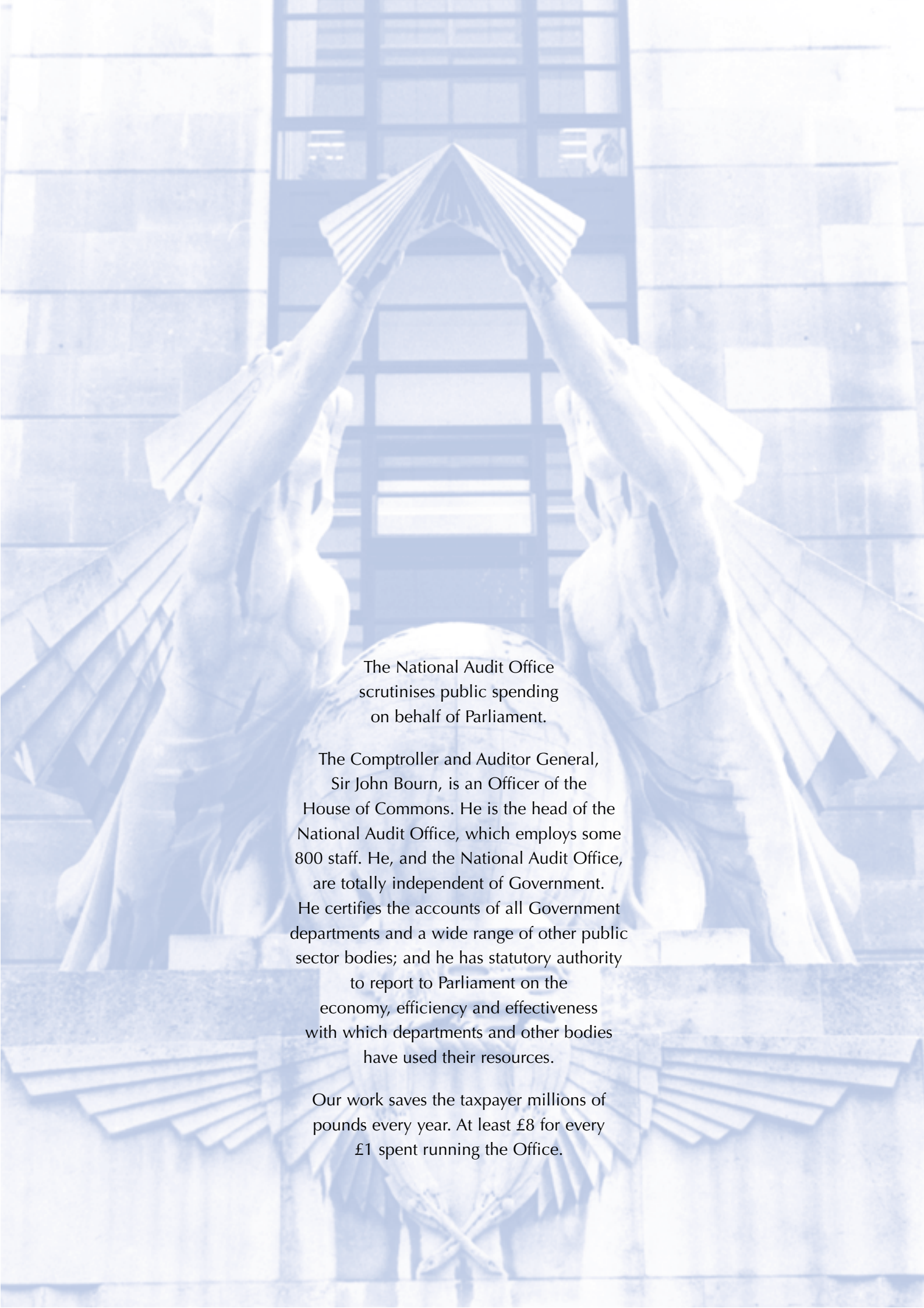


Ministry of Defence
**The Rapid Procurement of
Capability to Support Operations**

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL
HC 1161 Session 2003-2004: 19 November 2004





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Ministry of Defence
The Rapid Procurement of
Capability to Support Operations



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HC 1161 Session 2003-2004: 19 November 2004**

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This report has been prepared under Section 6 of the National Audit Act 1983 for presentation to the House of Commons in accordance with Section 9 of the Act.

John Bourn National Audit Office
Comptroller and Auditor General 15 November 2004

The National Audit Office study team consisted of:

Mike Scott, Lee-Anne Murray, John Baker,
Peter Berry, Kamal Bhatia and James Walsh under
the direction of Tim Banfield

This report can be found on the National Audit Office web site at www.nao.org.uk

For further information about the National Audit Office please contact:

National Audit Office
Press Office
157-197 Buckingham Palace Road
Victoria
London
SW1W 9SP

Tel: 020 7798 7400

Email: enquiries@nao.gsi.gov.uk

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executive summary

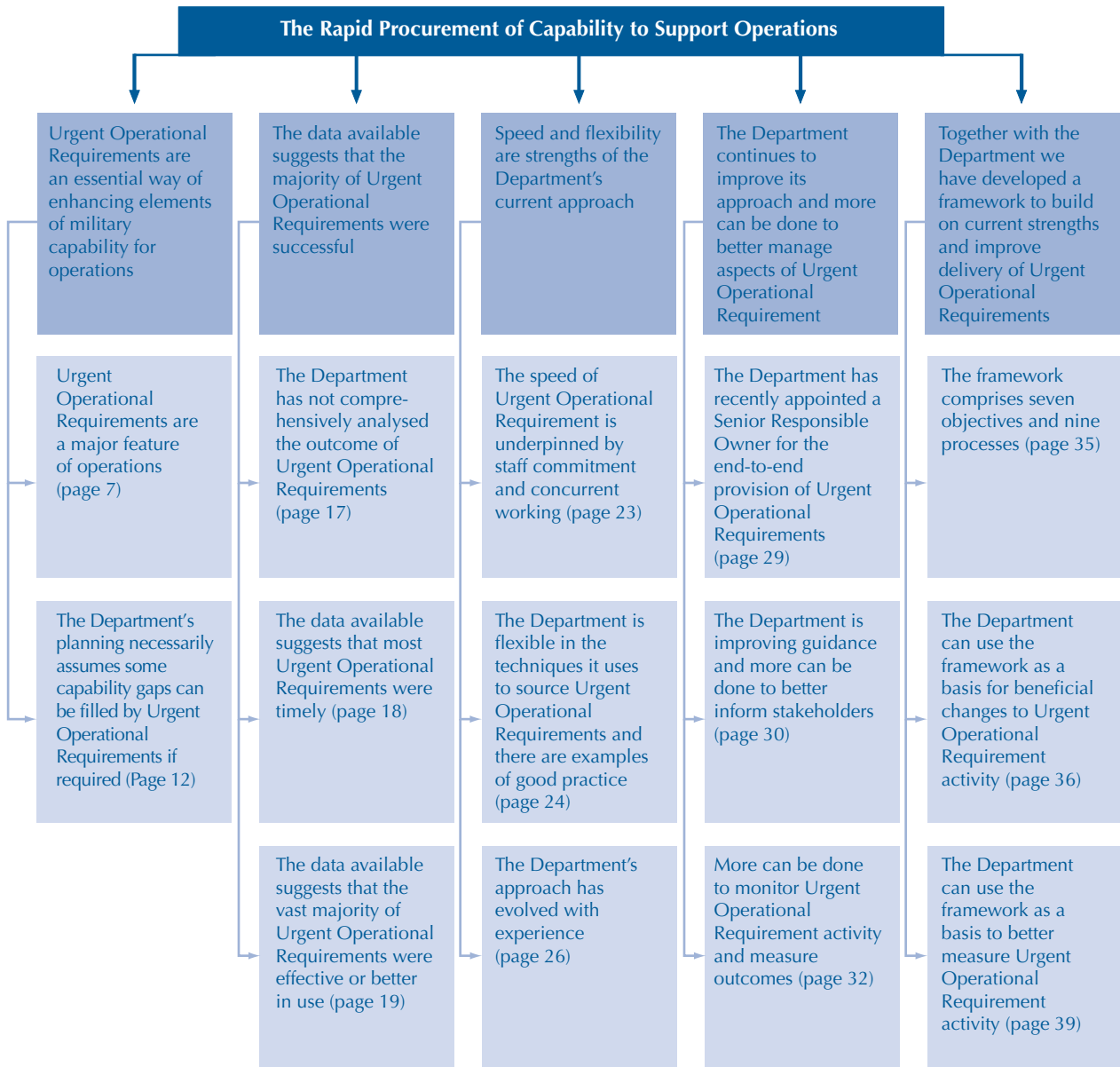
- 1 The United Kingdom's Armed Forces can be asked to deploy anywhere in the world to undertake different types of operation, sometimes at very short notice. The Ministry of Defence (the Department) uses the Urgent Operational Requirements process to meet the additional capability requirements of specific operations. The process aims to provide speedy and flexible procurement of capabilities using a streamlined version of the Department's normal procurement procedures.
- 2 Urgent Operational Requirements are a major and increasingly important feature of today's operations and other countries procure capabilities urgently similarly to the United Kingdom. The varied nature of operations and operational environments that may be encountered and the different strategies that may be employed mean that existing capabilities often need to be enhanced to adapt to circumstances or new capabilities need to be procured rapidly to fill previously unidentified gaps. Given that the Department does not have the money to buy all the equipment it may need for all types of operations, it must therefore prioritise and have to work on the basis that it will have to fill some capability gaps by Urgent Operational Requirements.



On patrol near Basra

- 3 Urgent Operational Requirement activity is intermittent by nature and involves people from across the Department operating together in temporary new roles and relationships. Activity can be high volume and fast moving with large numbers of capabilities being handled in a short period depending on the intensity and stage of operations. Individuals need to understand and act quickly, working effectively with others, which demands clear information and communication and strong leadership.
- 4 This report examines how successfully the Department procures Urgent Operational Requirements, including how well Urgent Operational Requirement activity is managed. **Figure 1** shows how the issues are analysed in the main body of the report and Appendix 1 provides details of our methodology. The following paragraphs summarise our main conclusions.

1 The Report Structure



5 The Department procured 312 Urgent Operational Requirements to support the preparation and warfighting stages of recent operations in Iraq¹ and Afghanistan at an approved cost of £658 million. Enhancements to existing capabilities provided through Urgent Operational Requirements ranged from fighting and defensive equipment, such as light machine guns and enhanced armour protection, through to supporting capabilities such as temporary accommodation, communications and medical supplies. The Department has so far decided to retain 44 per cent of Urgent Operational Requirements procured for the operation in Iraq and continues to consider whether others should be retained.

¹ For the purposes of our report 'operation in Iraq' refers to Operation TELIC, defined as the United Kingdom deployment, warfighting and initial transition to peace enforcement. It is recognised that the main Peace Support phase of Operation TELIC is still ongoing and Urgent Operational Requirements continue to be procured in support of it.

- 6 For the ongoing operation in Iraq, at its height, spending on Urgent Operational Requirements accounted for 35 per cent of expenditure on the preparation and warfighting stages, with most enhancing fighting equipment capability. Just less than a quarter of Urgent Operational Requirements filled unforeseen capability gaps. A third filled identified capability needs where the Department had decided not to fill them in advance, and the cost of these Urgent Operational Requirements equated to approximately 2 to 3 per cent of the some £6 billion spent each year by the Department on the procurement of equipment.
- 7 That the outcome of the operation in Iraq was successful is one indicator that Urgent Operational Requirements were successfully procured to support it. We found that analysis of the outcome of Urgent Operational Requirements is fragmented and the Department has not comprehensively analysed outcomes for all Urgent Operational Requirements for the operation in Iraq. The Department uses reporting by exception and has not attempted to centrally capture, consolidate and analyse data. Consolidated outcome data was available for just over half the Urgent Operational Requirements procured. Our analysis based on this data showed that two thirds of these Urgent Operational Requirements were delivered on time. Three quarters were finally deployed and used and virtually all of these were assessed as effective or better.
- 8 The Department has evolved its approach to managing Urgent Operational Requirement activity with experience and, working jointly with the Department, we have developed a framework for continuing developments to further improve management and delivery.
- 9 Some Urgent Operational Requirements for the operation in Iraq were delivered with impressive speed. This reflects massive commitment by staff in the Department and in industry and a flexible approach. The Department has also shown impressive ingenuity to deliver more customised solutions through approaches other than off-the-shelf purchases, such as leasing. Learning from experience with previous operations, the Department introduced improvements to its approach for the operation in Iraq such as better prioritisation of Urgent Operational Requirements and an operations centre to co-ordinate delivery to Kuwait.
- 10 The Department continues to improve its approach, and has recently appointed a Senior Responsible Owner to strengthen leadership of the end-to-end provision of Urgent Operational Requirements and is improving its guidance. The role and mode of operation of the Senior Responsible Owner are still being defined, but he will have responsibility for the co-ordinated and successful delivery of urgent capabilities and will operate by influence, with limited direct managerial or budgetary authority. Much will depend on the ability of the Senior Responsible Owner to wield this influence effectively. During the height of Urgent Operational Requirement activity for the operation in Iraq, the Department collated key information quickly, providing weekly updates to Ministers. However, weaknesses remain in the management information available to provide everyone involved with a complete and common picture of the progress of Urgent Operational Requirements and to measure outcomes. The Department is looking at how it can improve in this area.

- 11 For large scale operations such as those in Iraq, most Urgent Operational Requirements are funded through the Reserve managed by the Treasury. In certain circumstances such as where an existing funded programme is accelerated, the Treasury may seek reimbursement from the Defence budget of money advanced from the Reserve. On this basis, the Department have now agreed with the Treasury a £110m refund to the Reserve to cover the recent operations in Iraq.

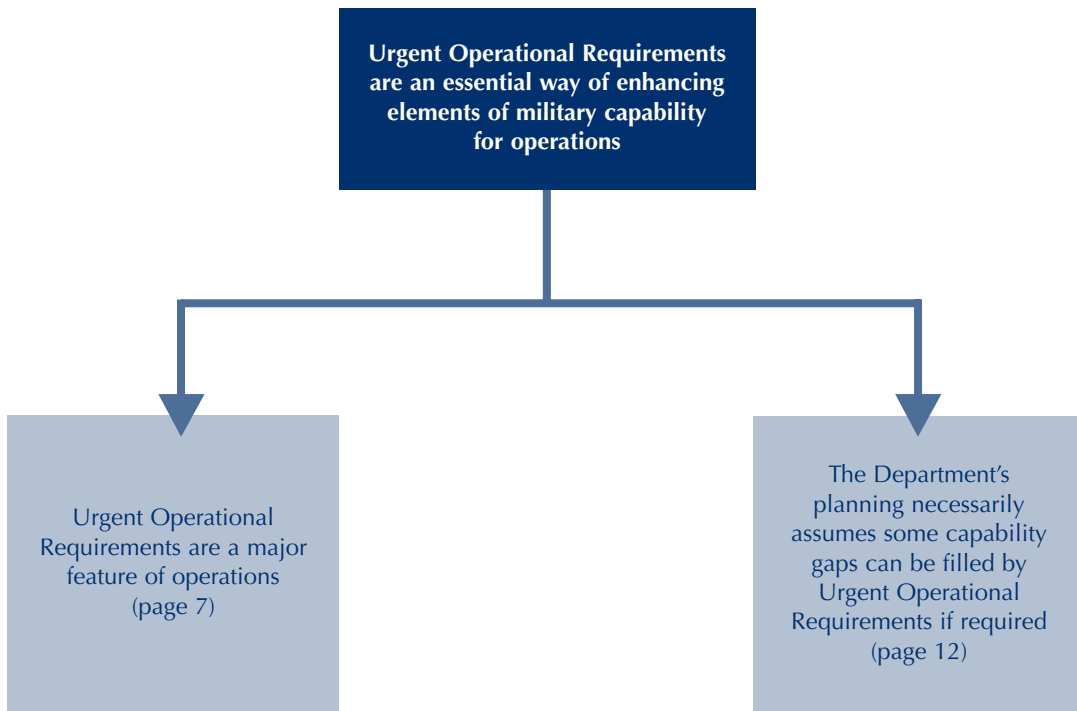
2 Recommendations²

NAO Recommendation	Implementation Benefits	Implementation Status
1. Apply lessons from the procurement of capabilities through Urgent Operational Requirements more widely, for example flexible procurement and rapid competition techniques (Para. 3.8)	<ul style="list-style-type: none"> ■ improved agility through added speed and flexibility from the normal procurement process 	The Department is considering how best to transfer lessons to wider procurement practice and the Acquisition for Network Enabled Capability project has started to roll out amended procurement processes.
2. Strengthen leadership of the end-to-end provision of Urgent Operational Requirements. (Para. 4.4)	<ul style="list-style-type: none"> ■ provides a focus for highlighting achievements and driving forward improvements 	'Quick Win' - already implemented. Senior Responsible Owner appointed - role and mode of operation being defined.
3. Better inform stakeholders about the end-to-end provision of Urgent Operational Requirements, including the processes and activities involved and the roles and responsibilities of different stakeholders. (Para. 4.8)	<ul style="list-style-type: none"> ■ all processes explicitly recognised and understood by stakeholders ■ basis for knowledge management and process improvement ■ reduced reliance on personal knowledge and experience ■ reduced disruption when personnel change 	'Quick Win' - revised end-to-end guide on the provision of Urgent Operational Requirements expected to be issued around the end of 2004. Further definition of processes to be considered and implemented as appropriate in the next 12 to 24 months.
4. More comprehensive capture of lessons learned from individual Urgent Operational Requirements through: <ul style="list-style-type: none"> ■ a focused post-operation review process to identify factors affecting successful outcomes in terms of cost, time and operational effectiveness; and ■ looking at practice in other industries and countries. (Para. 5.10)	<ul style="list-style-type: none"> ■ continuous improvement of Urgent Operational Requirement cost-effectiveness ■ continuous improvement in speed of delivery 	Options for post-operational review to be considered and implemented as appropriate in the next 6 to 12 months.
5. Introduce outcome measures and performance indicators to monitor achievements and drive improvements, for example: <ul style="list-style-type: none"> ■ outcome measures of timeliness of delivery and effectiveness in use; and ■ performance indicators of process efficiency, such as time to pass through different stages. (Paras. 5.11 to 5.16)	<ul style="list-style-type: none"> ■ improved understanding of whether Urgent Operational Requirements are performing successfully ■ basis for more clearly defined reporting of performance ■ more transparent internal and external reporting of performance ■ improved internal and external accountability ■ facilitates continuous improvement 	The Department is considering whether appropriate measures and indicators should be developed and Implemented in the next 6 to 12 months. A key consideration will be that the measures drive improvements and do not hinder the process through excessive reporting.

² In considering these recommendations, the Department's view is that a key consideration will be that implementation of them should not hinder the Urgent Operational Requirements process.

12 Together with the Department, we have developed a framework of objectives and processes which supports further improvements to the management and delivery of Urgent Operational Requirements. This is based on the practical experience of staff across the Department. Using the framework and our wider analysis presented in this report, we have identified beneficial changes. Our recommendations are summarised in **Figure 2** together with the benefits of implementing them and an indication of the Department's timescale for implementation. The recommendations focus on building on the current strengths and achievements of the Department's approach to Urgent Operational Requirement provision. The Department has already implemented some 'quick wins' and is positively and constructively looking at the benefits of full implementation of our recommendations.

NAO Recommendation	Implementation Benefits	Implementation Status
<p>6. Make information on Urgent Operational Requirements more complete, accurate, coherent and accessible by:</p> <ul style="list-style-type: none"> ■ assigning clear responsibilities for the maintenance of authoritative sources of information; ■ maintaining a flow of consistent and up-to-date information between the sources; ■ more clearly defining stakeholder information requirements; ■ defining and communicating to stakeholders how their requirements will be met; and ■ moving towards a shared data environment as technology and resource permits. <p>(Para. 5.8)</p>	<ul style="list-style-type: none"> ■ complete and accurate information on all Urgent Operational Requirements ■ clearer and quicker identification of Urgent Operational Requirement progress ■ easier and more visible prioritisation of Urgent Operational Requirements ■ better informed, timely action to resolve difficulties ■ quicker, more consistent and accurate accounting for Urgent Operational Requirements ■ reduced duplication of information ■ less time spent seeking information 	<p>Implementation in next 12 to 24 months. Joining up data sources into shared data environment dependent on technology and resources available.</p>
<p>7. Consider whether identifying potential Urgent Operational Requirements in advance for possible major operational situations would improve how rapidly and effectively they are delivered, by:</p> <ul style="list-style-type: none"> ■ considering this within the ongoing defence industrial policy and strategy work; ■ use of capability gap lists to identify Urgent Operational Requirements in advance of Operations; ■ where considered worthwhile, preparing proposals for potential Urgent Operational Requirements to clarify requirements and assess them for feasibility; and ■ further investigation of the potential for platforms to have capabilities added to them quickly and how to provide for this. <p>(Para. 5.10)</p>	<ul style="list-style-type: none"> ■ better understanding and management of risks taken against the equipment plan that may be filled through Urgent Operational Requirements ■ shortened preparation time when Urgent Operational Requirements are needed ■ avoidance of delays or difficulties due to requirements being unclear or unable to be met in the required timescales ■ reduced risk of different Services duplicating requirements 	<p>Some advanced planning already happening in pockets.</p> <p>Wider implementation to be considered and implemented as appropriate in the next 12 to 24 months.</p>



Part 1

Urgent Operational Requirements are an essential way of enhancing elements of military capability for operations

1.1 Urgent Operational Requirements are designed to ensure that equipment and materiel are available to the Armed Forces during times of tension and conflict when and where they are required. Such additional capability may take the form of providing additional equipment but may also be a result of a shift in capability amongst potential enemies, perceived threats or a requirement to keep pace with key allies in specific operational scenarios. In this part of our report we examine the role Urgent Operational Requirements play in the delivery of military capability and why they are necessary. Urgent Operational Requirements are an increasingly important feature of operations and the Department's planning necessarily assumes some capability gaps can be filled by Urgent Operational Requirements if required.

Urgent Operational Requirements are a major feature of operations

1.2 The United Kingdom exerts considerable influence in the international political arena which is underpinned by having strong, well equipped, versatile and highly trained forces. **Figure 3** shows that, since the end of the Cold War, the Armed Forces have been required, often at short notice, to conduct operations ranging from major warfighting to peacekeeping operations, either independently or with allies anywhere around the world.

3 United Kingdom Armed Forces operational deployments since 1990

Description of conflict type	Location	Time
Peace Enforcement	Bosnia Serbia/Kosovo Iraq	1992-1995 1999 2003-present
Peacekeeping	Bosnia East Timor Kosovo Sierra Leone	1996-present 1999 1999-present 2000-present
Disaster Relief	Mozambique	2000
Enforcing Sanctions	Iraq	1991-2003
Counter-insurgency	Sierra Leone	2000
Counter-terrorism	Afghanistan	2001
Weapons Collection	Macedonia	2001
Warfighting	Iraq Iraq	1991 2003

Source: National Audit Office

- 1.3 **Figure 4** summarises the Department's definition of what Urgent Operational Requirements are and how they should be used. The varied nature of operations and the different strategies that may be employed mean that existing capabilities often need to be enhanced to adapt to circumstances or new capabilities need to be procured to fill previously unidentified gaps. Urgent Operational Requirements are intended to provide these additional capabilities or to enhance existing equipment capabilities. In this way, Urgent Operational Requirements affect not only the physical capability of the Armed Forces but can also have a significant impact on confidence and morale, which underpin effective operational capability.
- 1.4 As part of our fieldwork, we visited five other countries to find out how they either provided new or enhanced existing capabilities in support of current or imminent military operations. We found that, whilst the approaches adopted varied widely dependent upon the military and political frameworks within which their armed forces operated, each of the five countries had developed processes to meet urgent military needs similar to the United Kingdom. **Figure 5** summarises the approaches adopted by each of the comparators.

1.5 In the following paragraphs we examine the role Urgent Operational Requirements have played in delivering military capability in recent operations. Given the limitations in the available data (explored more fully in **Part 2** of the report) our analysis focuses mainly on recent operations in Iraq and, to a lesser extent, Afghanistan.

For operations in Afghanistan and Iraq many key elements of capability were enhanced through Urgent Operational Requirements

1.6 In total the Department procured 312 Urgent Operational Requirements to support the preparation and warfighting stages of operations in Iraq (194 Urgent Operational Requirements) and Afghanistan (118 Urgent Operational Requirements) at an approved cost of £658 million (Iraq £510 million and Afghanistan £148 million). These Urgent Operational Requirements enhanced a significant number of elements of military capability or filled unforeseen capability requirements. An example from each operation is given in **Boxes 1 and 2**.

4 How the Department defines what Urgent Operational Requirements are and how they should be used

Urgent Operational Requirements are used for the rapid procurement of capability in support of a current or imminent military operation to provide new capabilities or to enhance equipment the Department has already invested in.

Urgent Operational Requirements can be used to:

- Procure operationally specific capabilities;
- Procure equipment to fill previously unknown capability gaps;
- Accelerate a programme already in train;
- Patch a gap until an already funded solution comes into service; or
- Fill a previously identified gap which has not been funded.

In order to qualify as an Urgent Operational Requirement, a capability must be able to be introduced into service in time to make a contribution to an operation. Normally, any capability taking more than six months to enter service would be procured through the normal procurement process.

Urgent Operational Requirements undergo a comparable amount of scrutiny to any normal programme, but the onus is on ensuring the approval is as quick as possible. Funding for Urgent Operational Requirements should be sought firstly from the Department's budget. For large scale operations, Urgent Operational Requirements that are operation-specific or fill previously unidentified capability gaps qualify for funding through the Reserve managed by the Treasury. Access to the Reserve is made available to the Department at the time of the operation to cover the cost of Urgent Operational Requirements. In instances where the Department has accelerated the procurement of equipment already provisioned for in the Defence budget, the Treasury allows the Department access to the Reserve, if required, but then recovers the money in subsequent years, taking account of any additional acceleration costs that the Department has had to incur.

Post-operation or after one year, whichever is shorter, Urgent Operational Requirements will either be disposed of, or brought into the Department's core planning process if it is decided that they are still required.

Source: National Audit Office

5 How other countries meet urgent military needs

Whilst approaches varied, all of the countries we visited have developed some way of meeting urgent operational needs.

Country	Approach
Australia	The Australian Department of Defence is progressively refining a rapid acquisition process which streamlines normal procurement processes to facilitate fast responses to capability needs. The rapid acquisition process began as a response to challenges encountered with accelerated acquisitions to support operations in East Timor and Afghanistan.
France	The French Ministry of Defence have a streamlined contracting route for urgent procurements. It is designed to be flexible enough to respond quickly but remains compliant with procurement regulations. The need for additional flexibility in defence procurement was identified after September 11, 2001.
Israel	Israel also has a streamlined procedure for rapid procurement of capabilities under which the usual law requiring procurements to be tendered is waived. The urgent need must be approved by a General and authorised by the Director of Finance and the Director of Procurement and Production within the defence department.
Sweden	The Swedish Ministry of Defence procure capability quickly using the normal procurement process, but staffed with a dedicated and experienced team who have experience of and understand rapid procurement.
United States	The United States Department of Defense have a streamlined approval process, whereby the procurement of urgently required, commercial, off-the-shelf equipment is not required to fully comply with procurement legislation, though they are still subject to Federal regulations. Procurement is managed by the single Services.

Source: National Audit Office

Box 1

Example of important capability enhancement from Afghanistan

ARTillery HUnTing Radar (ARTHUR)

For the operation in Afghanistan, and subsequently Iraq, the capability to locate artillery emplacements was necessary. The Department's existing weapon locating system, Cymbeline, was obsolete and due to be replaced by the Mobile Artillery Monitoring Battlefield Radar (MAMBA) in mid-2004. This programme could not be accelerated nor could the Counter Battery Radar (COBRA), a more up to date system which was still in manufacture. The Department temporarily leased the ARTillery HUnTing Radar (ARTHUR) from Ericsson, who were also providing the Mobile Artillery Monitoring Battlefield Radar. ARTHUR was used by 7th Armoured Brigade to locate 23 per cent (600) of their targets and post-operational reports mark it as highly effective. The Mobile Artillery Monitoring Battlefield Radar was subsequently delivered early and its in-service date was advanced in order to meet its urgent deployment to Iraq in April 2004.



Box 2

Example of important capability enhancement from Iraq

Storm Shadow

Storm Shadow is a technically advanced conventionally-armed stand-off missile that has been integrated onto Tornado GR4 and will be integrated onto Typhoon, enhancing considerably the Department's long-range precision attack capability. Work started on the Storm Shadow development programme in 1997 and the full capability was to be fielded in 2003. As part of the build-up to the operation in Iraq, the need for a stand-off capability was identified by an Urgent Operational Requirement. By this time Storm Shadow was in the final test and evaluation stages, and approval was given to deploy a number of missiles to provide an initial operating capability. This early successful deployment was possible due to the close relationship between the Integrated Project Team, contractor (MBDA (UK) Ltd) and end user. An additional £328,000 was incurred supporting the operation in Iraq. Storm Shadow is now continuing the process of being fully accepted into operational service, and this is expected to occur in late 2004.



The scale of Urgent Operational Requirement activity varies depending on the stage of operations and can be significant

- 1.7 The operational need for an Urgent Operational Requirement may occur at any time in the lifecycle of an operation. For example, the Department continues to raise Urgent Operational Requirements to support operations in Iraq despite the main warfighting phase concluding over a year ago. Mainly, the Department is procuring additional force protection measures, including secure communications, defensive aids suites and counter-measures for electronic devices.
- 1.8 Spending on Urgent Operational Requirements varies depending on the nature of operations and is highest during the preparation and warfighting stages. Indicatively, as at 31 March 2003, 35 percent of expenditure on the main preparation and warfighting stages of the operation in Iraq was accounted for by Urgent Operational Requirements. A higher proportion

(46 percent) was spent during the same phase of the operation in Afghanistan as it was a lower cost Special Forces-based expeditionary operation, not requiring a major commitment to move people and equipment to theatre. Our analysis in the remainder of this part of the report is based on Urgent Operational Requirements activity during the preparation and warfighting stages of an operation.

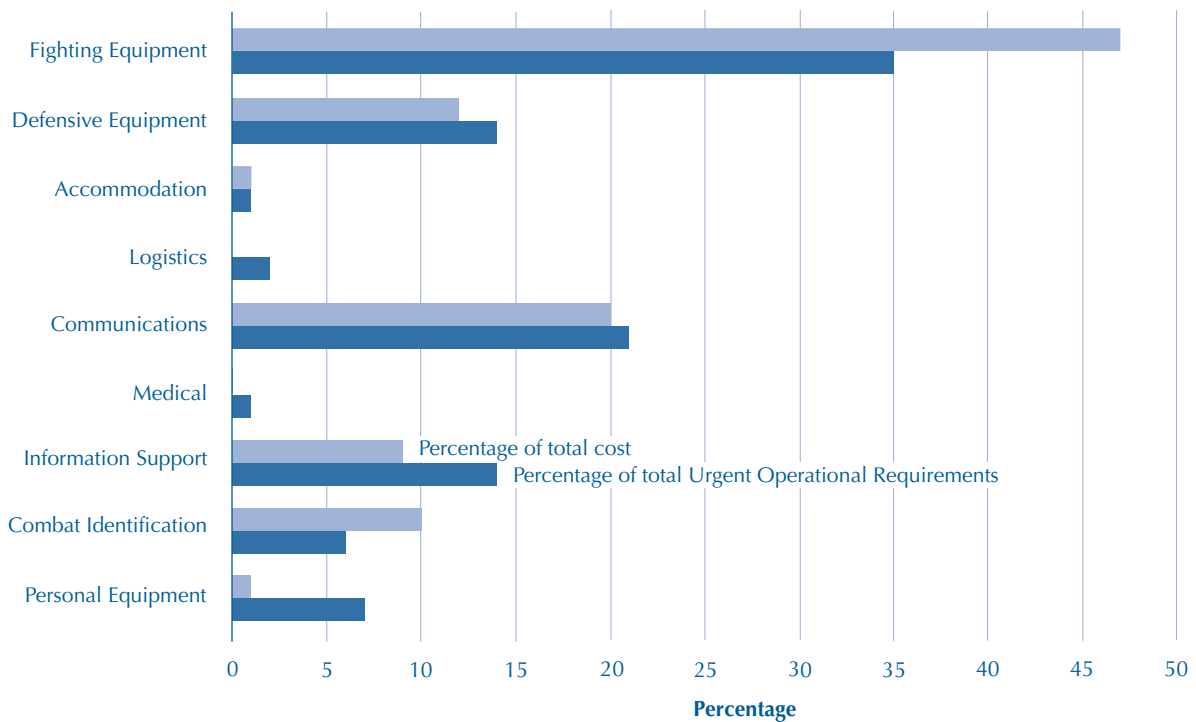
The capabilities procured using Urgent Operational Requirements vary depending on the nature of operations

- 1.9 **Figures 6 and 7** analyse the 312 Urgent Operational Requirements which were procured to support the preparation and warfighting stages of operations in Afghanistan and Iraq into the types of capability procured. In terms of the number of equipments procured, the dominant capabilities enhanced by Urgent Operational Requirements for both operations were fighting equipments (such as Night Vision

6 Urgent Operational Requirements to support the preparation and warfighting stages of operations in Afghanistan analysed by capability type

Fighting and communications equipments were the most commonly procured Urgent Operational Requirements.

Type of Urgent Operational Requirement



NOTE

In total 118 Urgent Operational Requirements were procured at a cost of £148 million.

Source: National Audit Office

Equipment and the Challenger 2 Enhanced Armour Protection) and communications equipment (including satellite systems allowing long-range communication and secure voice radios). For both operations most funding was committed to enhancing fighting equipment capability; but beyond this there is no clear pattern, with a more even spread of funding across a number of types of capability for Iraq than in Afghanistan. Again, the difference reflects the smaller, expeditionary nature of the operation in Afghanistan.

Some Urgent Operational Requirements have continuing utility after operations have finished

1.10 Once an Urgent Operational Requirement no longer has immediate utility on an operation, a decision is taken on whether it should be brought into the core procurement and maintenance programme. Regardless of whether they were previously in the Department's main equipment programme or not, all Urgent Operational Requirements are reviewed on the basis of their current

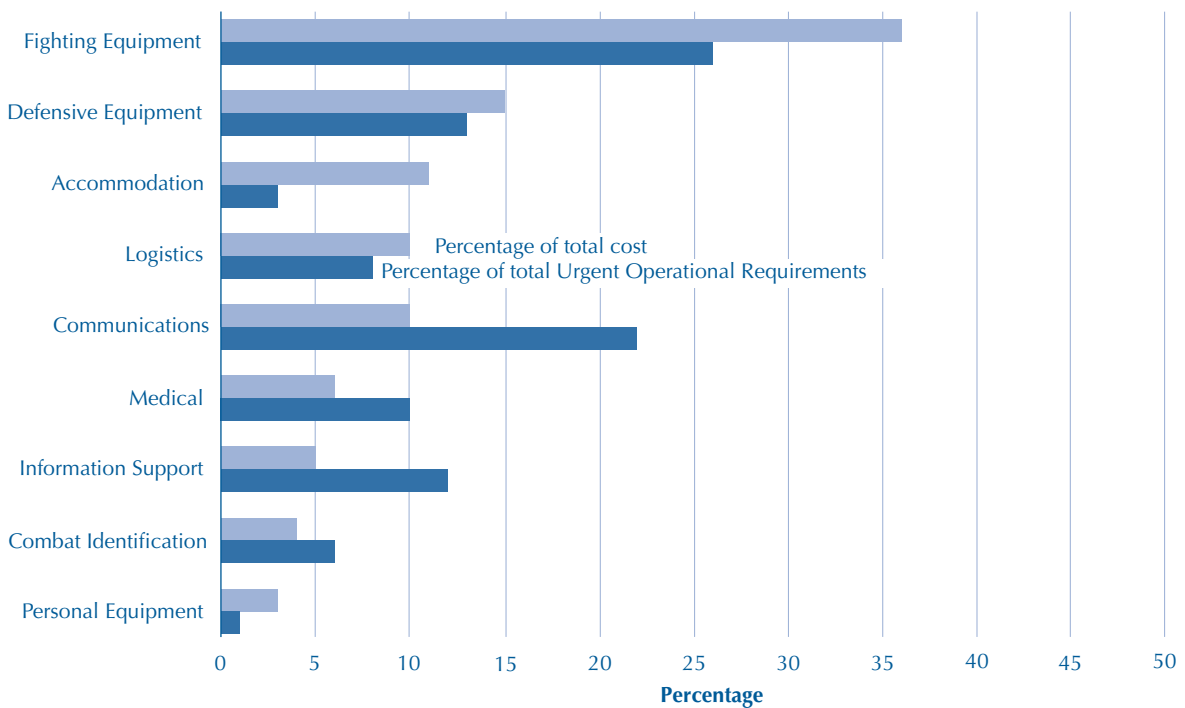
utility before disposal or incorporation into the programme. Urgent Operational Requirements are normally only accompanied with a maximum of twelve months support funding and, after this time, the capability must either be disposed of or brought into service as a fully supportable requirement.

1.11 The Department does not routinely retain a record of Urgent Operational Requirements accepted into the main equipment programme. However, for the operation in Iraq, the Department has so far decided to retain 44 per cent of the Urgent Operational Requirements procured and is currently considering retaining another 6 per cent. Those retained include weapon stocks, communications equipment, Temporary Deployable Accommodation and night vision equipment. Of the remaining 50 per cent, many are unlikely to be retained as they are consumables, do not have continuing utility or are on temporary lease. Some are still being used for the ongoing operation and the decision to retain or dispose of them has yet to be taken.

7 Urgent Operational Requirements to support the preparation and warfighting stages of operations in Iraq analysed by capability type

Fighting and communications equipments were the most commonly procured Urgent Operational Requirements.

Type of Urgent Operational Requirement



NOTE

In total 194 Urgent Operational Requirements were procured at an approved cost of £510 million.

Source: National Audit Office

The Department's planning necessarily assumes some capability gaps can be filled by Urgent Operational Requirements if required

1.12 The Department plans its equipment procurement programme using scenario modelling, analysis of research programmes and by drawing on operational experience. In an unpredictable security environment with constrained resources, planning is complex and involves a high degree of operational judgement.

Some Urgent Operational Requirements fill capability gaps which are not prioritised to be funded by the Department

1.13 It is inevitable that the Department has to make difficult decisions about which capability requirements should be included in its procurement plans. A decision not to procure a capability and therefore leave it out of the equipment plan will reflect a number of factors such as: whether the requirement can be met quickly; if the scenario is unlikely; or adapting how front-line forces operate may compensate for any gap. The move to resource-based accounting and budgeting, whereby storing stock incurs a charge, has also encouraged the Department to make better informed decisions on which equipment it continues to store, and which equipment can be procured rapidly when and if needed. Equipments procured through the equipment plan may not be configured for every mission scenario on introduction into service as Urgent Operational Requirements provide a mechanism for enhancing or introducing capabilities later if required.

1.14 **Figure 8** details the underlying reasons for the Urgent Operational Requirements procured to support the preparation and warfighting stages of operations in Iraq. It shows that, by value, 30 per cent of Urgent Operational Requirements reflected identified capability needs where the Department had decided not to procure them, because they were not considered of sufficiently high priority. This represents approximately 2 to 3 per cent of the some £6 billion spent each year by the Department on the procurement of equipment. Whilst

the data is less robust, the pattern of Urgent Operational Requirements procurement for operations in Afghanistan was similar to Iraq. **Figure 9** breaks down those Urgent Operational Requirements from Iraq which filled previously identified capability gaps according to the type of capability provided. It shows that the vast majority (68 per cent by number and 79 per cent by value) were to meet capability needs for fighting and defensive equipments and communications equipment. **Box 3** provides an example of a typical Urgent Operational Requirement which reflects the difficult judgements which the Department has to make in prioritising the equipment plan.

Box 3

Tactical data links

Tactical Data Links connect military air, ground and sea platforms by sharing data through formatted display messages. Currently, the Department has Link 11 fitted as standard on many platforms. The United States is introducing the next variant, Joint Tactical Information Distribution System/Link 16, which provides more sophisticated data pictures, faster and more securely to its platforms.

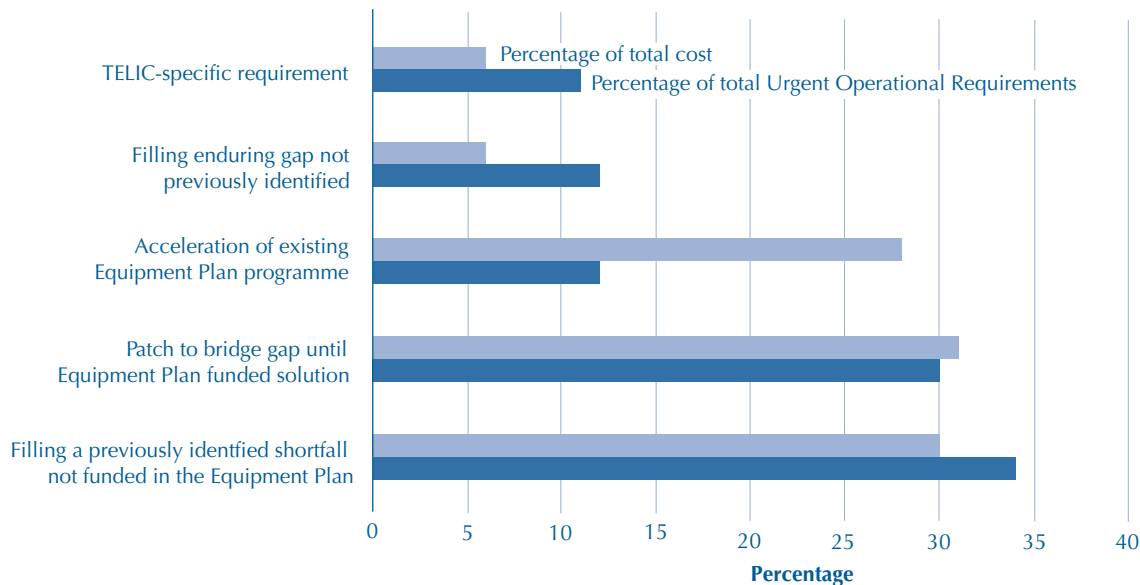
The Department approved and started full development, production, installation and support of the Joint Tactical Information Distribution System/Link 16 system for its tanker aircraft fleet in 1996. In 1997, savings measures were taken, firstly to slip the programme and then to cancel it, accepting the resultant capability gap. The Department has procured the Joint Tactical Information Distribution System/Link 16 for some tanker aircraft through Urgent Operational Requirements for operations in Kosovo in 1999, Afghanistan in 2001 and Iraq in 2003. In 2002, after the Urgent Operational Requirement in support of Afghanistan, wider fitting of Link 16 across the tanker fleet was considered. This was rejected as not a cost-effective measure ahead of the aircraft being replaced with the Future Strategic Tanker Aircraft which will be fielded with an integrated Joint Tactical Information Distribution System/Link 16.

The Link 16 system provides invaluable situational awareness and threat warning for aircrew, who consider that its retention is essential. The Department aspires to include the currently fitted systems in the core equipment programme from 2005 onwards, thus ensuring their retention until the tanker aircraft leave service.

8 Reasons why Urgent Operational Requirements were needed to support the preparation and warfighting stages of operations in Iraq

Traditional Urgent Operational Requirements which are usually funded by the Treasury were the least common type during Operation Telic.

Category of Urgent Operational Requirement



NOTE

Categorisation is subjective and some Urgent Operational Requirements will fall into more than one category.

Source: National Audit Office

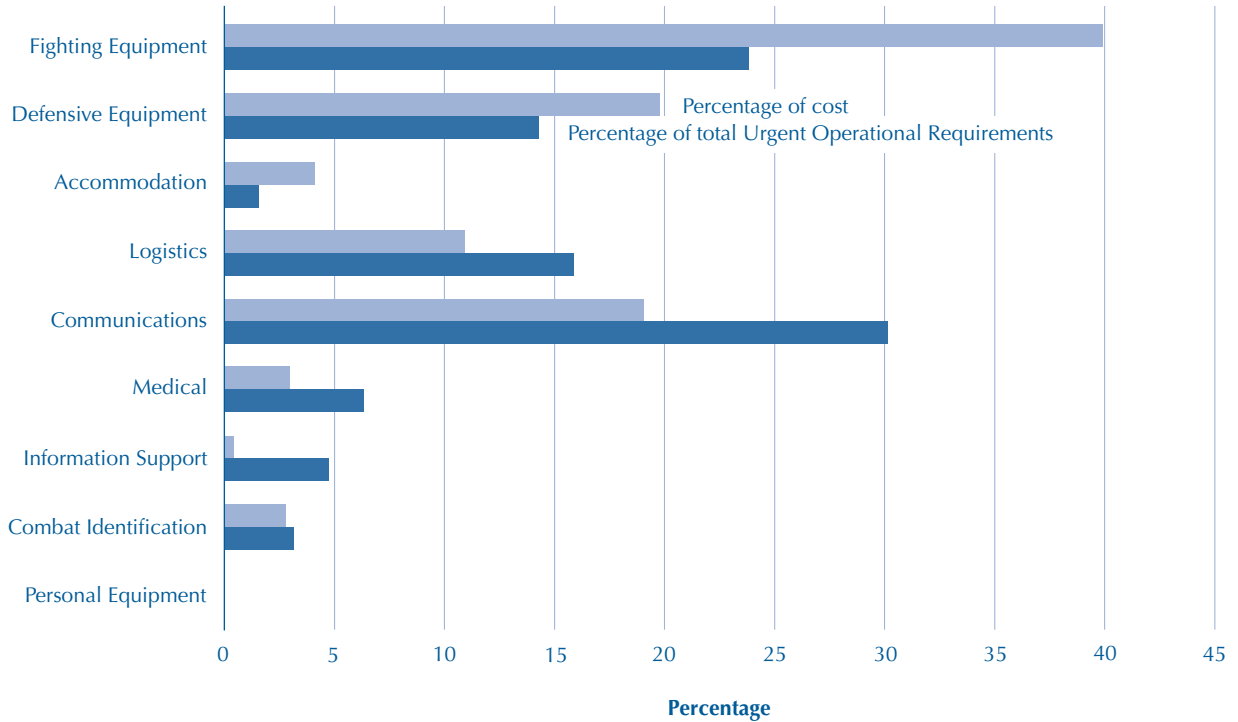
British troops boarding US helicopters



9 Urgent Operational Requirements to support the preparation and warfighting stages of operations in Iraq which reflected identified but unfunded capability gaps

By number and value, fighting and defensive equipment and communications are the most common type of Urgent Operational Requirement.

Type of Urgent Operational Requirement



Source: National Audit Office

When operations arise, some planned capabilities are accelerated or patched by Urgent Operational Requirements

1.15 Thirty per cent of Urgent Operational Requirements procured for the operation in Iraq were to provide short-term solutions where there was already a funded programme to meet the capability in the longer-term. For example, the ARTillery HUNting Radar (ARTHUR) was leased pending introduction into service of the Mobile Artillery Monitoring Battlefield Radar (see **Box 1** on page 9). Another 12 per cent of the Urgent Operational Requirements to support the preparation and warfighting stages of the operation in Iraq involved accelerating existing programmes, as was the case for the Storm Shadow cruise missile described in **Box 2** on page 9.

Some events cannot be foreseen, especially in the current security environment

1.16 Just less than a quarter (24 per cent) of Urgent Operational Requirements to support the preparation and warfighting stages of operations in Iraq were procured to fill unforeseen capability gaps. These gaps arise either because of the specific nature of the operation, such as the need to clear shallow waterways quickly in Iraq (see **Box 4**), or because technology or the way the Armed Forces operate evolves. For example in Iraq, Identification Friend or Foe systems had to be fitted to Royal Fleet Auxiliary ships so that they could operate closer to the battlespace.

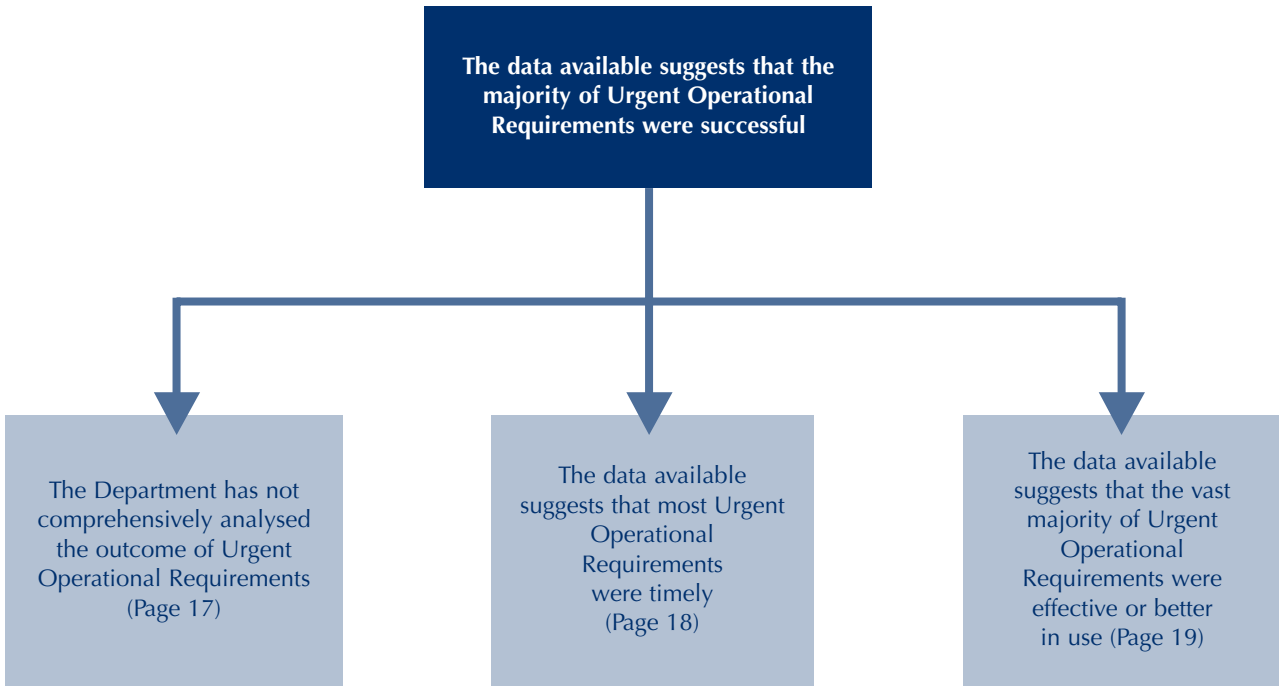
1.17 Planning may be further complicated by significant changes in operational strategy. Initial planning for operations in Iraq centred on United Kingdom forces moving into Iraq from bases in Turkey. As preparations evolved, it became clear that any invasion would come from the south of Iraq where conditions were very different, and some of the capabilities being procured as Urgent Operational Requirements changed (see Box 5 in Part 2 on page 19 - The procurement of additional All-Terrain Mobility Platforms).

Box 4

The Shallow Water Influence Mine-sweeping System



For the operation in Iraq a fast and safe method of clearing mines from the shallow waterways leading to Umm Qasar was required. The Mine Counter Measures Integrated Project Team identified a suitable sweep system. This comprised of, Mini Dyads (tubes that create a magnetic field) and Pipe Noise Makers (rattle bars that generate an acoustic influence to trigger sea mines). These were available to lease from the Australian Navy and were both small and self-powered. The Dyads and Pipe Noise Makers would need to be towed through the waterways so Combat Support Boats, which were small and shallow enough to be able to manoeuvre easily through the waterways and also less likely to set off any mines, were borrowed from the Army. QinetiQ, the Department's main research supplier, had been undertaking private venture research on the use of remote controls and this technology was fitted to the boats to create remote-controlled shallow water influence mine sweepers, reducing the risk of loss of life. The Department proved the capability in the United Kingdom followed by a rapid integration in Bahrain. The system was accepted into service by the Royal Navy before being operated successfully in Iraq.



Part 2

The data available suggests that the majority of Urgent Operational Requirements were successful

- 2.1 The success of Urgent Operational Requirements can be assessed at different levels. At the highest level, that the outcome of the operation in Iraq was successful can be taken as one indication that Urgent Operational Requirements were successfully acquired to support the operation. However, this is only an indication, as Urgent Operational Requirements were obviously not the only factor contributing to the success of the operation.
- 2.2 Analysing the individual outcomes of Urgent Operational Requirements gives a clearer picture of how successfully they were acquired. In this part of the Report we examine whether the Urgent Operational Requirements acquired to support the operation in Iraq were successful, through analysis of the data collected by the Department on the outcome of Urgent Operational Requirements. Throughout this part of the Report we have defined "outcome" as timeliness of delivery to the theatre of operation and effectiveness of use of the Urgent Operational Requirement. A successful outcome is defined as an Urgent Operational Requirement delivered to Iraq, fitted and ready to be deployed to users in time for the start of warfighting, where required; and judged as effective or better in use by the Forces. Problems with asset tracking and delivery to end users have been well documented² and we have not examined them again in this report.
- 2.3 We found that analysis of the outcome of Urgent Operational Requirements is fragmented and the Department has not comprehensively analysed outcomes for all Urgent Operational Requirements for the operation in Iraq. The Department uses reporting by exception and has not attempted to centrally capture, consolidate and analyse data. Consolidated outcome data was available for just over half the Urgent Operational Requirements procured. Our analysis based on this data showed that two thirds of these Urgent Operational Requirements were delivered on time. Three quarters were finally deployed and used and virtually all of these were assessed as effective or better.

The Department has not comprehensively analysed the outcome of Urgent Operational Requirements

- 2.4 When Urgent Operational Requirements were in train, during the build up and execution of operations in Iraq, Departmental staff were continuously engaged in acquisition and progress was actively monitored. The Department prepared weekly reports on the progress of key requirements. These were circulated widely, including to Ministers, and highlighted priority issues being or requiring to be addressed.
- 2.5 The reports included some outcome details such as dates when capability was expected to be in the theatre of operations and an indication of when capability had been delivered to the user in theatre. Successes and problems with delivery and use of Urgent Operational Requirements were identified as part of daily reports from front line commanders to the Permanent Joint Headquarters, responsible for directing, deploying, sustaining and recovering deployed forces.
- 2.6 These reports focused on key requirements and cases where outcomes were particularly successful or problematic. Consolidated data on timely delivery and effectiveness for all Urgent Operational Requirements is not available and the Department has not comprehensively analysed the outcome of Urgent Operational Requirements for operations in Iraq. In response to an enquiry by the House of Commons Defence Committee, the Department estimated that three quarters of the total number of Urgent Operational Requirements required to be were delivered to Kuwait, fitted and useable in time for the start of warfighting.³

² Report by the Controller and Auditor General on Operation TELIC - United Kingdom Military Operations in Iraq, HC 60 Session 2003-2004, 11 December 2003, paras 2.6 to 2,9 and Appendix C.

³ House of Commons Defence Select Committee Third Report, Lessons from Iraq, Written Evidence Volume 3 (HC57-111). Paragraph 4 in response to Question 1020.

The data available suggests that most Urgent Operational Requirements were timely

2.7 In May 2003, the Department collected data on the outcome of just over half of the Urgent Operational Requirements from the operation in Iraq. This was part of a wider exercise to gauge the status of delivery and effectiveness in use of equipment deployed on the operation. We have used this data, as the best available, supplemented by case studies and post-operational lessons learned documents gathered as part of the Department's lessons learned process, to analyse the outcome of Urgent Operational Requirements for the operation in Iraq. Data on timely delivery was available for 102 of the 194 Urgent Operational Requirements procured to support the operation.

Two thirds of Urgent Operational Requirements were fully delivered to Iraq, fitted and useable in time for the start of warfighting

2.8 Not all Urgent Operational Requirements were required to be in Iraq for the start of warfighting. For example, Temporary Deployable Accommodation was not required until the end of warfighting. Twenty five were not required to be delivered, fitted and useable in Iraq by the start of warfighting. The other 77 were and, of these, two thirds were fully delivered, fitted and useable in time (see Figure 10). Another quarter were fitted, delivered and useable in at least part quantities. These part quantities ranged from 10 per cent for nuclear biological

chemical vehicle decontamination systems to 95 per cent for thermal panels, paint and infra-red beacons to aid combat identification. For those Urgent Operational Requirements where only part quantities were delivered, fitted and useable, the available data does not support analysis of whether full quantities were required to be available by the start of warfighting. All of the remaining nuclear biological chemical vehicle decontamination systems were delivered in April as planned.

2.9 Only two (3 per cent) of those Urgent Operational Requirements required to be in theatre by the start of warfighting were not delivered at all in time. One, specialised secure radio equipment, was contracted to be supplied by the end of March 2003 and was delivered to theatre on 3 April 2003. In relation to the other, Weapons Capability for Shipborne Boats, the complexity of fitting and subsequent trials in the United Kingdom delayed delivery to Iraq. The equipment was subsequently delivered in April 2003.

Delivery timescales can be affected by changing operational priorities and sometimes there were also other difficulties

2.10 Deliveries to theatre and the fitting of Urgent Operational Requirements to platforms may be consciously rescheduled according to changing operational priorities. In some cases, Urgent Operational Requirements were delivered in the United Kingdom ready for transport, but their delivery to theatre was delayed as other equipment was given priority, as

10 Number and proportion of Urgent Operational Requirements delivered to Kuwait, fitted and useable before warfighting began

Two thirds of Urgent Operational Requirements were successful in being fully delivered, fitted and useable in time for the start of warfighting.

Required to be delivered, fitted and useable in time for the start of warfighting	Outcome	Number		%
Yes	100% delivered fitted and useable	53		68
	Part quantities delivered fitted and useable	19		25
	None delivered, fitted and useable	2		3
	Not known whether delivered, fitted and useable	3		4
	Sub-Total		77	100
No		25		
TOTAL		102		

Source: Ministry of Defence

was the case for the All-Terrain Mobility Platform (see Box 5). Whilst these changes in operational priorities cannot be mitigated for, they can render Urgent Operational Requirements redundant.

2.11 In some cases there were other difficulties. Only two out of four contracted One Shot Mine Disposal Systems (SEAFOX) were fitted for the operation in Iraq. The remaining two were going to be fitted in theatre, but insurance could not be arranged for the contractors as the operation had already started. This did not affect the operation as, in the end, the unfitted systems were not required. Also, in the case of the Urgent Operational Requirement for Joint Tactical Information Distribution System/Link 16, there were difficulties in scheduling time to fit the requirement to some air platforms because of the fitting of other modifications. This meant that for some platforms data links were not fitted in the planned timescales.

The data available suggests that the vast majority of Urgent Operational Requirements were effective or better in use

2.12 The Department's May 2003 review of Urgent Operational Requirement outcomes included an assessment from users in the theatre of operations of the effectiveness of the capability provided. This included whether the capability was deployed and used. We analysed this data to assess the success of Urgent Operational Requirements used in Iraq in terms of effectiveness in use. Effectiveness data was available for 98⁴ of the 194 Urgent Operational Requirements procured.

Eighteen per cent of Urgent Operational Requirements were either not deployed or deployed and not used

2.13 Not all Urgent Operational Requirements are deployed or used. This will depend on whether they are available for use and on changing operational circumstances. Eighty of the 98 Urgent Operational Requirements were deployed and used. Of the remainder, six were not deployed such as additional weapons stocks, and another 12 were deployed but not used such as the All-Terrain Mobility Platform (see Box 5). The available data does not support analysis of the reasons why Urgent Operational Requirements were not deployed or deployed but not used.

Box 5

All-Terrain Mobility Platforms

All-Terrain Mobility Platforms are six-wheel vehicles, ideal for tackling sand dunes. The Department has 65 Mark 3 versions procured using the normal procurement process at a cost of around £57,000 per vehicle. More had originally been planned but budgetary constraints led to a reduction in numbers. Fifty five of the 65 Mark 3s were available and deployed with 16 Air Assault Brigade to Iraq.



When the decision was taken to approach Iraq from the south, through desert terrain, an Urgent Operational Requirement was raised and approved to procure more All-Terrain Mobility Platforms. The Department was not able to procure additional Mark 3s in the required timescale. It therefore decided to buy back 30 Mark 2 versions that had previously been disposed of for around £3,000 a vehicle because they were at the end of their useable lives and no longer complied with health and safety standards. The buyer had refurbished the vehicles for resale and the Department was able to buy them back at a cost of around £17,000 per vehicle. The vehicles were then further modified to health and safety standards by the Army Base Repair and Overhaul Organisation (ABRO) at an additional cost of some £18,000 per vehicle.

The refurbished and modified Mark 2s were available to be delivered to Iraq in March 2003. At that time they were prioritised to be sent by ship and they arrived in April. By then, the operation had moved ahead more rapidly than expected and 16 Air Assault Brigade had completed their deployment and returned to the United Kingdom. The Mark 2s were subsequently returned to the United Kingdom unused. They are being sold because the costs of maintaining them to a deployable standard are considered prohibitive. The first batch of 12 to be sold raised an average of £6,500 per vehicle.

Of those deployed and used, 96 per cent were judged by users as effective or better

2.14 Of the 80 Urgent Operational Requirements deployed and used, 96 per cent (77) were judged by users as effective or better in the field (see Figure 11). Examples of equipment judged as highly effective include the Minimi light machine gun, the ARTillery HUNting Radar (see Box 1 on page 9) and the Storm Shadow cruise missile (see Box 2 on page 9). The remaining 4 per cent (3) contributed to the operation but were judged as having limited effectiveness.

⁴ The population of Urgent Operational Requirements for which effectiveness data was available is not exactly the same as that for which timely delivery data was available because effectiveness data was not available for some Urgent Operational Requirements delivered, fitted and useable in time for the start of warfighting and was available for some Urgent Operational Requirements delivered and used after the start of warfighting.

11 Effectiveness of Urgent Operational Requirements in use

Ninety-six per cent of Urgent Operational Requirements deployed and used were judged by users as effective or highly effective in the field.

Urgent Operational Requirements deployed and used	Outcome	Number		%
Yes	Highly effective	34		42
	Effective	43		54
	Less than effective	3		4
No	Sub-Total		80	100
	Deployed but not used	12		
	Not deployed	6		
	Sub-Total		18	
TOTAL			98	

Source: Ministry of Defence

In some cases there were difficulties making the capability available

2.15 There were a few cases where Urgent Operational Requirements did not arrive with all of the components required to use them. For example, the Department's lessons learned documents indicate that a number of helmet-mounted night vision devices arrived with some units without brackets to attach them to helmets. In some cases, the Imager Intensifier for the Long Range Rifle also arrived without brackets to attach it to the rifle and batteries to produce the power to form the image. When all of the required components arrived, both pieces of equipment were judged to be effective.

In some cases the capability available was limited by training

2.16 Sometimes more than basic training is necessary in order to understand the full operational capability that an Urgent Operational Requirement can provide. For example where the capability provided involves computer-related technology it can be relatively easy to use the equipment, but far harder to fix it when it is going wrong. In some cases in Iraq, not all of the training required to fully exploit Urgent Operational Requirements could be provided. For example, Departmental lessons learned documents indicate that commanders in the theatre of operation were not aware of the full capabilities and complexity of the One Shot Mine Disposal System (SEAFOX) as only short operator training was possible. However, the training was sufficient to enable the system to be used effectively.

2.17 The Department conducted a 'Lessons Learned' exercise after the main warfighting operation in Iraq had finished, which considered all elements of the operation. Building in adequate time for training on new or enhanced equipment provided through Urgent Operational Requirements was recognised as being very important. Training is an ongoing requirement for operations such as Iraq, as new troops take over from others.

Speed and flexibility are strengths of the Department's current approach

The speed of Urgent Operational Requirements is underpinned by staff commitment and concurrent working (page 23)

The Department is flexible in the techniques it uses to source Urgent Operational Requirements and there are examples of good practice (page 24)

The Department's approach has evolved with experience (page 26)



RAF Sentry Aircraft

Part 3

Speed and flexibility are strengths of the Department's current approach

3.1 The Department procures Urgent Operational Requirements using a streamlined version of its regular procurement procedures. The main differences are a streamlined staffing procedure and a shorter timescale to a clear deadline by which a capability has to be in-service. In this part of our report we examine how the Department's approach has been applied to support recent operations. The impressive speed of the process reflects the commitment of staff and application of concurrent working practices. The Department has been flexible in the techniques it uses to procure Urgent Operational Requirements and its approach has evolved with experience. In **Part 4** of the report we consider aspects of the Urgent Operational Requirements process which could be further improved.

The speed of Urgent Operational Requirements is underpinned by staff commitment and concurrent working

3.2 Urgent Operational Requirements arise in response to changing circumstances and often at short notice. In all cases, key attributes required of the response are that it must be sufficiently timely and flexible to meet emerging needs. In the following paragraphs we examine how well the Department's approach to procuring Urgent Operational Requirements reflects these attributes.

The Department can react very quickly

3.3 **Figure 12** demonstrates the planning timeline for activities to support the preparation and warfighting stages of the operation in Iraq. Once specific operational planning commenced in late September, the Department undertook a huge amount of activity to process 194 Urgent Operational Requirements in the six months to March 2003. Much of this activity was undertaken at great speed. For example, the requirement for secure communications for the Tornado F3 aircraft was approved on 9 December 2002 and full capability was delivered in theatre on 24 January 2003,

six and a half weeks later. The speed with which Urgent Operational Requirements progress varies and we explore this in **Part 5** of the report (see paras. 5.13 to 5.16).

12 Planning timeline for operation in Iraq

Most activity took place from September 2002.

Date	Event
May 2002	The Department starts to discuss possible Urgent Operational Requirements.
August 2002	Front Line Commands start preparation.
11 September 2002	Defence Logistics Organisation establishes Contingency Planning Group.
24 September 2002	Specific operation planning commences after Prime Minister's speech.
30 September 2002	Wider areas of Department told to start preparations.
2 December 2002	Industry are engaged.
9 December 2002	Treasury approves £150m to allow contingency plans to be developed.
23 December 2002	Treasury approves further £200m to allow planning to continue.
January 2003	Operation redrawn.
17 March 2003	Treasury approves further £60m to allow Department to buy 'in-theatre' Urgent Operational Requirements.
19 March 2003	Military action begins.
1 May 2003	Major combat phase of operation over.

Source: National Audit Office

Urgent Operational Requirements are driven by the dynamic interaction of individuals helping multiple activities to be progressed concurrently

3.4 **Appendix 2** describes the process Urgent Operational Requirements go through from identification to use, and post-operation disposal or retention. The Department has defined the process in fairly broad terms and along similar lines to its regular procurement cycle: an Urgent Statement of User Requirement is developed; a Business Case (outlining expected cost, in-service date and user requirements) is approved, procurement action is undertaken by Integrated Project Teams; and the equipment is delivered to the warfighter by the Defence Logistics Organisation. Whilst the process appears sequential, to achieve the tight timescales often required, most activities run concurrently. For example, on the Desertised Mineplough Upgrade requirement both the Urgent Statement of User Requirement and the Business Case were approved on the same day.

3.5 By its very nature, Urgent Operational Requirements activity is intermittent and therefore the Department does not maintain a permanent staff committed to the process. Rather, the Urgent Operational Requirements process involves people from across the Department taking on temporary new roles and interacting with industry and other government departments (mainly the Treasury), in a "virtual" organisation, to deliver the required capabilities. It is the informal interactions and discussions between the stakeholders which facilitates the rapid progress of Urgent Operational Requirements and the degree of concurrency in the process. Since planning for the operation in Iraq began, virtually all of the people who worked on Urgent Operational Requirements have now changed jobs.

The people involved in the Urgent Operational Requirements process are highly committed to making it deliver

3.6 The single most impressive aspect of our study has been the massive commitment by staff in the Department and in industry who, in times of need, assume the task of delivering Urgent Operational Requirements to the warfighter in addition to their normal ongoing duties. To support the preparation and warfighting stages of operations in Iraq many staff worked through the holiday period over Christmas 2002 and showed great ownership and responsibility for the delivery of their Urgent Operational Requirements. One example of this commitment by staff in the Department and industry is given in **Box 6**.

Box 6

Commitment and close working on the Joint Tactical Information Distribution System

In **Box 3** on page 12, we discussed the Department's Urgent Operational Requirement for the Joint Tactical Information Distribution System (JTIDS)/Link 16 to be fitted to tanker aircraft. Marshall Aerospace was the integrating designer for the systems. In the absence of detailed installation specifications, Marshall were able to use their existing relationship with the Air Refuelling and Communications Integrated Project Team to identify end user requirements and to devise potential solutions for fitting Link 16 which would not adversely affect future programmes. While the design options were considered by the Department, Marshall undertook work on the common aspects of the designs at risk. The design work required the creation of some 35 new drawings and the manufacture of over 200 parts for each aircraft kit. A close working relationship with the Department and concurrent engineering by Marshall meant that the trial installation kit was ready in just over six weeks from the selection of the preferred design.

The Department is flexible in the techniques it uses to source Urgent Operational Requirements and there are examples of good practice

3.7 Many Urgent Operational Requirements can be met by purchasing commercial-off-the-shelf solutions such as civilian Global Positioning Systems. However, in other cases, such as the Shallow Water Influence Mine-Sweeping System (see **Box 4** on page 15), the Department has shown impressive ingenuity to deliver more customised solutions to the warfighter. The range of approaches adopted is summarised in **Figure 13**.

3.8 It is very difficult to assess accurately in advance whether rapid procurement is more cost-effective than procuring routinely and incurring handling, storage, maintenance and possibly obsolescence costs. Given the limited data, it has not been possible to assess, with the benefit of hindsight, whether the Department got this decision right for all Urgent Operational Requirements. Any assessment is dependent on judgements such as storage times, the life of items and anticipated operations. However, despite the short timescales available, the Department held some form of competition for 65 per cent of Urgent Operational Requirements for the operation in Iraq. Although not previously considered sufficiently necessary to have been prioritised in the equipment programme, many of the Urgent Operational Requirements had recently been placed in the Assessment Phase of the normal procurement process and so competitions were either ongoing or potential contractors had already been identified. Competitions took different forms with all stakeholders working together to find the right solution. For example, in some cases, contractors were asked to prepare samples of equipment for rapid test and evaluation.

13 Techniques used by the Department to source Urgent Operational Requirements

The Department used a range of techniques to source Urgent Operational Requirements.

Method	Advantages	Disadvantages	Good practice example
Innovative solutions	Tailored to specific military need	Time-consuming Rely on understanding market and research available	Shallow Water Influence Mine-sweeping System (see Box 4 on page 15).
Commercial off-the-shelf purchases	Readily available	May not fully meet requirement	Majority of medical supplies were procured from those commercially available. 8,000 civilian Global Positioning Systems procured from those commercially available.
Military off-the-shelf purchases	Technical inter-operability with allies	Time consuming Security issues can cause difficulties with supply	Military-type Global Positioning Systems procured from the United States. The British Embassy in Washington established a working group in December 2002 to provide a focal point for advice to Integrated Project Teams and other stakeholders, and to assist with procurement negotiations.
Accelerating planned programmes	Relationship with supplier already established Capability gap already understood Other Lines of Development (such as training and support) will have been considered	Security of supply issues	Storm Shadow cruise missile programme (see Box 2 on page 9). Temporary Deployable Accommodation was due to enter service in March 2004 when planning for the operation in Iraq commenced. This date was brought forwards to April 2003 after a competition, and the contractors, Kellogg, Brown and Root, worked in theatre to construct the accommodation. The technical design, procurement, supply and construction of the camps was completed in less than 10 months.
Leasing	Short-term fix where capability is not likely to be needed long-term Can be flexible interim solution	Security of supply issues	The ARTillery Hunting Radar (ARTHUR) (see Box 1 on page 9).

Source: National Audit Office

The Department's approach has evolved with experience

3.9 Planning for the operation in Iraq followed closely from similar activities to support the deployments in Afghanistan and elsewhere and many of the people involved were the same. This continuity gave the Department the opportunity to learn from its experiences and refine the Urgent Operational Requirements process between the two operations. Since the end of the main warfighting stage of the operation in Iraq, the Department has also reviewed this operation for further lessons. The lessons learned by the Department through experience and how they are being applied are summarised in **Figure 14**.

Recommendation

The Department should apply lessons from the procurement of capabilities through Urgent Operational Requirements more widely, for example flexible procurement and rapid competition techniques.

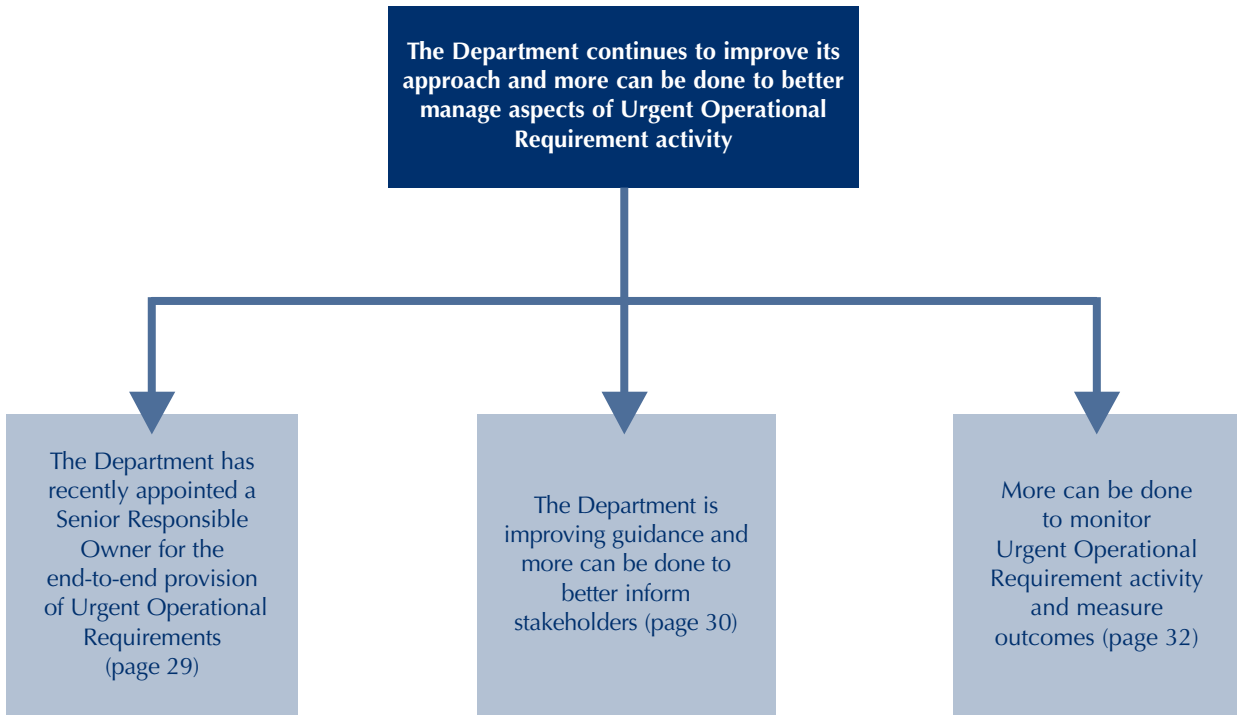
(Recommendation 1 of Figure 2 on page 4)

14 How the Urgent Operational Requirement process has improved

The Department has learned and applied a number of lessons to the Urgent Operational Requirement process from its experiences.

Lesson	How applied
Earlier identification of potential Urgent Operational Requirements	Clear technical requirements are key to procuring equipment effectively, and clarification of what is needed to meet some Urgent Operational Requirements has been identified as something which slows the process down. The Front Line Commands in Strike and Land are proposing to use their respective capability gaps lists in order to identify potential Urgent Operational Requirements and, in appropriate cases, develop hypothetical Urgent Statements of User Requirements outlining technical requirements. The intention is to shorten the preparation time.
Better prioritisation of requirements	For the operation in Iraq, a Defence Urgent Operational Requirement Steering Group was used to prioritise requirements and monitor their progress. The Group was chaired by the Equipment Capability Customer organisation and during the main preparation stage of the operation met two times a week. All major stakeholders involved in the provision of Urgent Operational Requirements are invited. Now, during the peacekeeping stage of the operation, the Group continues to meet on a monthly basis where necessary.
Improvements in management information	For the operation in Iraq, data collection in the central approving area in the Equipment Capability Customer organisation and in the Defence Procurement Agency was improved to enable better tracking of Urgent Operational Requirements once approved. Further improvements to management information are needed (see Parts 4 and 5).
Updated guidance	Central guidance on the Urgent Operational Requirements process was re-designed between operations in Kosovo and Afghanistan to clarify the process and stakeholders involved after the introduction of Smart Acquisition. Further improvements to guidance are in progress (see Part 4).
Establishment of a Defence Logistics Operations Centre	For the operation in Iraq, the Chief of Defence Logistics identified the need for a Defence Logistics Operations Centre to deliver requirements into the delivery chain and track them to theatre. The Operations Centre is now permanently established.

Source: National Audit Office analysis of the Department's lessons learned



Part 4

The Department continues to improve its approach and more can be done to better manage aspects of Urgent Operational Requirement activity

- 4.1 We noted in **Part 3** that, by its nature, Urgent Operational Requirement activity is intermittent and success relies largely on speedy and effective interactions between the stakeholders involved.⁵ This places a premium on:
- consolidated leadership of Urgent Operational Requirement activity;
 - stakeholders being well informed about the process and the progress of Urgent Operational Requirements through it; and
 - activity being measured to monitor performance and assess success in delivering the expected results.
- 4.2 In this Part of our report, we examine these three aspects of the management of Urgent Operational Requirement activity. The Department has recently taken steps to strengthen leadership and improve guidance to stakeholders for the end-to-end provision of Urgent Operational Requirements. More can be done to better inform stakeholders, monitor Urgent Operational Requirement activity and measure outcomes. We explore a framework for further improvements in **Part 5**.

The Department has recently appointed a Senior Responsible Owner for the end-to-end provision of Urgent Operational Requirements

- 4.3 Discrete stages of the Urgent Operational Requirement process are led by different parts of the Department as illustrated in **Figure 15**. The Permanent Joint Headquarters takes the lead in endorsing requirements to be put forward for approval. The Equipment Capability Customer organisation takes the lead in co-ordinating drafting, scrutiny and approval of business cases for requirements endorsed by the Permanent Joint Headquarters. Procurement of capabilities to meet approved requirements is led by the Defence Procurement Agency and, once delivered off-contract, the Defence Logistics Organisation leads delivery of capabilities to the theatre of operations and users.

15 Leadership is spread along organisational lines



Source: National Audit Office

⁵ Part 3, paragraphs 3.3-3.5.

4.4 This split of responsibilities meant that during the preparation stages of the operation in Iraq, there was no single leader responsible for the end-to-end provision of Urgent Operational Requirements. However, there was a Defence Urgent Operational Requirements Steering Group chaired by the Equipment Capability Customer organisation which took the lead in overseeing and reporting on progress. In July 2004, the Department appointed a Senior Responsible Owner for Urgent Operational Requirements who will be accountable for ensuring co-ordinated and successful delivery of urgent capabilities. The role and mode of operation of the Senior Responsible Owner is still being defined but he will have limited direct managerial or budgetary authority across the entire process, and will operate by influence. Much will depend on the ability of the Senior Responsible Owner to wield this influence effectively.

Recommendation

The Department should ensure that the Senior Responsible Owner is suitably empowered to co-ordinate successful delivery of Urgent Operational Requirements and drive performance improvements.

(Recommendation 2 of Figure 2 on page 4)

The Department is improving guidance and more can be done to better inform stakeholders

4.5 To interact effectively, stakeholders need to have a common understanding of the Urgent Operational Requirement process and have access to consistent information on the progress of Urgent Operational Requirements through it. We asked stakeholders across the Department about their understanding of the process and examined the guidance and information available to them.

The Department is producing guidance on the end-to-end provision of Urgent Operational Requirements to clarify stakeholder understanding

4.6 Current guidance on Urgent Operational Requirements covers raising a requirement, preparing a Business Case for meeting the requirement, and scrutiny and approval of the Business Case. It takes the form of guiding principles and an outline of procedures. The end-to-end process from identifying a requirement to successful delivery of capability to the user is not clearly and fully defined.

4.7 In practice, stakeholders interpret the process and its end point in different ways. Depending on their role, stakeholders see the process as a series of forms to be completed, steps to be followed, or people to involve from different parts of the Department. The end point can be signing a contract for supply of the equipment, delivery of the equipment for distribution to the theatre of operations, delivery to theatre, or successful exploitation of the capability in support of the operation.

4.8 In itself, this is not necessarily a problem as long as each party understands their own role and the roles of those they directly interact with. To clarify stakeholder understanding, the Department is producing revised guidance on the 'end-to-end' provision of Urgent Operational Requirements. This guidance will be more comprehensive than that currently available and will cover areas such as: the relationship between Urgent Operational Requirements and longer-term strategic planning; approvals and scrutiny; delivery into the supply chain; cost reporting; and post-operational review. The Department expects the new guidance to be available around the end of October 2004.

Recommendation

The Department should ensure that the guidance addresses stakeholders' needs and appropriately covers: the objectives of Urgent Operational Requirement activity; the processes and activities involved; stakeholders' roles and responsibilities; and arrangements for meeting information requirements and monitoring and reporting performance.

(Recommendation 3 of Figure 2 on page 4)

More can be done to improve availability and access to management information

4.9 Better availability and access to complete and accurate management information on the progress of Urgent Operational Requirements was one of the lessons identified by the Department 'Lessons for the Future' report on operations in Iraq. This concluded that:

*"tracking Urgent Operational Requirements.....relied on a multitude of information systems, databases and reporting mechanisms. This led to some difficulties in obtaining complete and accurate information on the progress of Urgent Operational Requirement action."*⁶

Information sources are fragmented and there are some gaps

4.10 There are a variety of different information sources on Urgent Operational Requirements which different stakeholders have evolved independently in response to their individual information requirements (see Figure 16). Using these information sources, it is not possible to readily track the progress of Urgent Operational Requirements from raising of the requirement to Business Case, through approval to delivery to theatre, and on to disposal or retention.

4.11 Information flows between the different sources are not well-defined and are restricted by incompatibilities between them. Some information is not captured. Whilst it is relatively straightforward to track large, high value pieces of equipment some smaller pieces of equipment are more difficult to track. For example, the Department is aware of where most of the low value Global Positioning Systems procured are post-operation but the whereabouts of some of these units is still unclear given the operational circumstances under which they were issued. Requirements raised but not approved and the reasons for non-approval, which could be useful in future, are also not captured.

16 The different sources of information on Urgent Operational Requirements

There are different sources of information on Urgent Operational Requirements.

Source	Information holder	Information contained	Relationship between sources
Unapproved Urgent Statements of User Requirements request lists	Lists of requirements generated held by Top-Level Budget holders and Front Line Commands, or the Joint Commander in theatre	Detail technical requirements requested and the capability gaps they are designed to fill	Sometimes more than one Top-Level Budget holder or Front Line Command will generate a requirement for the same thing, especially communications related capabilities, which are cross-service
Approved Urgent Statement of User Requirements lists	Permanent Joint Headquarters	Details all approved User Requirements	Relies on information from Front Line Commands and the Joint Commander in theatre
Approved Urgent Operational Requirement list	Equipment Plan Directorate within Equipment Capability Customer	Details: sponsor of requirement; highest acceptable cost; reason for requirement; and type of capability. Can also detail progress and highlight any issues for attention	The key list uses the approved requirements list from Permanent Joint Headquarters. This list is relied upon by those planning the operation, Ministers and Treasury, as well as those working out the cost of the operation
Urgent Operational Requirement List	Held by the Future Business Group in the Defence Procurement Agency	Details progress through the procurement process, including estimated in-service date and cost	Is based on the approved master requirements list and is used to report progress on procurement to the Defence Urgent Operational Requirements Steering Group
Urgent Operational Requirement prioritised delivery list	Held by the Defence Logistics Organisation Operations Centre	Details when requirements are due to come into the delivery chain and prioritisation to theatre	Based on the master approved requirements list. Used to inform commands of what items are coming to theatre
Effectiveness of Urgent Operational Requirements List	Held by Permanent Joint Headquarters	Details when some requirements got to theatre, when they were fitted and useable and whether they were effective in the field	

Source: National Audit Office

Availability and access to information to fully meet the requirements of all stakeholders is constrained by technology and resources

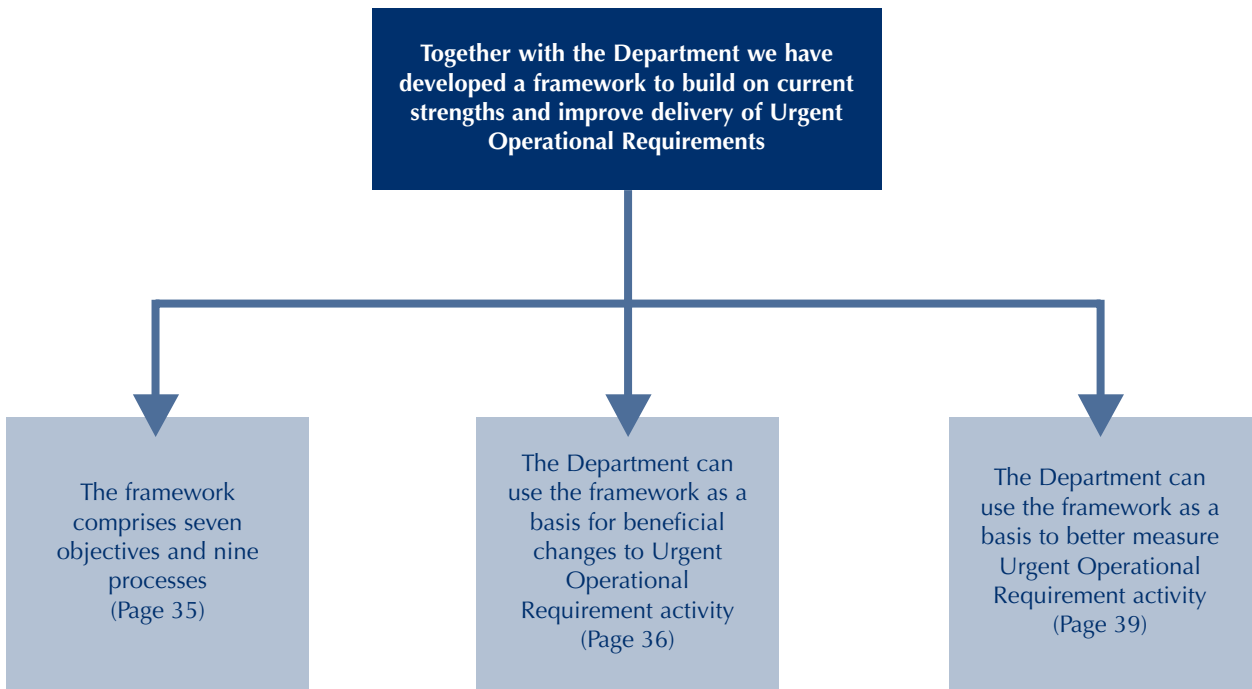
4.12 At the height of Urgent Operational Requirement activity for the warfighting operation in Iraq, a master list of approved requirements was maintained by the Equipment Capability Customer organisation. This was updated daily for key events such as approval, contract let and delivery. It was used to highlight issues for resolution at the Defence Urgent Operational Requirements Steering Group and to report progress to Ministers, the Treasury and other stakeholders on a weekly basis.

4.13 Stakeholders, such as the Treasury and those in the Defence Logistics Organisation, would ideally have liked access to more information more frequently. The Department's 'Lessons for the Future' report on operations in Iraq noted that an effective shared working environment to provide all stakeholders with a common picture of the progress of each Urgent Operational Requirement may help to improve accessibility and access to information. Currently technological incompatibilities across the Department mean that such an environment would be resource intensive to set up and maintain. The Defence Information Infrastructure project is underway to rationalise information systems across the Department and this should facilitate moving towards a shared working environment.

4.14 There have also been difficulties in reconciling the actual cost of Urgent Operational Requirements with original estimates. Two recent Departmental reports have pointed to there being insufficiently detailed financial information to enable full reconciliation of the actual spend on Urgent Operational Requirements to approved costs. Integrated Project Teams are not required to report the outturn costs of individual Urgent Operational Requirements. This made it difficult to agree the refund to the Treasury for Urgent Operational Requirements which were accelerated programmes. The Department has now agreed with the Treasury a refund of £110m to the Reserve.

More can be done to monitor Urgent Operational Requirement activity and measure outcomes

4.15 Paragraph 2.4 noted that during the operation in Iraq the department provided weekly reports to Ministers and senior military personnel on the progress of key Urgent Operational Requirements. However, Urgent Operational Requirement activity is not comprehensively monitored and outcomes are not well measured. There are no performance indicators to monitor whether Urgent Operational Requirements progress towards delivery efficiently or to facilitate learning and improvements to the way activity is undertaken. The outcomes of Urgent Operational Requirements in terms of capability delivered are not comprehensively measured and assessed against planned requirements, and forecast timescales and costs. This means that it is difficult for the Department to demonstrate the success of Urgent Operational Requirement activity and what it delivers. Monitoring and measurement of activity needs to be clearly focussed on driving delivery and improvements.



Part 5

Together with the Department we have developed a framework to build on current strengths and improve delivery of Urgent Operational Requirements

- 5.1 In this Part of the Report we explore a framework for continuing improvements in how the Department undertakes Urgent Operational Requirement activity. We developed the framework working together with the Department and external consultants and it is based on the knowledge, experience and expectations of stakeholders from across the Department who are involved in Urgent Operational Requirement activity. The framework uses this understanding to analyse Urgent Operational Requirement activity into its constituent processes and identify beneficial changes to these processes so that activity is clearly focused on delivering results against objectives. **Appendix 1** gives a more detailed description of the methodology underpinning the framework.
- 5.2 There is scope for beneficial change and, as a pilot, we have fully analysed one of the nine constituent processes of delivering Urgent Operational Requirements to identify specific changes. This is the process for monitoring and reporting on the progress and outcome of Urgent Operational Requirements, which was identified by stakeholders as the process where the scope for change was greatest. A complete understanding of the scope for change across all of the processes would be possible if the Department undertook similar analysis for the remaining eight processes. This would enable the costs and benefits of all changes to be assessed and co-ordinated coherently. We have also identified how indicators and measures could be used to monitor performance and drive improvements.

The framework comprises seven objectives and nine processes

- 5.3 **Figure 17** details the objectives developed in consultation with key strategic stakeholders and designed to provide clarity of purpose and define the outcomes to be achieved from Urgent Operational Requirement activity. The nine processes (see **Figure 18**) encapsulate all of the activities necessary to achieve these objectives.

17 The objectives of Urgent Operational Requirement activity

- 1 Match Urgent Operational Requirement output to required capability**
To ensure that the capability gaps identified by the setting of campaign aims are prioritised and filled according to their priority.
- 2 Deliver the required capabilities to theatre in a timely manner**
To ensure that requested capability reaches the theatre of operations in time to support military objectives and is used to achieve military goals.
- 3 Ensure governance of Urgent Operational Requirement activity**
To ensure each Urgent Operational Requirement is properly justified so that there is visibility to the required parties and a proper explanation of the use of public resources.
- 4 Continually improve Urgent Operational Requirement activity**
To ensure that individuals participating in the future Urgent Operational Requirement processes work to a common set of guidelines and fulfil their responsibilities in the processes and that the processes continually improve.
- 5 Manage risk associated with Urgent Operational Requirements**
To identify, understand and manage contractual, time, financial and technical risks in Urgent Operational Requirement activity.
- 6 Coordinate people undertaking activity for each Urgent Operational Requirement**
To ensure the stakeholders relevant to each Urgent Operational Requirement buy-in to the 'course of action' being proposed.
- 7 Secure Resources**
To secure resources from the appropriate source.

Source: National Audit Office

18 The processes which constitute Urgent Operational Requirement activity



Source: National Audit Office

The Department can use the framework as a basis for beneficial changes to Urgent Operational Requirement activity

5.4 By asking stakeholders what activities they expected the nine processes to include and comparing these expectations with the Department's current practice, we identified where there is scope for beneficial changes. We gathered some 350 expectations from 16 stakeholders across the Department involved in Urgent Operational Requirement activity.

There is scope for beneficial changes

5.5 Overall, stakeholders were 'satisfied' or 'delighted' with how well over two thirds (69 per cent) of their expectations were being met. This is a high level of satisfaction compared to an average of 54 per cent for a sample of public and private sector organisations where a need for beneficial changes had been identified and stakeholders' expectations had been assessed in a similar way.

5.6 There is most scope for beneficial change where stakeholders' expectations are of high importance to them but are not being met satisfactorily. A quarter (25 per cent) of the expectations of Urgent Operational Requirement stakeholders fell into this 'priority zone' compared to 30 per cent in the sample of other organisations. High performing organisations aim to have 5 per cent or less of stakeholders' most important expectations in the 'priority zone'.

5.7 We analysed expectations falling into the 'priority zone' according to which of the nine processes in the framework they related to (see Figure 19). The results were consistent with findings in Parts 3 and 4 and indicated that most expectations in the 'priority zone' concerned monitoring and reporting the progress and outcome of Urgent Operational Requirements.

Changes to how information is kept and managed would benefit the monitoring and reporting process

5.8 In consultation with stakeholders, we analysed the monitoring and reporting process in more detail to identify where existing activities and tasks can be performed better or may not need to be performed at all, and where new activities and tasks may need to be introduced. Figure 20 summarises the beneficial

changes that could be implemented to better monitor and report the progress and outcome of Urgent Operational Requirements from origin through to delivery and on to disposal or retention for continuing use.

Recommendation

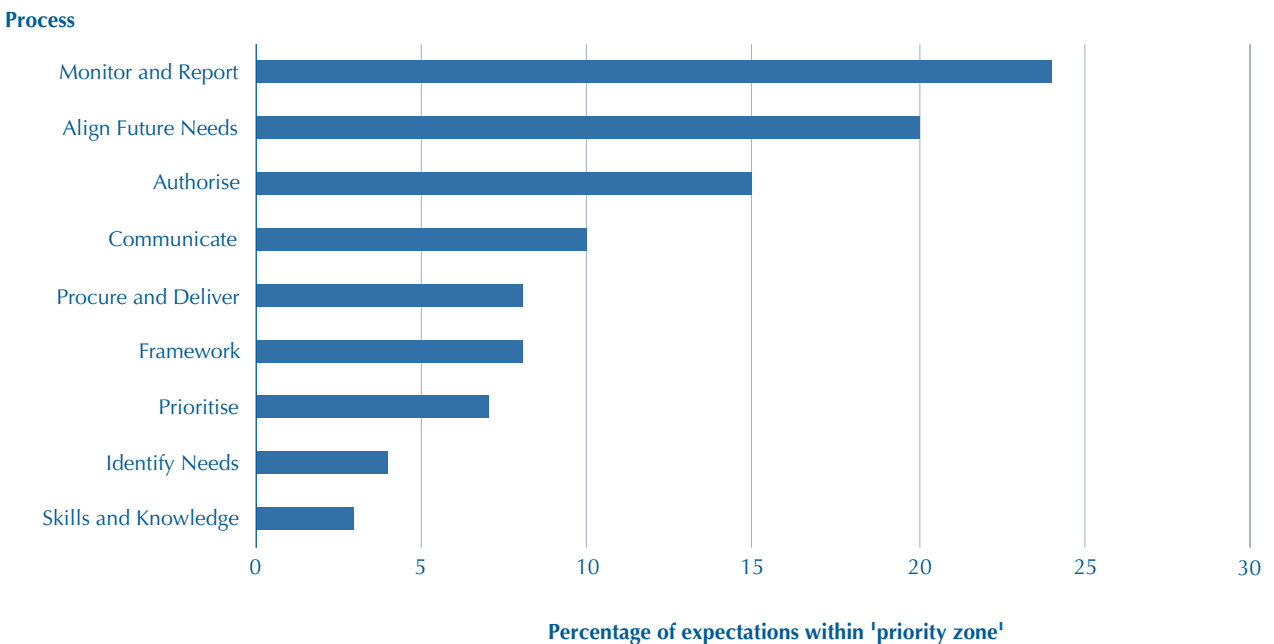
The Department should make information on Urgent Operational Requirements more complete, accurate, coherent and accessible by:

- assigning clear responsibilities for the maintenance of authoritative sources of information;
- maintaining a flow of consistent and up-to-date information between the sources;
- more clearly defining stakeholder information requirements;
- defining and communicating to stakeholders how their requirements will be met; and
- moving towards a shared data environment as technology and resource permits.

(Recommendation 6 of Figure 2 on page 5)

19 Spread of expectations within the 'priority zone' across the nine processes

Most expectations in the 'priority zone' concerned monitoring and reporting the progress and outcome of Urgent Operational Requirements.



Source: National Audit Office

Wider reaching beneficial changes to the other processes can also be identified

5.9 We have not conducted a full analysis of all of the other eight processes as the scope and cost of this report did not permit this. A complete understanding of the scope for change across all of the processes would be possible if the Department undertook similar analysis to that we have completed for the monitoring and reporting process for the remaining eight processes. This would enable the costs and benefits of all changes to be assessed and co-ordinated coherently.

5.10 Our work has highlighted there is potential for beneficial changes to some of the other processes. The changes we have identified are summarised in **Figure 21 overleaf**. For example, in relation to the maintaining skills and knowledge process, greater retention of knowledge and better learning could be facilitated by strengthened post-operation review of Urgent Operational Requirements, and looking at practice outside the Department. Also, in relation to the identifying Urgent Operational Requirements process, more advance assessment of the feasibility of filling capability gaps, if necessary, with Urgent Operational Requirements, could improve planning.

Recommendations

The Department should build on the existing operational lessons learned process to capture more comprehensively lessons learned from individual Urgent Operational Requirements through:

- a focused post-operation review process to identify factors affecting successful outcomes in terms of cost, time and operational effectiveness; and
- looking at practice in other industries and countries.

(Recommendation 4 of Figure 2 on page 4)

The Department should consider whether identifying potential Urgent Operational Requirements in advance for possible major operational situations would improve how rapidly and effectively they are delivered, by:

- considering this within the ongoing defence industrial policy and strategy work;
- use of capability gap lists to identify potential Urgent Operational Requirements in advance of operations;
- where considered worthwhile, preparing proposals for potential Urgent Operational Requirements to clarify requirements and assess them for feasibility; and
- further investigation of the potential for platforms to have capabilities added to them quickly and how to provide for this.

(Recommendation 7 of Figure 2 on page 5)

20 Beneficial changes to monitoring and reporting on the progress and outcome of Urgent Operational Requirements

Beneficial changes that could be implemented to better monitor and report the progress and outcome of Urgent Operational Requirements.

Process	Changes	Benefits
Monitoring and reporting on the progress and outcome of Urgent Operational Requirements	<ul style="list-style-type: none"> ■ Assigning clear responsibility for holding authoritative data on different aspects of Urgent Operational Requirements, such as: origin and approval; procurement; delivery; effectiveness in the field; post-operation disposal or use/whereabouts; and cost; ■ Maintaining a flow of consistent, agreed and up-to-date information between the authoritative data sources above; ■ Better defining the information requirements of all stakeholders, including those external to the Department; ■ Assigning clear responsibility to the holders of authoritative data for providing up-to-date information to stakeholders; ■ Communicating to stakeholders how they can get access to the information they require; and ■ As the Department's information systems are rationalised, joining up the authoritative data sources more coherently into a shared data environment based on user requirements. 	<ul style="list-style-type: none"> ■ Better informed and faster decision-making; ■ Faster and better capability delivery; ■ Reduced effort by some stakeholders in keeping track of Urgent Operational Requirements; ■ Reduced risk of duplication of information between stakeholders; ■ Common and more accurate understanding of progress amongst stakeholders; ■ Unified reporting of Urgent Operational Requirement progress and outcome internally; ■ Improved ability to report progress and outcomes to stakeholders externally, e.g. to Parliament, the Treasury and the public; ■ Greater transparency and increased confidence in information internally and externally; ■ Improved morale and perception of the Department.

Source: National Audit Office

The Department can use the framework as a basis to better measure Urgent Operational Requirement activity

5.11 The framework we have developed enables better measurement of Urgent Operational Requirement activity. Appropriate measures of Urgent Operational Requirement outcomes and indicators of the performance of activities can be structured around the objectives and processes. These would help to demonstrate the success of Urgent Operational Requirement activity and drive performance improvements.

Outcome measures can be structured around the objectives to demonstrate and drive success

5.12 Potential measures of achievement that the Department could use for the key objectives of matching Urgent Operational Requirement output to required capability and delivering required capabilities to theatre in a timely manner (Objectives 1 and 2 from the framework in **Figure 17**), are shown in **Box 8**. The Department could set planned levels of achievement and monitor actual achievements against them on an ongoing basis to enable timely action where needed. Recognising that Urgent Operational Requirement activity is intermittent by nature, to optimise the utility of the information provided by the measures the Department would need to vary the frequency of monitoring to match the tempo of activity.

Recommendation

The Department should introduce outcome measures to monitor achievements and drive improvements, for example, outcomes measures of timeliness of delivery and effectiveness in use.

(Recommendation 5 of Figure 2 on page 4)

Performance indicators can be structured around the processes to drive improvements

5.13 Performance indicators for the key processes involved in delivering Urgent Operational Requirements could provide the Department with useful information to better understand how efficiently and effectively activities are working and to identify and drive performance improvements. For example, by definition, Urgent Operational Requirements require activities to be completed quickly. The progress of Urgent Operational Requirements is likely to vary depending on the extent to which activities take place concurrently, and as requirements are subject to re-prioritisation as a campaign plan develops. Indicators of how quickly activities are undertaken would help the Department to better understand and manage the speed with which activities take place, in accordance with the priority of particular Urgent Operational Requirements.

Box 7

Examples of initiatives from the United States designed to facilitate urgent provision of capability

Recognising that the scale of United States activity is much bigger, the United States Army has developed methods of responding to urgent requirements, elements of which, if adapted to the United Kingdom context, could yield useful lessons.

- **The Army Strategic Planning Board** is responsible for strategic responsiveness, and as such approves Operational Needs Statements, the equivalent to Urgent Operational Requirements, sets up task forces on certain capabilities and uses in-theatre teams to bring back lessons.
- **The Rapid Equipping Force** has been established to provide quick 70-80 per cent solutions to the field using established, modified technology, such as using robot technology with cameras to look in wells and caves in Afghanistan.
- **The Rapid Fielding Initiative** speeds up the procurement of already approved personal items to ensure that different Units have the correct types and quantities of equipment such as helmets, goggles and global positioning systems.
- **The Agile Development Centre** is interested in pulling through technology in the eight to 18 month time bracket.

Box 8

Potential measures of achievement against the key objectives of Urgent Operational Requirement Activity

Matching Urgent Operational Requirement output to required capabilities (Objective 1 from the framework in Figure 17)

- The percentage of Urgent Operational Requirements assessed as high priority which progressed through Business Case, scrutiny, approval, procurement and delivery in the desired timeframes. [Timeframes would need to be decided by the Department]

Delivering required capabilities to theatre in a timely manner (Objective 2 from the framework in Figure 17)

- the percentage of Urgent Operational Requirements reaching theatre in time to support military objectives; and
- the percentage of Urgent Operational Requirements assessed as effective or better in contributing to the achievement of military objectives in the field.

21 Potential beneficial changes to other processes

Beneficial changes that could be implemented to maintaining skills and knowledge and identifying Urgent Operational Requirements.

Process	Changes	Benefits
Maintaining skills and knowledge	<ul style="list-style-type: none"> ■ A focused post-operation review of all Urgent Operational Requirements individually, comparing actual outcomes against Business Case objectives; and ■ looking at practice outside the Department and applying it as appropriate to the United Kingdom context. For example, the United States have introduced a number of initiatives to facilitate more rapid provision of capability (see Box 7). 	<ul style="list-style-type: none"> ■ Better learning from experience; ■ Potential to identify types of Requirement which have greater chances of success.
Identifying Urgent Operational Requirements	<ul style="list-style-type: none"> ■ Examining the Services' capability gap lists and capabilities taken out of the Department's budget to identify capabilities which could potentially be filled in future by Urgent Operational Requirements, if necessary; ■ Preparing proposals for potential future Urgent Operational Requirements and, where considered worthwhile, assessing them for feasibility; ■ More coherent analysis of the potential for platforms to have capabilities added to them quickly and how to provide for this, e.g. the Department is planning to fit the A400M Transport Aircraft with the ability to have Defensive Aids Systems added to it by leaving space and putting in appropriate wiring. 	<ul style="list-style-type: none"> ■ Better management of risks presented by unfunded capability gaps; ■ Advance identification of Urgent Operational Requirements which would not be achievable in the timescales required or could require more time than others; ■ Better exploitation of platform potential to be fitted with Urgent Operational Requirements.

Source: National Audit Office

5.14 For a sample of Urgent Operational Requirements in support of operations in Iraq, we analysed how quickly they progressed from User Requirement to Business Case. This was the only indicator for which there was representative data available on Urgent Operational Requirements. The Department could similarly analyse other stages of the process if the required data was captured.

The speed with which Urgent Operational Requirements progress from user requirement to approved business case varies widely

5.15 We found that, on average, it took 25 days for Urgent Operational Requirements to progress from User Requirement to approved Business Case. The time to progress varied from less than a day to 105 days. Within this overall variation, there were variations by type of Urgent Operational Requirement (including complexity), originator and procuring team from which some patterns can be identified (see **Box 9**).



Box 9

Patterns of variation in the speed of progress of Urgent Operational Requirements from User Requirement to Business Case

Speed of progress varies by category (see Figure 8 on page 13) of Urgent Operational Requirement

- *By category:* accelerated programmes show least variation in time to progress.
This is unsurprising as accelerated Urgent Operational Requirements are already part way through the normal procurement process and some progress will have been made with defining the technical requirement.
- *By category:* filling known capability gaps shows the largest variation.
This is surprising as it might be expected that plans would be in place to address known capability gaps urgently if needed and that they would progress quickly.

Speed of progress varies depending on who generates the Urgent Operational Requirement

- *By sponsor:* the average for different sponsors varies from 21 to 61 days.

Speed of progress varies depending on the Directorate of Capability and Integrated Project Team involved

- *By Directorate of Equipment Capability:* the average for different Directorates varies from 11 to 47 days.
- *By Integrated Project Team:* the average for different Teams varies from 19 days to 48 days.

Understanding and managing these variations better would enable improved consistency

5.16 Some variation is to be expected as Urgent Operational Requirements differ in size, complexity of the requirement and procurement route, involve different individuals within and outside the Department, and are given different priority, which may change with campaign planning and strategy. For example, some Urgent Operational Requirements may require additional time and effort where they are procured from overseas or need to be co-ordinated and interoperable with the capabilities of allied forces such as with communications or combat identification technology. Time is also related to the number of Urgent Operational Requirements and the availability, skills and experience of staff to progress them. The extent and patterns of variation are worthy of further investigation by the Department. This could help the Department to determine how it might better manage the variations to achieve a more predictable and consistent response.

Recommendation

The Department should introduce performance indicators to monitor achievements and drive improvements, for example, performance indicators of process efficiency, such as the time for Urgent Operational Requirements to progress through different stages.

(Recommendation 5 of Figure 2 on page 4)

Appendix 1

Study scope and methodology

1 This study has identified beneficial changes to how the Department manages Urgent Operational Requirement activity to enhance rapid and effective delivery. The following paragraphs describe the methodologies we employed to inform the design of the study and to gather and analyse our evidence. We focused on the Department's procurement of Urgent Operational Requirements for the recent operations in Afghanistan and Iraq and examined three key questions

- Is it necessary for the Department to procure capabilities rapidly through Urgent Operational Requirements? **(Part 1)**
- Is the Department successful in delivering Urgent Operational Requirements, to the short timescales required, that are effective in supporting operations? **(Part 2)**
- Does the Department manage Urgent Operational Requirement activity efficiently to facilitate rapid and effective delivery of Urgent Operational Requirements? **(Parts 3 to 5)**

Informing the design of the study

2 During the study design phase, to focus our key questions on pertinent issues, we held six unstructured interviews and examined Departmental papers concerning the nature of Urgent Operational Requirements and management of their delivery. The interviews encompassed key stakeholders across the Department and covered:

- how Urgent Operational Requirements were raised and endorsed;
- how endorsed Urgent Operational Requirements were co-ordinated and tracked through approval, procurement and delivery; and
- what issues were encountered in practice when identifying, procuring and delivering Urgent Operational Requirements.

Gathering and analysing evidence

3 Our evidence gathering and analysis combined use of existing Departmental data and documentation with collection of new data through semi-structured interviews, case studies, a study by consultants to identify process improvements and examination of practice in other countries.

Use of existing data - Analysis of Urgent Operational Requirement performance data

4 We analysed data from a May 2003 review by Permanent Joint Headquarters of Urgent Operational Requirements procured to support the operation in Iraq. Our analysis covered whether Urgent Operational Requirements were successful in being delivered, fitted and useable when required and performing effectively when used. We also analysed Urgent Operational Requirements data held by the Equipment Plan Directorate in the Equipment Capability Customer organisation and responsible for tracking and reporting progress within the Department. Using this data, we performed some standard deviation analysis on how quickly Urgent Operational Requirements progressed through the process, as an indicator of the extent to which activity was controlled and gave repeatable results.

Use of existing data - Review of Departmental guidance and lessons learned reports

5 We reviewed the Department's guidance on procurement of Urgent Operational Requirements to assess how comprehensively and clearly it defined the processes that needed to be gone through and the activities involved. Following each operation, the Department also produces lessons learned reports covering feedback on all aspects of undertaking the operation, including the provision of Urgent Operational Requirements. We reviewed these post-operation reports for Afghanistan and Iraq for comments on how well provision of Urgent Operational Requirements had worked, how successful they had been in terms of timely delivery and effectiveness, and improvements that could be made for future provision.

Collection of new data - Semi-structured interviews

6 We conducted some 30 semi-structured interviews between November 2003 and April 2004 covering all principal stakeholders internal and external to the Department (see Figure 22). Our framework of questions covered what worked well, what could be improved and how things could be done differently to enhance the rapid and effective delivery of Urgent Operational Requirements. 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 or in Defence Logistics Organisation sites in Bath. Each interview lasted between one and two hours, and key points were noted. The key points were reviewed across interviews to make links and draw out themes.

Collection of new data - Case studies

7 Between January and March 2004, we examined 11 Urgent Operational Requirements as case studies to explore practical examples of the challenges faced when procuring capabilities rapidly and how these were addressed by the Department. The case studies were selected to include the five main categories of Urgent Operational Requirement (see Figure 23), and examples of differing value involving procurement of different numbers and types of equipment across the LAND, AIR and MARITIME environments. Our final selection was also informed by wider evidence from the interviews and other sources to ensure that the case studies were balanced in covering examples of successful procurement, delivery and use as well as examples where there had been difficulties.

8 Each of the case studies traced the end-to-end provision of the Urgent Operational Requirement from inception through to retention or disposal, examining progress so far and future planned actions. We used a standard set of questions to gather evidence from the relevant Integrated Project Team co-ordinating provision of the Urgent Operational Requirement, followed up with interviews with other stakeholders and examination of documents as appropriate. The Department's Internal Audit team worked with us to complete two of the case studies and we are grateful for their assistance.

Collection of new data - Study by consultants to identify process improvements

9 Focusing on beneficial changes, we commissioned a study by consultants to identify practical ways in which the Department might improve how it manages the procurement of Urgent Operational Requirements to enhance rapid and effective delivery. The consultants were selected by competitive tender and our key selection criteria included robustness of approach and utility of likely output, as well as cost.

10 FirstConsult Services Limited conducted the four-month study between January and April 2004 using their Process Dependency Network approach. Figure 24 on page 45 outlines the approach, which is designed to deliver improved results by identifying beneficial changes to specific activities carried out in different parts of an organisation and coordinated in processes. These processes are aligned to the expectations of the stakeholders involved in delivering the results and the objectives to be achieved. Further information on the approach can be obtained from Ashley Braganza (ashley.braganza@firstconsult.co.uk).

22 Interview coverage

Stakeholders interviewed	Responsibilities covered
Internal stakeholders: <ul style="list-style-type: none"> ■ Permanent Joint Headquarters ■ Front Line Commands ■ Equipment Capability Customer organisation ■ Defence Procurement Agency ■ Defence Logistics Organisation ■ Central staff 	<ul style="list-style-type: none"> ■ identification, endorsement and definition of Urgent Operational Requirements; ■ scrutiny, approval, prioritisation and tracking of Urgent Operational Requirements; ■ responsible for procurement of Urgent Operational Requirements; ■ delivery of Urgent Operational Requirements to the theatre of operation; ■ financial monitoring and accounting for Urgent Operational Requirements.
External stakeholders: <ul style="list-style-type: none"> ■ Industry ■ Treasury 	<ul style="list-style-type: none"> ■ production of Urgent Operational Requirements; ■ approval of funding of Urgent Operational Requirements from the Reserve.

Source: National Audit Office

23 Case study coverage

Urgent Operational Requirements	Description of capability	Approved cost (£m)	Operating Environment	Category*	Comments
All-Terrain Mobility Platforms	Increased mobility of troops and equipment around the battlefield.	1.8	LAND	5	
Battlefield Ambulance Upgrade	Enhanced facility for care of casualties in transit to medical centres.	3.6	LAND	3	
Communications	Improved communication, situational awareness and security in the battlefield.	52.6 (in total)	Various across environments	1 and 4 (mainly)	Cluster, predominantly comprising of enhanced data links, of which we examined a sample.
Temporary Deployable Accommodation	Increased capacity to accommodate troops in facilities equipped for extreme hot weather conditions.	32.6	LAND	3 and 5	
Storm Shadow	Fully autonomous, sub-sonic, long-range air-to-ground missile.	0.5	AIR	3	Bring forward and temporary acceptance of the missile.
Tactical Radiation Monitoring Equipment	Detection, monitoring and recording capability for radiation.	10.4	JOINT (LAND, AIR and MARITIME)	3	
Medical Supplies	Enhanced medical supplies for care of troops.	38	CENTRE	5	Cluster, of which we examined a sample.
Global Positioning Systems	Electronic navigational and positional aid.	14.6	LAND	4	
Weapon-Locating Radar (ARTHUR)	Deployable means to locate indirect fire systems in limited range.	10.6	LAND	4	
One Shot Mine Disposal System	Portable system to hunt and destroy mines.	2.4	MARITIME	1	
Shallow Water Influence Mine-sweeping System	Mine clearance for shallow depth rivers, tidal streams etc.	1.6	MARITIME	1	

NOTES

* The category numbers are defined as follows:

- 1 Filling a capability gap specific to the operation.
- 2 Filling a previously unidentified capability gap.
- 3 Filling a known capability gap by accelerating the planned funded solution.
- 4 Filling a known capability gap with a patch until the planned funded solution comes into service.
- 5 Filling a known capability gap for which there is no planned funded solution.

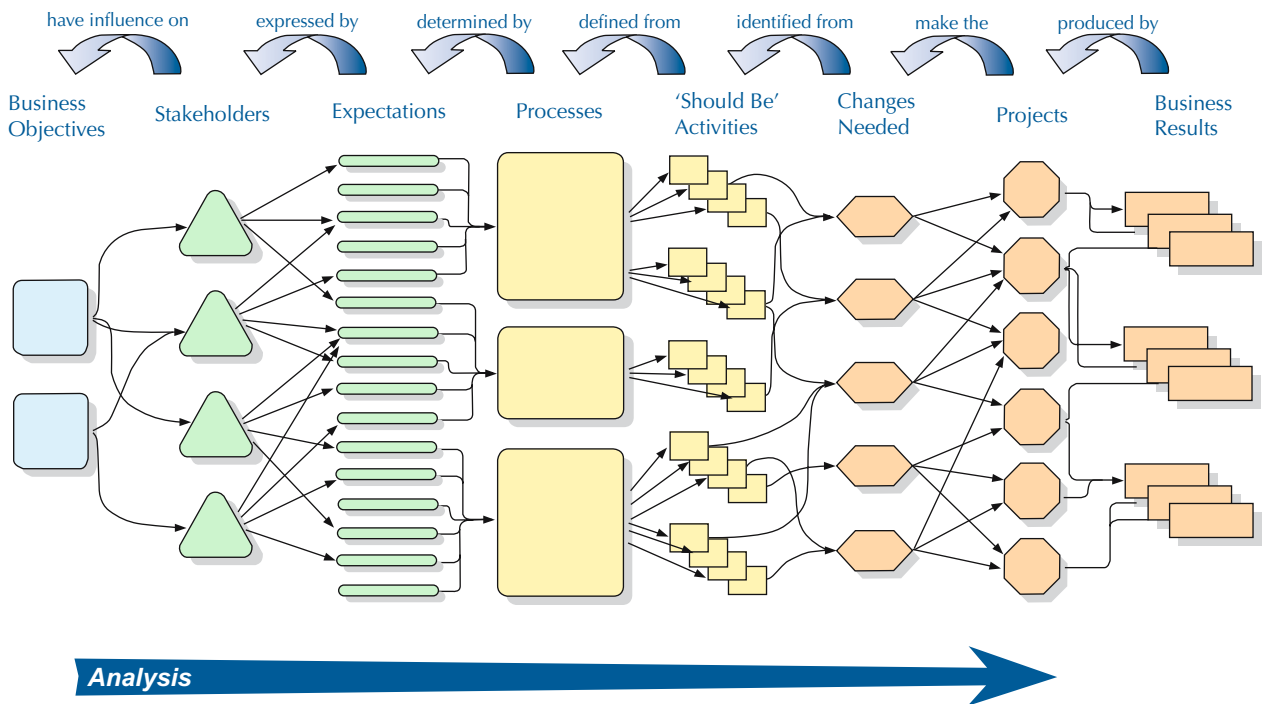
Source: National Audit Office

11 Applying the Process Dependency Network approach, through interviews and focus groups with the key stakeholders involved, we defined seven objectives and nine processes constituting procurement of Urgent Operational Requirements. We analysed the process where stakeholders felt there was most scope for beneficial change (monitoring and reporting of progress and outcomes) to identify specific changes that the Department could make to enhance rapid and effective delivery of Urgent Operational Requirements.

Collection of new data - Examination of practice in other countries

12 As part of another defence study examining how the progress of major projects is monitored and forecasted we visited defence ministries in five other countries between January and March 2004. The countries were France, Sweden, Israel, the United States of America and Australia. They were chosen using a range of criteria including similarity to the United Kingdom in terms of the nature of their capability requirements and level of engagement in active operations. We used the opportunity presented by these visits to also cover how these countries procured capabilities rapidly and highlight comparative practice that the United Kingdom might draw on.

24 Methodology



Source: FirstConsult Services Limited

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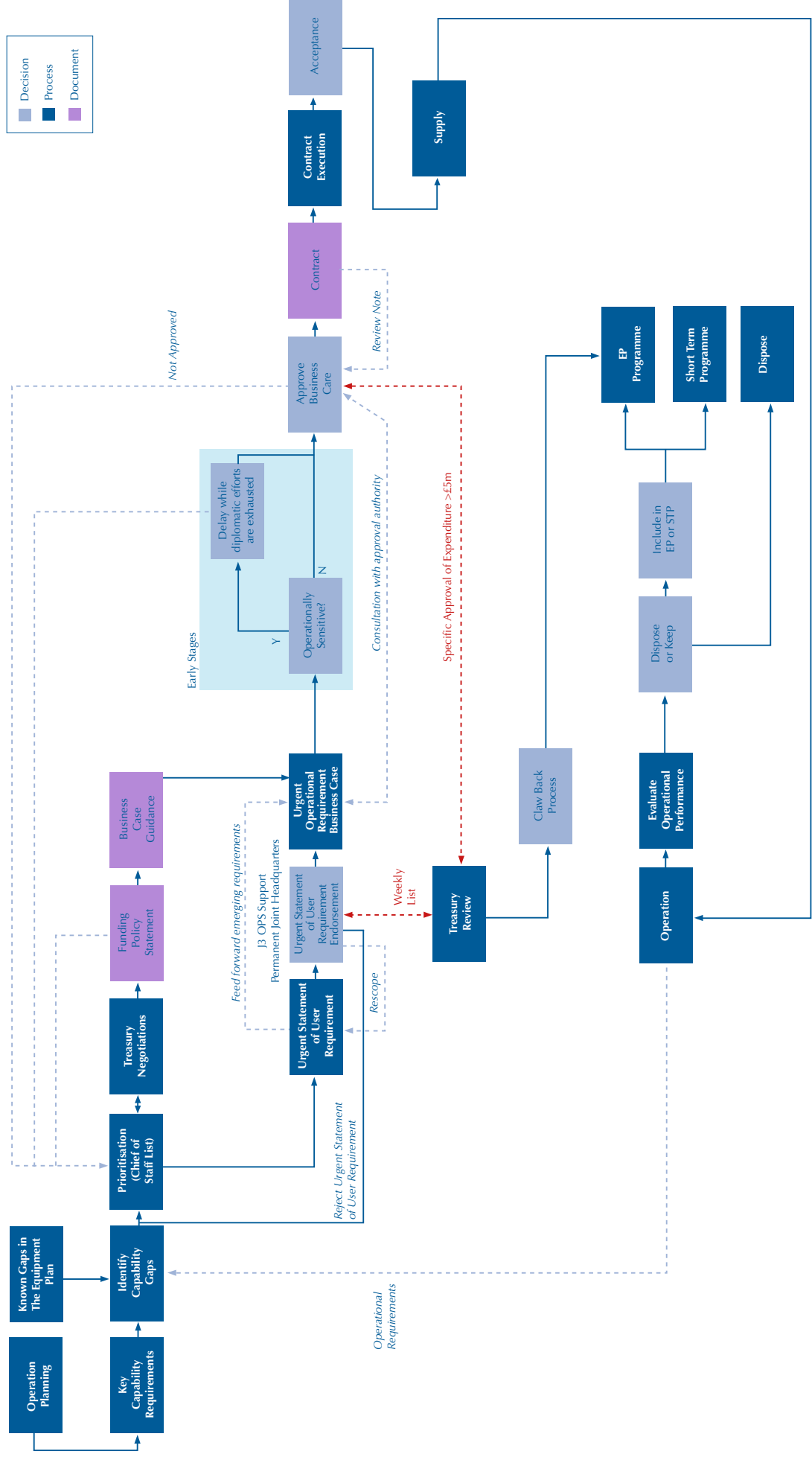
Appendix 2

The Urgent Operational Requirements process

The processes which constitute Urgent Operational Requirements activity



The processes which constitute Urgent Operational Requirements activity



Appendix 3

Terminology

All-Terrain Mobility Platforms	A lightweight vehicle for moving troops and equipment around the battlefield.
Army Base Repair Organisation (ABRO)	A Trading Fund of the Department responsible for engineering service, repair and re-manufacturing of defence equipment for the UK Armed Forces.
ARTillery HUnTing Radar (ARTHUR)	An artillery weapon-locating system which is both lightweight and transportable by air.
Business Case	Documentation submitted to the approving authority outlining expected cost, in service date and user requirements of Urgent Operational Requirements.
Capability gap	A known or unidentified gap in the assets or services available and the operational effect that can be achieved.
Central Staff	Staff performing central functions within the MoD such as finance and policy roles.
Challenger 2	The British Army's main battle tank.
Concurrent operations	Operations conducted simultaneously.
Counter-insurgency	Military actions taken to defeat uprisings in foreign states.
Counter-terrorism	Operations to counteract a specific terrorist threat.
Counter Battery Radar (COBRA)	A long-range radar capable of locating hostile rocket, gun and mortar batteries.
Defence capability	An operational outcome or effect that users of assets or services need to achieve.
Defence Logistics Organisation	The organisation that provide logistics support to the UK Armed Forces. It is responsible for keeping the Services fully equipped and ready to act at any time, in war or peace.
Defence Procurement Agency	An Executive Agency of the Department responsible for the procurement of equipment for the UK Armed Forces. It was responsible for capital expenditure of £4.6 billion in 2003-04.
Disaster relief	Working in conjunction with local authorities to aid areas affected by natural disasters.
End-to-end provision	The process by which a capability is taken from its initial concept, through the support and maintenance of the capability during its operational life, to its final disposal.
Enforcing sanctions	Operations conducted to enforce bilateral or multilateral sanctions against a nation.
Equipment Capability Customer	The customer organisation of the Department, responsible for developing and managing a balanced and affordable equipment programme to meet capability needs. It also has through-life responsibility for equipment capability including effective delivery of capability into service.
Equipment Programme	The Department's equipment budget, which profiles defence priorities and available funding over a 10-year period.
Front Line Commands	Users of equipment in-service.
Identification Friend-or-Foe	An electronic question and answer system fitted to aircraft, ships and missile air defence systems to allow them to discriminate between friendly and hostile forces.

In-service dates	The point at which the military capability provided by an equipment or system, is assessed as being available for operational use.
Integrated project teams	A 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 assessment, demonstration, manufacture, support and disposal of equipment.
Joint Tactical Information Distribution System	Tactical information system for aircraft that will enhance air-to-air weapon effectiveness through the transfer of precise targeting information. The system also provides improved security and secure voice communications.
Medical Supplies Agency	An Executive Agency of the Department responsible for the provision of medical equipment to the UK Armed Forces.
Monitoring Battlefield Radar (MAMBA)	Mountable radar unit that can accurately locate enemy artillery positions, including howitzers, multiple rocket launchers and mortars.
Operation Telic	UK military operations in Iraq since March 2003.
Peace enforcement	Peace enforcement operations are undertaken under Chapter VII of the UN Charter. They are designed to maintain and re-establish peace or enforce the terms specified in the mandate.
Peacekeeping	Conducted by the military in conjunction with diplomatic and humanitarian agencies to monitor and facilitate the implementation of a peace agreement by placing emphasis on consent among warring factions.
Permanent Joint Headquarters	The organisation responsible for directing, deploying, sustaining and recovering forces on operations.
QinetiQ	Formerly an agency of the Department, QinetiQ's core business is providing scientific research, test and evaluation for military customers.
Senior Responsible Owner	Individual responsible for ensuring successful delivery of Urgent Operational Requirements to meet urgent capability needs.
Shallow Water Influence Mine-Sweeping System (SWIMS)	Remote-controlled minesweeping equipment designed to operate in shallow rivers and waterways.
Storm Shadow	Air launched long range stand-off precision weapon deployable in most weather conditions, designed to attack static targets without exposing aircraft.
Theatre of operations	The location/environment where military units are deployed.
Top Level Budget Holder	The Department is split into a series of budget areas termed Top Level Budgets covering a wide variety of activities, such as the Army and RAF. Top Level Budget Holders are responsible for managing the budget for the organisations and executive agencies they represent.
Tornado GR4	The latest version of the RAF's primary attack aircraft, capable of supersonic speeds and low-level flight.
Typhoon	An advanced, agile fighter aircraft which will serve as the cornerstone of the RAF's fighting capability.
Urgent Operational Requirement (UOR)	Requirement for rapid procurement of capability in support of a current or imminent military operation to provide new capabilities or enhance equipment that the Department has already invested in.
Urgent Statement of User Requirement	The document outlining a capability gap and the technical requirements which will need to be satisfied in order for the gap to be filled.
Warfighter	Military individual partaking in war operations.
Warfighting	The conduct of combat operations against an adversary.
Weapons collection	Collection of weapons and munitions from warring factions or local communities following an armistice or end of conflict.