrella contract on the innovative NITeworks® project, clear codes of behaviour were agreed which apply to members of the team from the Department, main contractor and staff from other companies in the team at the time.

The AS90 project team uses a range of pricing mechanisms to incentivise performance of different aspects of a complex project and linked these to recognition of contractor motivation.

Queen Mary 2 and Toyota claim not to have ever used a penalty clause and liquidated damages are rarely used on the basis they feel they have too detrimental an effect on working relationships.



# APPENDIX ONE

## Study scope and methodology

**1** This study compares the Department’s contracting practices for major equipment projects within the organisation and with overseas and commercial organisations. The study developed one of the good practice sub-criteria of the theoretical gold standard drawn up in our 2005 report *Driving the successful delivery of major defence projects: effective project control is a key factor in successful projects*.<sup>4</sup> The good practice sub-criterion was that the contract was a key component of project control. The following paragraphs describe the methodologies we employed for design of the study, to gather and analyse our evidence and to conduct the comparative analysis. More information can be found at [www.naodefencevfm.org](http://www.naodefencevfm.org).

### The design of the study

**2** We developed the following four issue-areas to allow us to analyse whether the contractual processes used by the Department maximise the likelihood of successful project outcomes:

- Do the Procurement Strategy and Invitation to Tender provide a sound basis on which to negotiate the contract?

- Do Department and industry have an effective process to negotiate clearly understood contracts?
- Are contracts used effectively to support project progress?
- Do contracts ultimately deliver the desired capability?

**3** These four issue-areas were taken forward into the evidence-gathering phase and formed the basis of our consultation exercise.

### Gathering evidence

**4** Our evidence gathering was based primarily on collection of new data through surveys, case studies and semi-structured interviews with some use of existing Departmental data and documentation. We also spoke to a wide range of stakeholders both in the Department and in the defence industry more widely.

### Collection of new data – Surveys

**5** We conducted two surveys between September and November 2005. The details of the approach and returns are given in **Figure 26**.

26 Survey approach and coverage		
Survey	Reason and approach	Returns
1 Departmental integrated project teams	Representative data on Departmental practice. All Project Teams with live contracts valued above £20 million surveyed (117 in total). PFI contracts were excluded from the sample.	115 returns from 88 project teams. This represents 75 per cent of project teams surveyed.
2 Commercial project managers	Data on commercial practices and views for comparison with project team results.  Majority of survey questions mirrored Survey 1.	65 returns from project contractors (97 per cent return rate).

Source: National Audit Office

<sup>4</sup> HC 30, Session 2005-06, May 2005, Figure 2.



**6** Our survey covered 115 contracts from 88 of the Department's Project Teams (a return rate of 75 per cent of the 117 Project Teams surveyed). This provided a large enough sample size to allow us to extrapolate the results over the whole population. The breakdown of responses by project stage is given in **Figure 27**. The majority of responses were for contracts where the item of equipment was in-service. Further details of the survey results can be found on the study website [www.naodefencevfm.org](http://www.naodefencevfm.org).

## Collection of new data – case studies

**7** Between April and October 2005 we visited 13 Departmental project teams to examine, in detail and at first hand, their approach to drawing up, negotiating and managing contracts. For some of the teams, we also spoke to the contractor. The teams were selected on the basis of them representing various different aspects of good practice. Summaries of each of the different cases studies examined are set out in Appendix 2.

## Collection of new data – Semi-structured interviews

**8** We conducted 15 semi-structured interviews between April and October 2005 covering acquisition and contracting experts and senior stakeholders within the Department. Our framework of questions covered key issues from their perspective, what works well, what could be improved and how things could be done differently to enable better contracting. Most of the interviews were with one or two interviewees and were held in the Department's offices in London, in the Defence Procurement Agency in Bristol and at various Defence Logistics Organisation sites. Relevant trade organisations interviewed were the British Naval Equipment Association, the Chartered Institute of Purchasing and Supply, the Defence Manufacturers Association, Intellect, the Office of Government Commerce, the Ship Builders and Ship Repairers Association and the Society of British Aerospace

Companies. We also interviewed a number of defence contractors; with particularly useful contributions from BAE Systems, MBDA Missile Systems and SERCO.

## Use of existing data – Departmental documents and reports

**9** We analysed procurement strategies, risk registers and business cases to trace how contracts are designed, negotiated and managed by the Department. We examined Defence Procurement Agency and Defence Logistics Organisation organisational and process development papers to understand how approaches are evolving and to evaluate new initiatives alongside interview and case study data.

## Development of contracting strategies tool

**10** The criteria identified in Parts 1 to 3 represent a theoretical gold standard which no one project is likely to meet in its entirety. One of our key gold standard criteria was that project teams should recognise that there is no 'one size fits all' contract or contracting strategy and that different approaches are likely to be needed in different circumstances. To help project teams better meet this criterion, we worked with IBM to establish a methodology whereby commercial staff within the Department could more easily identify procurement influences and develop contracting strategies appropriate to the circumstances of a project. We have called this methodology the "Contracting Strategies Tool". The Tool is summarised in more detail in Appendix 3 and at [www.naodefencevfm.org](http://www.naodefencevfm.org). A separate handout is also included in this report.

**11** It is important to note that, at this point, the Tool is not complete. We have developed it to establish the principle and show how it could work in the Department. We have tested it with Project Teams and other key stakeholders within the Department to check its practicality. We would encourage the Department to take forward the development of the Tool for the benefit of all Project Teams.

### 27 Analysis of Departmental survey responses

Survey	Concept or Assessment	Demonstration	Manufacture	In-Service	Disposal	Total
Number of responses	5	10	14	75	11	115
Percentage	4	9	12	65	10	100

Source: National Audit Office



# APPENDIX TWO

## Our case studies

### Departmental case studies

Name of IPT and title of project	<b>Land Guided Weapons IPT Air Defence Availability Project</b>
Phase	Assessment
Approximate contract value	Contract not placed yet
Description of the project (type of equipment/capability, purpose/nature of the requirement)	<p>The LGW (Land Guided Weapons) Integrated Project Team is responsible for all Land Launched Guided Weapons Systems, transferred to the Defence Logistics Organisation from the Defence Procurement Agency.</p> <p>The Air Defence Availability Project aims to provide support to High Velocity Missile and Rapier systems to their out of service dates in 2020. Under 'Contracting for Availability' they aim to make missiles available to users with the most cost-effective support needed to maintain capability.</p>

Name of IPT and title of project	<b>Merlin IPT Integrated Merlin Operational Support</b>
Phase	In-Service
Approximate contract value	£450 million over five year contract
Description of the project (type of equipment/capability, purpose/nature of the requirement)	<p>The Merlin Mk1 and Mk3 are now both in service and the IPT are responsible for in service support of the platforms and a number of minor enhancement programmes. Additionally, to sustain the capability of the Merlin Mk1 the IPT is managing a technical upgrade, Merlin Mk1 Capability Sustainment Programm (MCSP) which is currently at the demonstration and manufacture phase. The Merlin IPT is also at the leading edge working to provide innovative solutions for Inservice Operational Support for Merlin aircraft.</p>

Name of IPT and title of project	<b>Vehicle Category Management Team Armoured Vehicle Support Initiative Team (D Log Manoeuvre/Strike)</b>
Phase	Concept
Approximate IPT spend	£164 million per year
Description of the project (type of equipment/capability, purpose/nature of the requirement)	<p>Provision of support for the armoured fighting vehicle fleet. Looking to use Departmental resources more effectively and increase vehicle availability. The project is still in its very early stages but is looking to follow the lead set by the AS90 'Contracting for Availability' in achieving greater reliability in its service support.</p>

Name of IPT and title of project	<b>Tornado IPT</b>
Phase	In-Service
Approximate contract value	£300 million year decreasing
Description of the project (type of equipment/capability, purpose/nature of the requirement)	The Tornado IPT provides engineering and logistics support for the Royal Air Force's Tornado GR4 and F3 fleets. Tornado is an international collaborative programme with Germany and Italy and uses a partnering approach to contracting. It aims to place 'Contracting for Availability' contracts with BAE Systems for overall aircraft availability and Rolls Royce for engines.

Name of IPT and title of project	<b>D Log Maritime Platforms IPT Design Support Alliance</b>
Phase	In-Service
Approximate contract value	£48 million over five year contract
Description of the project (type of equipment/capability, purpose/nature of the requirement)	The Design Support Alliance is an overarching agreement relating to design support activities which were previously covered by Lead Yard Services (ship mature system design, safety documentation and production of working drawings for installation of alterations and additions). It applies to vessels managed by Mine Counter Measures Vessels and Major Warships IPTs, including those vessels previously managed by the Landing Platform Dock IPT.

Name of IPT and title of project	<b>Sentry IPT</b>
Phase	In-Service
Approximate contract value	£32 million per year
Description of the project (type of equipment/capability, purpose/nature of the requirement)	Provided in 1991-92, the Sentry aircraft provides an airborne Warning and Control System which gives strategic support in theatres of operation around the world. It plays a key role in communicating and exploiting information as part of The Department's Network Enabled Capability. The contract was drawn up to achieve an increase in aircraft availability at a reduced cost to the Department through more efficient maintenance schedules.

Name of IPT and title of project	<b>Facilities Management Group (Support Group)</b>
Phase	In-Service
Approximate contract value	£50 million, seven year contract (currently in Year 6)
Description of the project (type of equipment/capability, purpose/nature of the requirement)	In 2000 a contract was let for the total facilities management of the Defence Procurement Agency's site in Abbey Wood, Bristol. It was let over a seven year term, combining both soft (cleaning, catering) and hard (building infrastructure). The contract suffered a number of problems in its first two years of operation but since a dedicated commercial officer has been assigned new contracting arrangements have improved the service.

Name of IPT and title of project	<b>Marine Environment Survivability and Habitability IPT The Holistic Equipment Support Strategy</b>
Phase	In-Service
Approximate value	£2.6 million per year
Description of the project	The Marine Environment Survivability CBRN (chemical, biological, radiological, nuclear) have the design authority responsibility for nuclear biological chemical filtration and associated equipments. The Nuclear Biological Nuclear Filtration Equipment Project Team has implemented a consolidated approach to contracting.

Name of IPT	<b>Maritime Gunnery and Missiles Systems IPT</b>
Phase	In-Service
Total contract value	£58.6 million over 10 years
Description of the project	The Maritime Gunnery and Missiles IPT is responsible for the 996, a medium range air surveillance and target indication radar fitted to Royal Navy platforms, providing target indication data to the missile systems and surveillance information to the command centre.

Name of IPT and title of project	<b>Network Integration Test and Experimentation Works IPT</b>
Phase	Assessment
Total contract value	3 year contract awarded to BAES July 2003. £47 million contract value
Description of the project (type of equipment/capability, purpose/nature of the requirement)	NITEworks® is an experimental environment that allows the Department to assess the benefits of network enabled capability and the options for its effective and timely delivery. NITEworks® is a partnership between the Department and the defence industry. The arrangement allows NITEworks® to draw on the widest possible range of specialist skills, information and facilities in addressing problems set by the Department.  Niteworks® is a trademark registered in the name of the Secretary of State.

Name of IPT and title of project	<b>Tactical Unmanned Air Vehicle IPT Watchkeeper</b>
Phase	Due to enter service in 2006 for 30 years
Approximate contract value	Forecast assessment phase £65 million, forecast demonstration and manufacture £907 million
Description of the project (type of equipment/capability, purpose/nature of the requirement)	<p>The Watchkeeper system comprises an unmanned air vehicle with imagery sensors and the necessary ground control stations for the detection, recognition and identification of ground targets to support the land component commanders' imagery intelligence needs. It will also contribute to The Department's development of Network Enabled Capability.</p> <p>Research had confirmed that an unmanned air vehicle system would best meet the intelligence, surveillance, target acquisition and reconnaissance needs to support battle group up to formation level imagery intelligence needs over the battlefield.</p>
Name of IPT and title of project	<b>Field Artillery Systems Support IPT AS90 Equipment Support Agreement</b>
Phase	In-Service
Approximate value	£15 million per annum
Description of the project (type of equipment/capability, purpose/nature of the requirement)	<p>The AS90 is a self-propelled howitzer which entered service in 1993 with a current out-of-service date of 2023. A contract for the support of a fleet of 146 vehicles was let by The Field Artillery Systems Support IPT in June 2005. The AS90 Equipment Support Agreement works under a 'Contracting for Availability' arrangement where the contractor is rewarded for keeping equipment in service.</p>
Name of IPT and title of project	<b>Infantry Guided Weapons IPT Javelin Anti-Tank Guided Weapon System</b>
Phase	In-Service
Approximate value	£400 million
Description of the project (type of equipment/capability, purpose/nature of the requirement)	<p>The contract is for the manufacture, supply and support of a crew portable Medium Range Anti-Tank Guided Weapon for the Light Forces and Mechanised Infantry, including training equipment. Javelin was a hybrid purchase of both direct commercial sale and foreign military sale from the United States.</p>

## Commercial case studies

Name of company	<b>Toyota</b>
Description of case study	<p>Toyota is at the heart of global manufacturing, a company that has grown in the last 70 years to become the world's third largest vehicle manufacturer.</p> <p>Toyota is a truly global business with factories on six continents and employing a quarter of a million people. Its products are sold in 160 markets. The Toyota production system, its pioneering approach to efficient manufacturing methods has provided a template for industry that has been adopted by many other businesses.</p> <p>Toyota is Britain's fourth largest car exporter and as such is a key player in the country's manufacturing economy. Today Toyota's investment in the United Kingdom economy has reached more than £1.7 billion and provides jobs directly to more than 4,500 people.</p>

Name of company	<b>Virgin</b>
Description of case study	<p>Virgin is one of the most respected brands in Britain and becoming the global brand name of the 21st century. Virgin are involved in planes, trains, finance, soft drinks, music, mobile phones, holidays, cars, wines, publishing and bridal wear. What ties all these businesses together is the value of the brands and the attitude of their employees. Virgin has created over 200 companies worldwide, employing over 25,000 people. Total revenues around the world in 2002 exceeded £4 billion (US\$7.2 billion).</p>

Name of company	<b>Sainsbury's Plc</b>
Description of case study	<p>J Sainsbury plc is a leading United Kingdom food retailer with interests in financial services. It consists of Sainsbury's Supermarkets, Sainsbury's Local, Bells Stores, Jacksons Stores and JB Beaumont, Sainsbury's Online and Sainsbury's Bank. It employs 153,000 people. A large Sainsbury's Supermarket offers around 30,000 products – 50 per cent of these are Sainsbury's own brand including fresh produce.</p>

Name of company	<b>QMI – Carnival Ships</b>
Description of case study	<p>The Queen Mary 2 is the world's biggest cruise ship at 1,132 feet long and weighing 150,000 tons. The vessel with carry 1,253 crew and 2,620 passengers. Its total cost was £550 million.</p>

Name of company	<b>BAA Plc Terminal 5 Project</b>
Description of case study	<p>British Airport Authority's Terminal 5 project at Heathrow Airport is currently one of Europe's largest construction projects. It involves over 60 contractors, 16 major projects and 147 sub-projects on a 260ha site. When complete it will cater for approximately 30 million passengers a year and will provide additional terminal and aircraft parking capacity. The planned opening date for public use is the 30 March 2008.</p> <p>Terminal 5 represents an investment of £4.2 billion for the British Airport Authority.</p>

## Overseas case studies

Country and organisation	<b>Australia Defence Materiel Organisation</b>
Total defence budget	\$A16.4 billion <sup>5</sup> (£6.7 billion)
Definition of a major project	Major Capital Project Threshold is \$A20 million <sup>6</sup> (£8.1 million)
Areas/topics covered by visit	Military satellite (MILSATCOM) Armed Reconnaissance Helicopter (AIR 87) Defence Materiel Association Air Warfare Destroyer

Country and organisation	<b>Netherlands: Ministry Of Defence – Defence Materiel Organisation</b>
Total defence budget	€7.8 billion (£5.3 billion) for the budget of the year 2006 <sup>7</sup>
Areas covered by visit	Infantry Fighting Vehicle

Country and organisation	<b>United States Department Of Defense</b>
Total defence budget	US\$453.6 billion (2004) <sup>8</sup> (£241.3 billion) <sup>9</sup>
Areas covered by visit	Advance Medium Range Air to Air Missile The Defence Contract Management Agency

5 The Military Balance 2004-2005, International Institute for Strategic Studies, Oxford University Press, October 2004. Sterling figures based on an exchange rate of £1 = \$A2.46 as at 13 January 2005.

6 Source: [www.defence.gov.au/dmo](http://www.defence.gov.au/dmo) accessed on 13 January 2004.

7 Currency conversion based on exchange rate of £1 = €1.46 as at 21 February 2006.

8 The Military Balance 2004-2005, International Institute for Strategic Studies, Oxford University Press, October 2004.

9 Based on an exchange rate of £1 = \$1.88 as at 13 January 2005.



## APPENDIX THREE

### Development of a contracting strategies tool

#### Aim of the contracting strategies tool

**1** An important factor in helping projects get delivered on time, within budget and to the desired requirements is choosing the right contracting strategy. The contracting strategy looks at the approach to the supplier base in terms of the required relationships and communication, the process by which the contract will be let and the terms and conditions which are to be used to facilitate effective delivery and provide an appropriate framework for the procurement.

**2** Selecting the right contracting strategy, however, given the range and complexity of different defence procurements, is no easy task. We therefore asked IBM to help us to produce a tool to aid Departmental and industry teams making a better informed choice of the contracting strategy most suited to the circumstances of the procurement.

**3** We envisage the tool helping to guide contracting staff on both sides (i.e. the Department and industry) through the different contracting options and leading them to choose the approach most likely to lead to the ultimate success of the project. We envisage the tool helping procurement teams assess more rigorously the various factors that need to be considered in an effective contract, such as risk allocation, pricing method, dealing with uncertainty, dealing with changes to specification and behavioural issues. The tool is also intended to help procurement teams to make use of previous good practice more easily. The tool is aimed at Departmental project team members, commercial staff and others involved in preparing the Procurement Strategy.

#### Methodology for developing the contracting strategies tool

**4** In developing the scope of the tool, we considered the role and definition of the procurement strategy as distinct from the contracting strategy. We recognised that these terms can be used interchangeably and to avoid misinterpretation and ambiguity we defined the scope and context of the contracting strategy as illustrated in **Figure 28**.

**5** The development of the contracting strategy tool and associated methodology was based on the following underlying principles:

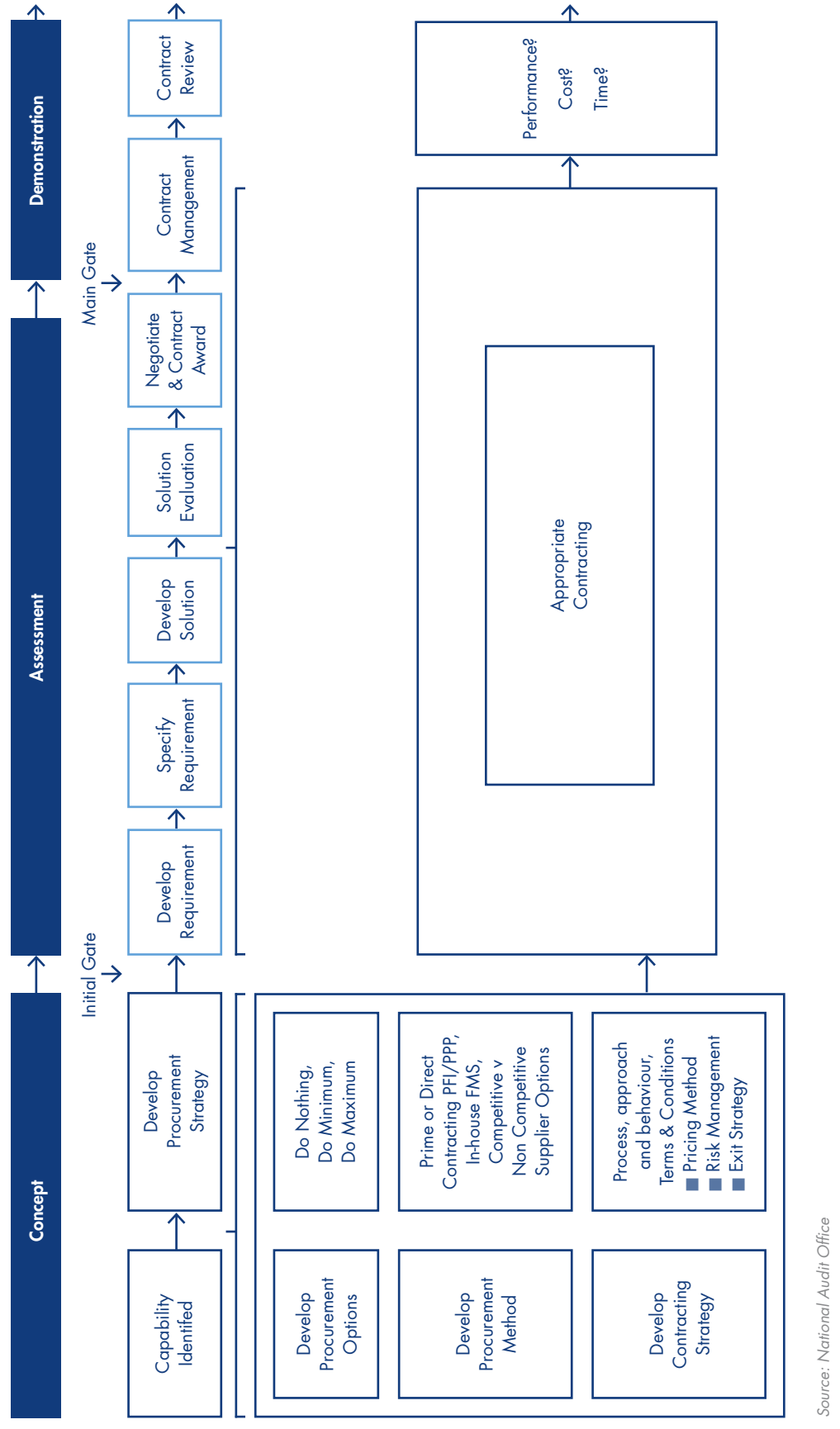
- Internal and external procurement influences exist which impact the nature of the procurement environment.
- Different procurement circumstances arise depending on the range and combination of procurement influences.
- Different procurement circumstances warrant specific approaches, process and contracting considerations.
- Differentiated contracting strategies need to be established for specific procurement circumstances.

**6** Based on these high level principles, we developed a four step methodology to support the construction of the tool. The methodology was based on linking an understanding of procurement influences and their associated contracting considerations to Departmental procurement circumstances and then identifying strategies which were appropriate to those circumstances. The study methodology is summarised in **Figure 29 on page 32**.

#### Outline of the contracting strategies tool

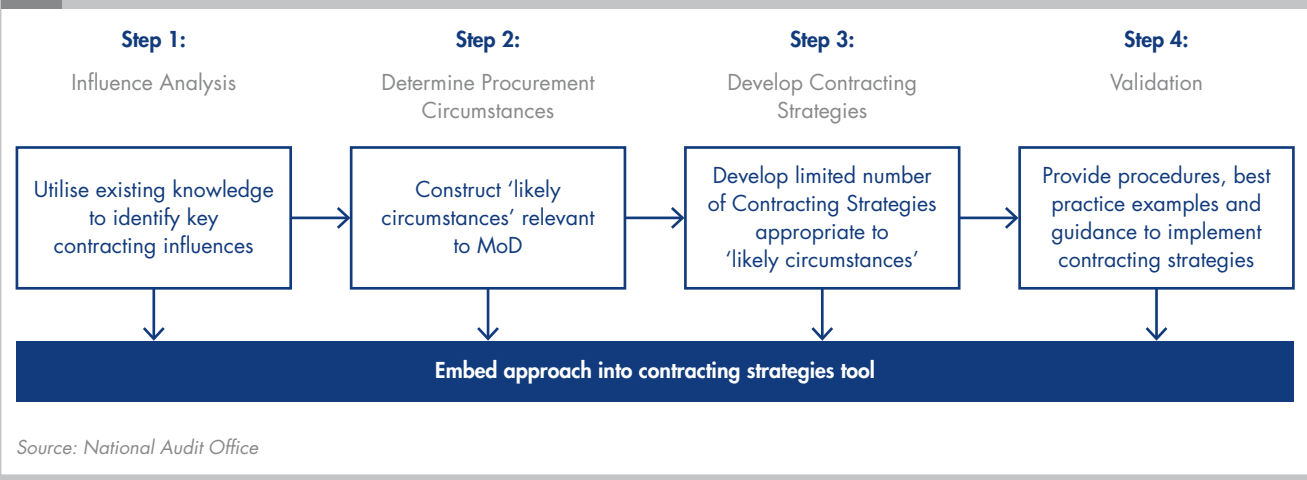
**7** The tool provides an initial introduction which includes setting it in the context of Smart Acquisition and the general procurement environment in the Department. This recognises the need to develop a contractual strategy early and in parallel with the procurement strategy. This initial context setting was particularly important as we found that individual contracting strategy documents did not always exist and that commercial staffs were not often engaged at this early stage.

28 Definitions of procurement options, method and contracting strategy



Source: National Audit Office

**29** Summary of IBM methodology for developing contracting strategy tool



**8** The first step in using the tool is to understand and assess the key influences relevant to the particular procurement in order to identify the appropriate procurement circumstance. We identified five key influences:

- Requirement Importance: How important is the equipment to the MoD? Is it strategic, complementary or administrative?
- Requirement Standardisation: Is the product readily available in the market place? Is it unique, customised or a commodity product?
- Supply Market Competition: What does the supply market look like? Is it monopoly, limited or are there strong supply and demand conditions?
- Demand Predictability: Can demand be planned? Is it predictable or unpredictable?
- Procurement Competition: Will the procurement be competed or not?

NB: These definitions are explained in greater detail in the Contracting Strategies Toolkit leaflet attached to this report and in the IBM report, available at [www.naodefencevm.org](http://www.naodefencevm.org).

**9** By assessing these influences a particular procurement circumstance can be derived. For example, assume for the sake of illustration this is the requirement for Attack Helicopters;

- of Strategic importance because it will be used in theatre to support the frontline;
- is Customised because this capability has been provided to other nations but will require customisation to meet United Kingdom specific capabilities;

- is provided by a limited number of suppliers;
- has predicted demand because the Department will manage their demand based on internal resourcing and capability plans;
- will be procured on a Competitive basis to leverage the limited supply market and to drive value for money.

**10** In the second step the user is then provided with tailored guidance for developing a contracting strategy for their particular procurement circumstance. The tailored guidance acts as a checklist of good practice points, promoting the key elements to consider in the approach and process of determining the contractual arrangements.

**11** In the final step the user is guided to check the robustness of the strategy with a checklist of questions likely to be raised by scrutineers and approvers in the submission of the business case. The checklist will cover areas such as incentivisation, pricing and intellectual property rights. At this stage the user is also provided with a series of links to existing relevant Departmental good practice guidance.

**12** At present the tool has been developed to address five procurement circumstances which covers significant Departmental project spend and to prove the utility of the tool and underlying concepts and methodologies. The Department is now going to develop the tool further as a way to allow good practices to be more routinely adopted when teams are drawing up contracts and contracting strategies. Fuller details of IBM's work are available in a separate report available at [www.naodefencevm.org](http://www.naodefencevm.org).

# GLOSSARY

<b>Ascertained costs</b>	<p>A contract price fixed by agreement between the Ministry of Defence (the Department) and the contractor on the basis of:</p> <ul style="list-style-type: none"> <li>■ the costs properly incurred for the purposes of the contract (e.g. wages, salaries and materials);</li> <li>■ overhead and administration charges;</li> <li>■ a sum for profit to be agreed in accordance with the Government Profit Formula published in the Report on the General or Annual Review of the Profit Formula for Non-Competitive Contracts by the Review Board for Government Contracts.</li> </ul> <p>The contract price is subject either to the provisions in the contract of any limitation of liability clause or to any maximum amount stated to be payable under the contract.</p>
<b>Assessment phase</b>	<p>Second phase of a United Kingdom defence project which occurs after the first approval point, Initial Gate, and aims to identify the most cost-effective technological and procurement solution and reduce risk.</p>
<b>Concept phase</b>	<p>First phase of a United Kingdom defence project to define the users' requirements and identify technology and procurement options for meeting the need.</p>
<b>Contracting Strategy</b>	<p>Having established the procurement options and method, the final part of the procurement strategy is the contracting strategy. This looks at the general approach to the supplier base, in terms of the required relationships and communication, the process by which the contract will be let and the terms and conditions which are to be used to facilitate effective delivery and provide an appropriate framework for the procurement.</p>
<b>DEFCON</b>	<p>Defence Condition – a standard contract condition, centrally agreed between the Ministry of Defence and industry. Applied as appropriate.</p>
<b>Defence Logistics Organisation</b>	<p>The tri-Service logistics organisation formed on 1 April 1999 to provide joint logistics support to the Armed Forces. Headed by the Chief of Defence Logistics.</p>
<b>Defence Procurement Agency</b>	<p>An executive agency of the Department formed on 1 April 1999 to procure new equipment for the Armed Forces. Headed by the Chief of Defence Procurement.</p>
<b>Demonstration phase</b>	<p>Third phase of a United Kingdom defence project which occurs after the second approval point, Main Gate, and aims to eliminate development risk to fix performance targets for manufacture.</p>
<b>Disposal phase</b>	<p>Final phase of a United Kingdom defence project where plans are carried out for the efficient, effective and safe disposal of the equipment.</p>

<b>Firm price</b>	A price agreed for goods or services which is not subject to variation.
<b>Fixed price</b>	A price agreed for goods or services which is subject to variation in accordance with the variation of price provisions in the contract.
<b>Gainshare</b>	Gainsharing is working together to derive mutual advantage where there is a benefit to both the Department and industry in reopening and renegotiating current contracts.
<b>Gold standard</b>	Framework for the comparative analysis during this study comprising good practice criteria in the area of contracting practices.
<b>In-service phase</b>	Fifth phase of a United Kingdom defence project when the military capability is available for operational use. Projects must provide effective support to the front line, maintain levels of performance and carry out any upgrades as agreed.
<b>Integrated Project Team</b>	The term referring to the Departmental team responsible for delivering timely and cost-effective equipment to meet the stipulated requirements of the user. The team includes the core skills necessary to manage the project in each phase from concept to disposal and is led by an Integrated Project Team Leader.
<b>Liquidated damages</b>	A remedy available to a party to a contract to compensate for the financial loss suffered as the result of a proven breach of contract. Its purpose is to quantify in advance the amount of damages to be paid upon demonstration of the breach. A liquidated damages provision must be based upon the potential financial loss likely to be suffered in the event of a breach of contract. It therefore provides certainty and reduces the risk of dispute and potential litigation.
<b>Manufacture phase</b>	Fourth phase of a United Kingdom defence project when production is undertaken.
<b>Maximum price</b>	A price beyond which the Department is not required to pay. Costs incurred above the Maximum Price fall to the contractor alone. Exceptionally, a Maximum Price may be adopted until a Firm Price can be agreed.
<b>More Effective Contracting</b>	More Effective Contracting is an acquisition initiative that seeks to promote the application of good practice using proven project management tools to both de-risk programmes and prevent either the Department or suppliers becoming over committed. The initiative has particular relevance where there is technology risk. The initiative also looks to adopt a more consistent approach to contracting across the Department with a sharper focus on bringing equipment and services into service with greater speed and agility. Key to the success of the initiative is the development of relationships with industry, formed on mutual trust and openness.

<b>Procurement Options</b>	This is the first stage in the formulation of the procurement strategy. It addresses the potential options for meeting the identified requirement. This normally includes the option of 'Do nothing' (i.e. maintain the 'As Is'), Do minimum (i.e. minimum solution for meeting some of the requirement) and 'Do maximum' (i.e. full scale solution).
<b>Procurement Method</b>	Based on the market conditions and the known requirement, the procurement strategy needs to identify the potential suppliers and how these will be engaged and selected. The procurement method determines whether this should be a competitive or non competitive procurement, how the suppliers are to be contracted (in terms of prime or direct contracting or through a Private Finance Initiative) and whether and how a staged selection process will be managed.
<b>Procurement Strategy</b>	This comprises three stages: the procurement options; the procurement method; and the contracting strategy.
<b>Risk register</b>	A method of recording all the risks to delivering a project that have been identified along with the likelihood of each risk occurring, the estimated impact should the risk occur and the mitigation actions.
<b>Smart Acquisition</b>	<p>Smart Acquisition is a long-term Departmental initiative to improve the way it acquires defence capability. The Department aims to no longer replace military equipment, services, estates or business information systems on a like-for-like basis but instead take into account how such a capability will integrate with other capabilities to achieve optimum effect by the Armed Forces. And the Department seeks to adopt a through-life approach to acquisition, rather than concentrating resources on the initial procurement. There are seven principles in Smart Acquisition:</p> <ul style="list-style-type: none"> <li>■ a whole-life approach, typified by applying Through Life Costing techniques;</li> <li>■ Integrated Project Teams with clearly identified customers;</li> <li>■ a better, more open relationship with industry;</li> <li>■ more investment during early project phases;</li> <li>■ effective trade-offs between system performance, through-life costs and time;</li> <li>■ new procurement approaches, including incremental acquisition;</li> <li>■ a streamlined process for project approvals.</li> </ul>
<b>Target Cost Incentive Fee Price</b>	A method of pricing used when there is insufficient confidence to agree a Firm or Fixed Price. A 'target cost' is agreed (i.e. the cost at which both parties believe the work can be done). If the contractor's costs are below the target cost, they will share the underrun with Department in line with a pre-determined ratio. If the contractor's costs are greater than the target cost, the Department will share the overrun also in line with a pre-determined ratio. It is usual for the Department to include in a Target Cost Incentive Fee arrangement a cost ceiling figure (i.e. Maximum Price) above which the contractor will take full responsibility for any overrun.