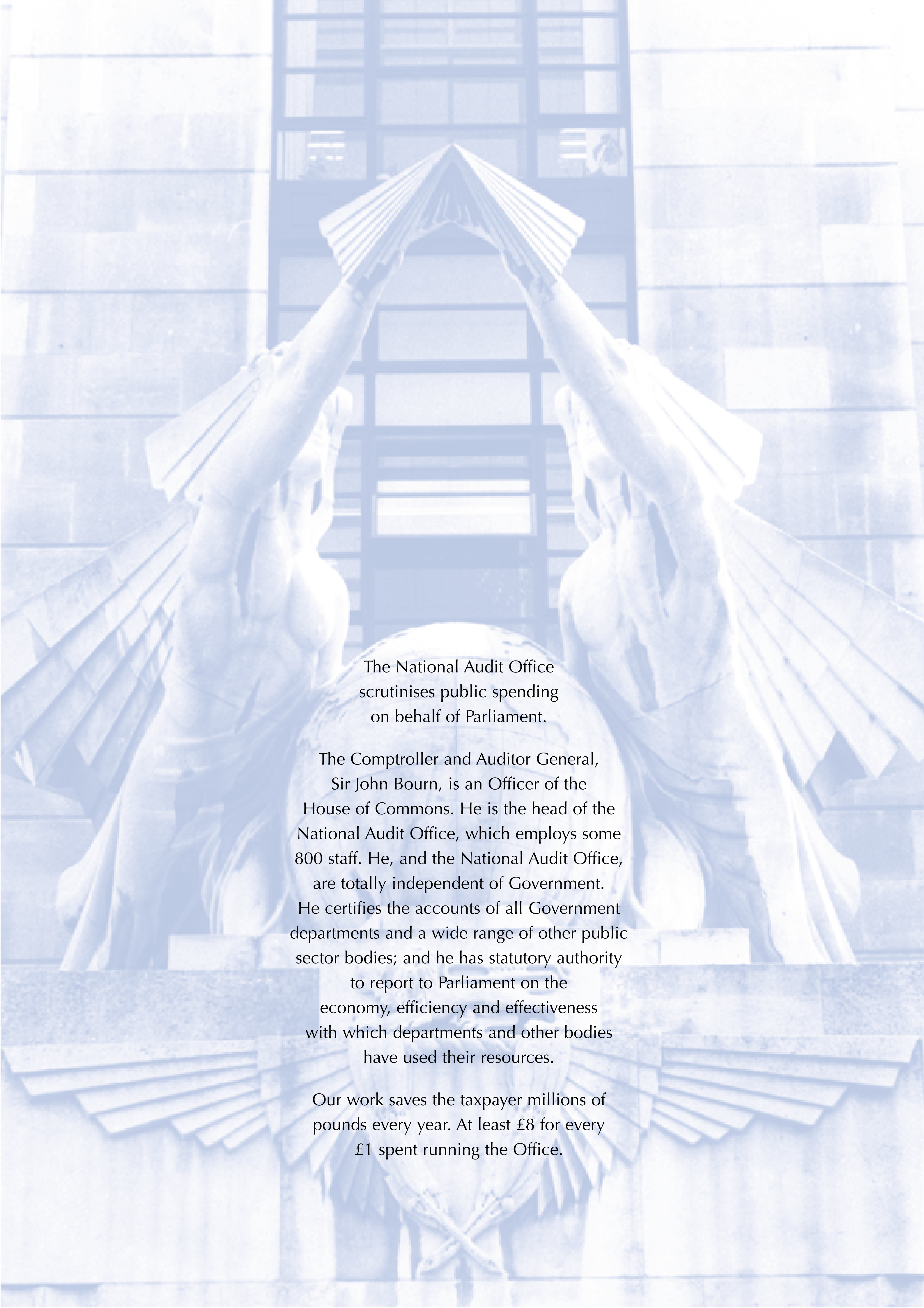
NATIONAL AUDIT OFFICE

Managing Risks to Improve Public Services

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL
HC 1078-I Session 2003-2004: 22 October 2004



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John Bourn **National Audit Office**
Comptroller and Auditor General **8 October 2004**

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Preface

In recent years a great deal of effort has been put into improving risk management in departments. The need for a more structured approach to risk has been highlighted by some costly and high profile failures in projects and policy implementation and events of unprecedented scale such as foot and mouth disease. Improved risk management has also been necessary to support the innovation and change needed to deliver better public services. In November 2002, therefore, a two year Risk Programme was launched by the Prime Minister to give focus and drive to departments in the development of plans and frameworks designed to make effective risk management a reality.

Departments generally have responded well to the Risk Programme; good progress has been made in putting in place the machinery to manage risk better. Examples of good practice are significantly more widespread than at the time of the previous NAO report published in August 2000. But the Risk Programme, which has created much of the recent momentum and focus for change, ends in December 2004. This is a critical time for departments; in order to secure the benefit of the processes and structures they have put in place, risk management must become increasingly an integral part of wider management, signalled by board level commitment and informed by clear lines of risk ownership and reporting. Where this does not happen, risk management practices will fail to deliver maximum benefit and may even fall into disuse or become pointless additional bureaucracy. This would be a missed opportunity for departments, already faced with a pressing need to deliver improved public services, often through increasingly complex delivery networks, while at the same time securing increased efficiency.

The Government announced in the Spending Review in July 2004 its intention to achieve savings of £21.5 billion a year, staff reductions of 84,000 in support functions by 2008, and sales of £30 billion of assets by 2010. If this is to be successfully implemented, whilst also delivering Public Service Agreement targets, risks will need to be successfully managed. This report is about how to do this, based on case study examples of effective risk management.

Our general conclusion is that while significant progress has been made by departments to improve their risk management, they have further to go to demonstrate that they have made effective risk management a central part of their day to day general management processes in a way that can fully deliver improved performance and other benefits. They need to continue to develop their ability to take risks and innovate, to keep projects and programmes on track, to handle complex service delivery networks, and to be ready with the means to respond to the fast-moving and unexpected turn of events.

In this report there are many examples of where departments and organisations have adopted innovative approaches to risk and risk management. However, there is more to be done if departments are to ensure that a culture of active, explicit and systematic risk management exists, where well managed risk taking is fully encouraged and supported, and where decisions made by civil servants and other public officials are routinely based around accurate and well informed judgements about risk. Good progress has been made - but the key is now to maintain the momentum.

executive summary

In this report 'Risk' is defined as something happening that may have an impact on the achievement of objectives as this is most likely to affect service delivery for citizens. It includes risk as an opportunity as well as a threat.

1 All departments face risks. These may be external such as terrorist threats, public health issues such as a flu epidemic, or instability arising from climate change. Such risks usually require a co-ordinated response involving more than one department. Risks may also arise from the capacity of departments to handle incidents or developments which have an impact on their core responsibilities such as the foot and mouth disease outbreak in 2001, which had an economic cost of £8 billion.

2 Well managed risk taking also presents opportunities to innovate, experiment and develop new ideas where more traditional ways of working are not able to deliver real change; for example, in providing an environment where radically new or different approaches can be developed in the confidence that the associated risks will be well managed. Indeed the greatest risk of all may be not taking any risks, where services and the way they are delivered do not anticipate change or evolve to meet new demands from citizens.

3 This report assesses the progress which departments have made since our report[1] published in August 2000 and the Committee of Public Accounts report[2] published in 2001. It focuses in particular on the resilience of departments' risk management to prevent adverse impacts on service delivery or value for money.

4 In their 2001 report, the Committee emphasised their support for well managed risk taking:

"Innovating to improve public services entails risk. We are rightly critical where risks are ignored, for example where major IT projects are poorly specified and managed; but we give due credit where risks are carefully identified, evaluated and managed recognising that good management reduces but does not eliminate the possibility of adverse outcomes."

Appendix 4 assesses the action which departments have taken in response to the Committee's recommendations to strengthen risk management. Good progress has been made against most of the recommendations, but there are some significant further challenges to address.

5 Our examination is based on a survey of the 20 main Whitehall departments, focus groups of 27 departmental risk managers, comparisons with private sector organisations (GlaxoSmithKline, Nomura, Prudential and Reuters) and internationally, academic research[3] and five case studies - Department of Trade and Industry, HM Customs and Excise, National Savings and Investments, Department for Culture, Media and Sport and Office for National Statistics. Summaries of the case studies and private sector organisations are published in a separate volume.

1 *Supporting Innovation: Managing Risk in Government Departments. NAO, 1999-2000 (HC 864).*

2 *Managing Risk in Government Departments. Committee of Public Accounts First Report, 2001-02 (HC 336).*

3 *Risk Based Decision-Making: Mitigating Threat - Maximising Opportunity. Report prepared for the National Audit Office by Professor Rhona Flin and Dr Margaret Crichton, Industrial Psychology Research Centre, University of Aberdeen. (Appendix 2 of this Report.)*

6 Risk management is an evolving capability and as well as assessing progress the report highlights a range of good practice. If more widely applied this good practice would better equip public sector organisations to deliver improvements in both public services and their overall efficiency.

Improving risk management is a key government priority

Risk management means having in place a corporate and systematic process for evaluating and addressing the impact of risks in a cost effective way and having staff with the appropriate skills to identify and assess the potential for risks to arise.

7 Many failures in service delivery have arisen from a lack of effective risk identification and management. This has often resulted in poorly thought through plans, unrealistic timetables for programmes and weak controls, delays in delivery and wasted money. On the other hand, effective risk management has provided the means to develop successfully new services or new ways of working. For example, National Savings and Investments (NS&I), which secures finance for the Exchequer by offering a range of savings products to citizens, entered into a joint Public Private Partnership venture with Siemens Business Services. Four years on, NS&I has modernised its operations in ways that could not otherwise have been realised. Service to customers has improved and there have been savings for the taxpayer.[4]

8 The greater financial certainty now provided by three year spending settlements should make it easier for departments to invest to improve the underlying infrastructure and capability of public services. This means, however, that in managing risks departments need more than ever to take a longer term perspective. They need to focus attention not only on ensuring that existing services remain reliable and resilient to risks but also that planned improvements are fully achieved and sustainable.

9 Departments are also under pressure to make more efficient use of resources which will require them to embrace even more the principles of good resource management and budgeting, while at the same time requiring in some cases radical rethinking of how services are delivered, for instance how departments' back office functions are organised (as part of Sir Peter Gershon's Efficiency Review). Today's civil servants, therefore, need to have the skills to exploit new opportunities by, in turn, having the skills to identify the risks they run and to manage those risks, which include dealing with increasingly complex networks of partners and contractors.

10 A number of important Government initiatives are seeking to achieve a step change in the way departments manage risk. In November 2002, the Prime Minister launched a two year Risk Programme overseen by Sir David Omand, Permanent Secretary and Security Intelligence Co-ordinator at the Cabinet Office. This is supported by a Treasury team providing advice and guidance through a network of departmental risk improvement managers. The Civil Contingencies Secretariat co-ordinates cross-departmental responses to significant emerging risks, such as SARS[5]. The Office of Government Commerce through Gateway[6] scrutinies conducts and facilitates reviews of major projects. Since 2001-02, Departmental Accounting Officers have also had to sign Statements confirming that they have reviewed the effectiveness of the system on internal control. Since 2003-04, they also have to confirm that they have discussed the result of the review with the Board, the Audit Committee and the Risk Committee if appropriate. In addition, the Prime Minister's Delivery Unit works with departments to help ensure the effective management of risks to the delivery of key public service priorities.

4 National Savings and Investments' Deal with Siemens Business Services, Four Years On. NAO, 2002-03 (HC 626).

5 Severe Acute Respiratory Syndrome.

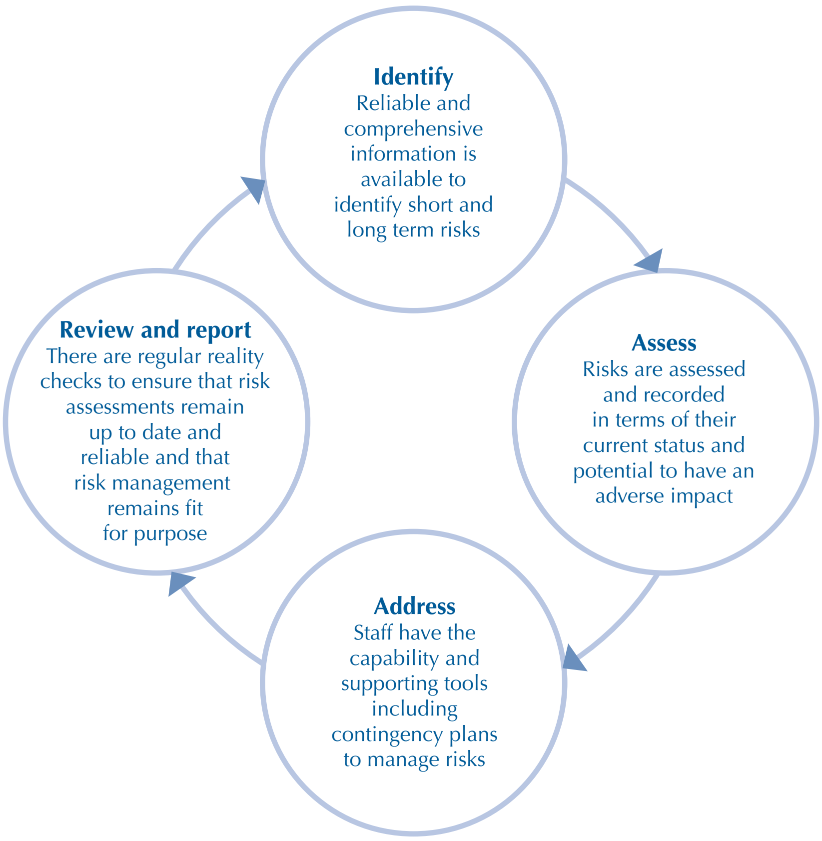
6 The Gateway Review process was introduced in February 2001. It provides for detailed scrutiny of major procurement projects at critical stages in their development so that significant risks can be identified sufficiently early to be managed.

11 This report adds further weight to the analysis of NAO's earlier report, and reports from the Strategy Unit and the Risk Programme by providing clarification of the challenges departments face and further practical illustration of how to get to grips with them.

Findings

12 There are four key stages to risk management **(Figure 1)**.

1 Four key stages of risk management[1]



NOTE

1 There are different models of risk management. This Figure reflects the key stages of risk management set out in the Treasury's Orange Book.

Source: National Audit Office

13 Each of these stages needs to be supported by robust processes but they should not be applied mechanistically to the extent that staff perceive them to be no more than an administrative burden. To be effective, departments need to have a well developed capability to manage risk through the exercise of intelligence and sound judgement. To help achieve this, the Risk Programme has focused on developing five aspects of risk management - leadership, risk strategies, skills, managing partnership risk and processes which incorporate effective risk management. The Treasury has developed, with departments, a Risk Management Assessment Framework to help departments judge, on a common basis, these risk management capabilities and progress in developing them over time. Our examination[7] indicated that:

7 *Covering the 20 main Whitehall departments.*

14 **Risk management processes are either fully embedded or implemented but more progress is needed in developing departments' capability to handle risk**. In the Risk Programme's Interim Report to the Chief Secretary in June 2004, just over 10 per cent of departments considered that processes were fully embedded and three quarters stated they had been implemented in key areas. Our independent survey confirmed this. In the Interim Report, one third of departments reported that they had clear evidence that risks were being handled effectively. No departments were fully confident of their capability to handle risk.

15 **Departments have made progress since 2000, particularly in defining risk objectives, having processes to report changes in risks and in regarding risk as an opportunity as well as a threat**. Over 70 per cent of departments report that they now have clearly defined risk policies compared to under 10 per cent in 2000. Departments also appear much clearer about what risk management is intended to achieve - 95 per cent reported that they had defined risk objectives compared to 19 per cent in 2000. In 75 per cent of departments, senior managers discuss overall risks and how they are changing at least quarterly.

16 **Staff have greater access to training and guidance on risk management**. Compared to 2000 when no department considered that this was adequate two thirds now rate training as effective or very effective. While there is more support within departments to encourage innovation in the spirit of well managed risk taking, there needs to be more support and incentives for staff so that the willingness to embrace innovation becomes much more widespread.

17 **The Risk Programme has improved communication between departments about risk and a common understanding of risk has developed within and between departments**. Our focus groups considered that the programme had enabled departments to benchmark their respective risk management approaches to learn lessons and share good practice.

18 While there is therefore evidence of good progress in many respects, more needs to be done particularly in how risk management is used to improve service delivery.

19 **Many departments have yet to establish an overall view about their exposure to risk**. Departments are less confident about their understanding of the total range of risks they have to manage; for example, just one quarter of departments consider they know how much risk they can take to achieve objectives. This concern is greater where departments have complex delivery chains and depend on a large number of contractors or partner organisations.

20 **Managing the working relationship with partner organisations requires strengthening**. In 2000, some 20 per cent of departments were confident they understood the strengths and weaknesses of their partner organisations' risk management approaches. By the time of our May 2004 survey, some 30 per cent were confident. Issues of particular concern to departments were the difficulties of communicating through complex delivery chains and lack of clarity about which delivery organisation was responsible for different risks.

21 **More progress is needed to embed risk management in the day to day activities of departments**. Three quarters of departments consider they face more risk than they did three years ago. While three quarters of departments have implemented risk strategies in key areas, these are not always sufficiently well developed or understood by key staff. Training has yet to have the widespread impact so that there is a sufficient critical mass of staff who have well developed skills and expertise with the confidence to manage risks effectively.

22 In summary, the Risk Programme has been influential in supporting departments in establishing the overall framework, mechanisms and tools for managing risks. In addition structures, such as the Civil Contingencies Secretariat, should enable departments to respond in a co-ordinated way to wider cross-cutting risks of national strategic importance. The main aspect requiring further development if departments' risk management is to be sufficiently resilient is the capability of staff to apply risk management skills effectively by making good use of the tools and processes that are in place. Change of this magnitude is likely to take some time given the size of some departments and agencies. But as reflected elsewhere in this report, there are increasing examples of where good progress is being made.

Risk management can deliver tangible benefits

23 The importance of departments having a well developed capability to manage risk is clearly demonstrated by some of the benefits secured by the five departments included in this study and the private sector companies which we consulted **(Figure 2)**. In particular risk management can help departments:

i) **Deliver better public services**. For instance, it can help ensure that departments' Public Service Agreement targets, programmes and projects deliver what they are intended to, on time and within budget, by early identification of potential risks and having the means to take early action to deal with them. Often, these are complex and challenging issues. Failure to anticipate and grip risks quickly may put delivery in jeopardy. Risk management can also contribute to sustained improvements in services by bringing a flexibility and resilience to the way services are delivered. This may include, for example, adapting to changes in expectations of citizens or other service users, or maintaining services through regular appraisal of delivery mechanisms and being ready to act in the event of the unexpected, by careful planning and testing of business continuity arrangements.

2 Benefits of reliable risk management

Risk management can contribute to

Better public services

through

Improving efficiency

By 2000, 1 in 5 cigarettes smoked in the UK was smuggled, costing around £2.5 billion in lost revenue. Through a comprehensive risk assessment **HM Customs and Excise** refocused its efforts from just increasing the number of seizures of smuggled cigarettes to disrupting supply routes.

Risk based resource allocation has resulted in a more efficient and effective use of resources. The previous rapid growth in the market share of illicit/smuggled cigarettes has been successfully slowed and then reversed so that by 2002-03 it had been reduced to 18 per cent, compared to 34 per cent projected by this time without action, saving over £3 billion in revenue.

Making more reliable decisions

Departments rely heavily on accurate and comprehensive data to take decisions. For example, unreliable statistics on the UK economy can affect decisions on interest rates.

The **Office for National Statistics** has a risk management programme which includes the need to minimise the likelihood of errors which would undermine the UK's economic performance and public confidence.

Supporting innovation

Drawing on private sector experience, **National Savings and Investments** launched a new type of savings account - the Easy Access Savings Account which is accessible through automated teller machines - thus improving convenience to customers.

The **four UK authorities for education qualifications,** working in partnership with funding by the Invest to Save budget, are acquiring new technology for managing the centralised collection and marking of examination scripts. This is intended to improve the quality and speed of marking while reducing risks to security and confidentiality of scripts.

The **Department for Culture, Media and Sports'** Culture Online is making a range of arts events much more accessible through new technologies, including the internet, digital television and mobile devices.

The **Prescription Pricing Authority** has successfully implemented the issuing of plastic entitlement cards for the purposes of providing patients with evidence of prescription charge exemption or prepayment.

Source: National Audit Office case study examinations

ii) **Improve efficiency**. Departmental procedures have often developed over many years and as a result some have become multi-layered and sometimes unnecessarily complex, which inevitably increases costs. In some cases they can be gold plated to deal with every conceivable circumstance and need however small or remote. A good test of whether a process is fit for its intended purpose is to review it periodically from the perspective of risk: that is, forming a judgement on what is an acceptable level of risk. This will be largely influenced by the potential service delivery or monetary implications should the risk mature and the likelihood of this occurring, and then assessing whether the supporting processes are likely to be able to handle such an occurrence. Examples include systems intended to prevent error in processing a claim or making a payment, a key IT system failing, an unacceptable increase in waiting times for a service, or significant variations in the quality of a service. By adopting a risk based approach, managers can make better judgements about how systems can be improved and new ways of working developed to reduce unproductive overheads or overly cautious delivery mechanisms.

iii) **Make more reliable decisions**. In developing new policies, decisions often have to be made about the needs of the people intended to benefit and the most cost effective means of meeting these needs. Such decisions can involve a degree of uncertainty and much depends on the reliability of the information available to take such decisions. For example, a key aspect might be understanding the characteristics and preferences of a specific client group to avoid any potential exclusion from the intended benefits. Risk management can be very useful in such circumstances by helping to test the rigour of underlying data and minimise the possibility of any misinterpretation or inaccuracy which could have adverse consequences. It can also be used to assess the probability of both intended and unintended outcomes occurring so that action can be taken to ensure that the policy is implemented in a way to ensure its success.

iv) **Support innovation**. Applying a systematic risk management approach can help to weigh risk against potential reward and turn theoretical ideas, new technologies or novel means of delivery into practical propositions. For example, Culture Online - developed by the Department for Culture, Media and Sport - is making available different arts events online to reach groups of people who would normally have little contact with the arts. There are linkages with the National Curriculum to encourage greater awareness and take up among children as well as adults.

What more needs to be done

24 Drawing on good practice in both public and private sector organisations and building on existing progress, there are five key aspects of risk management which, if more widely applied, could substantially help secure these benefits and contribute to better public services and increased efficiency.

25 **First - Sufficient time, resource and top level commitment needs to be devoted to handling risks**. Reliable processes and procedures, however well developed, are not enough; they need to be applied with skill and judgement. Over reliance on process can create false confidence that risks are under control and at worst result in a "tick box" culture. Risk management needs to be ongoing to deal with often rapidly changing events and circumstances; it is rarely static. Changing behaviours so that key staff understand how to identify and respond to risk is a major task which inevitably takes time. It needs concerted and sustained leadership with well publicised role models from which others can learn. A key issue is the extent to which staff feel confident that they can report problems, failures and threats without fear of unjustified censure or penalty. Moreover, a mature risk culture recognises that when risks are taken they will not always succeed and creates a greater incentive for all staff to acknowledge and learn from difficulties rather than conceal them, and to report threats to delivery sooner rather than later. If such a culture exists problems are more likely to be identified before they become unmanageable and spiral out of control.

Recommendation

26 **To help achieve this cultural change, departmental boards need to spend time anticipating risks and judging what actions need to be taken, including involving Ministers where appropriate. This includes**:

i) assessing the development of staff skills in relation to risk management and whether learning activities give sufficient prominence to risk management;

ii) forming a view about the department's risk appetite at the outset of policies, programmes and projects by considering where it is willing and prepared to take risks, for example in new policy initiatives, and where it should be risk averse and needs to monitor closely or minimise risks being taken, for example in essential service delivery or corporate governance;

iii) re-emphasising their support for risk management periodically, including the need for staff to be open about challenges they face without fear of censure or blame, in order to inform better decision-making;

iv) encouraging innovation and well managed risk taking by applying sufficient management grip to new or risky ventures and ensuring a systematic risk management approach is in place so that benefits from innovative or novel approaches to developing and delivering services are more likely to be secured.

27 **Second - Responsibility and accountability for risks need to be clear, backed up by scrutiny and robust challenge to provide assurance**. If staff were not clear about their responsibilities risk management would be weak and ineffective. At worst, important aspects of service delivery could fall "between the cracks" with no one taking responsibility. Lack of clarity could lead either to staff being unduly risk averse for fear of blame if things go wrong or to excessive risks being taken when staff are not clear about the limits of their authority at which decisions should properly be referred to more senior staff.

Recommendation

28 **To help achieve effective responsibility for risk management, departments need to ensure that they have clear structures of delegation which provide staff with clarity about the risk decisions they can take, but not in so much detail that this stifles initiative. They should continue to clarify the extent of risk which can be managed at each level in the department and check that appropriate procedures for escalating risk management decisions are in place**.

29 **Effective accountability** needs (i) an environment which encourages staff to be open in explaining their risk management decisions and (ii) processes which help ensure risk management decisions are adequately reviewed. Review of risk management decisions should be based upon consideration of the evidence that was available on which to base the decision and whether the decision was within the authority of the person who took it. **Robust constructive challenge** can support effective accountability and provide assurance about the reasonableness of risk management decisions. It also promotes opportunities for lessons to be learned from experience. Audit Committees are a key element of a robust constructive challenge process; their effectiveness is frequently enhanced by having non-executives in their membership. They can provide effective overall assurance on the way in which departments manage their risks. Such assurance also underpins the Accounting Officer's annual Statement on Internal Control.

30 There are various ways in which robust challenge can be provided. GlaxoSmithKline's business, for example, is supported by a number of groups overseeing activities such as regulatory compliance and research and development. The work of these groups is subject to independent scrutiny and discussion by the Audit Committee, in this case consisting entirely of non-executive directors.

Recommendation

31 **To help achieve effective accountability and challenge departments need to develop a culture that encourages staff to account for their management of risk, whether or not it was successful, by explaining the reasons behind decisions and the evidence on which they were based. Departments should also consider whether their Audit Committees are adequately resourced to provide sufficient objective assurance about the effectiveness of risk management and to undertake constructive challenge in a way that supports effectively the business of the department**.

32 **Third - Departments need to base their judgements about risks on reliable, timely and up to date information**. Reliable data are the life blood of risk management. But departments must also have the capability to assimilate and interpret often complex information quickly and use this to make reliable decisions. Professor Rhona Flin's and Dr Margaret Crichton's paper[8] prepared for the NAO draws comparisons with ensuring safety in high reliability organisations, such as offshore oil, aviation and nuclear power. In these, often highly time pressured industries, much attention is given to ensuring that information is comprehensive enough and presented in a way that supports real time decision-making. If such information is unreliable, lacking in sufficient precision or not interpreted quickly, human life can be put at risk, for example the Piper Alpha disaster. While the risks government faces may often be different, the principles are very similar, with the need for departments to support a culture where emerging or changing risks and 'near misses' are reported openly so that they can be addressed promptly and learned from.

8 *Risk Based Decision-Making: Mitigating Threat - Maximising Opportunity. Report prepared for the National Audit Office by Professor Rhona Flin and Dr Margaret Crichton, Industrial Psychology Research Centre, University of Aberdeen. (Appendix 2 of this Report.) Professor Flin and her team already contribute their insights to the Senior Civil Service Successful Delivery course on Risk Management set up by the Centre for Management and Policy Studies and the Risk Programme.*

33 Departments are also more likely to make better decisions on risks if they understand how best to respond to different circumstances. Professor Flin highlights different types of decision-making which are best suited to different risk circumstances. For example, where an event has occurred previously an experienced decision-maker should be able to "read the situation" and draw on past experience. This depends, however, on the fast retrieval of information or corporate knowledge of what worked well before. An example of this is the major flooding in the autumn of 2000[9] when the Department for Environment, Food and Rural Affairs needed to retrieve knowledge quickly of how flooding on this scale had been dealt with many years before.

34 Conversely a department may be faced with a new or unfamiliar situation requiring the design of a completely new and untried course of action where no accumulated rules or corporate memory of suitable actions are available. Depending on time pressures this can be where opportunities for innovation may arise. The key point is, however, that in responding to risk, potential courses of action are considered very much in the context of the situation and whether there is prior experience to learn from.

Recommendation

35 To help ensure that information is reliable departments need to subject their data requirements and sources to regular review. They need to be confident that their information about risks to performance is fit for purpose, that their staff, in particular those with delivery and budgetary responsibilities, are both aware of the risks and how they are being managed and that the early warning "signals" and "messages" from staff at the front line highlighting emerging risks reach those in the management hierarchy with the power to act. Departments also need to avoid information overload - too much information about risks can undermine the effectiveness of decision-making because of the time it may take simply to assimilate, filter and focus material. But too little data can result in fundamentally flawed decisions.

36 Assessments of the extent to which information about risks and how to manage them is fit for purpose should include:

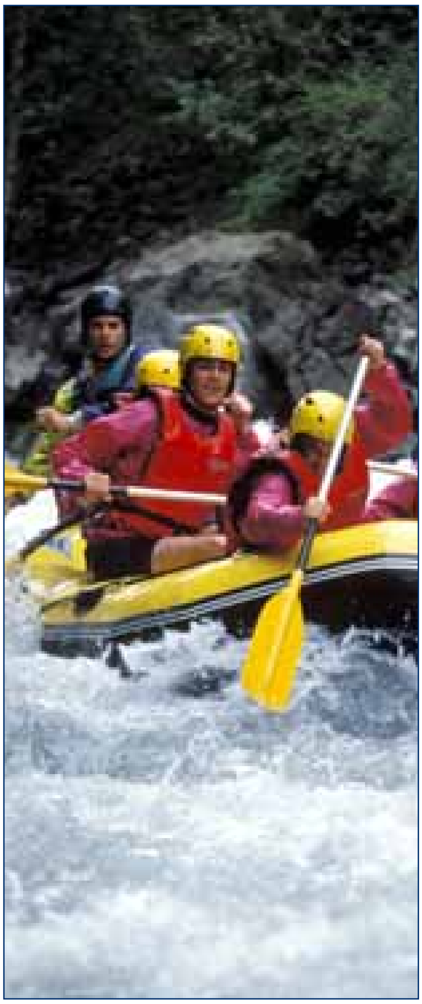
i) risk identification - departments need information about the kind of risks they face using, for instance, horizon scanning or analyses of trends in data, or feedback such as customer surveys about service delivery;

ii) likelihood and impact - departments should check that they have sufficient timely information to assess the likelihood and impact of risks materialising, by analysing, for instance, data from past experience in projects and programmes or, for key service delivery, from tests of continuity and contingency plans. The costs of improving information about risks need to be considered against the likely savings which could be derived from managing risks effectively and having sufficient information to avert service delivery failures;

iii) addressing risks - once risks have been assessed, departments need to determine how to address them on a portfolio basis, in the context of achieving the overall objectives of the department. To do this they should have good quality information to monitor changing risks which can be promptly collated or triangulated with other data to inform judgements, for example external perspectives on risks to delivery;

9 *Inland Flood Defence, Committee of Public Accounts Eighteenth Report, 2001-02 (HC 587).*

iii) **review - the way in which information is communicated is also important; it should be presented so that it can be easily understood to facilitate effective decision-making and, in particular, provide early enough warning of potential risks to trigger action at sufficiently senior levels in the department.**



37 **Fourth - Risk management needs to be applied throughout departments' delivery networks**. Departments' responsibility for, or oversight of, a range of public services mean that they often depend on a network of organisations including local authorities, non-departmental public bodies operating at arm's length, private sector suppliers and voluntary organisations. Poor quality services can often arise because one organisation in a complex delivery chain makes incorrect assumptions about the activities of another or fails to share vital information. Departments' risk profiles are therefore often influenced by decisions taken by others, over which they may have limited control. Prior to 2004-05, for example, the Department for Education and Skills had little control over the funding allocations made by local education authorities to schools. In some cases some risks can be handled through contractual arrangements such as in Private Finance Initiative deals. But in others, departments have to work more informally with organisations to achieve common agreement as to how key risks should be handled.

Recommendation

38 **Departments need to test the resilience of their delivery chains by**:

i) **checking that the department's and its partners' objectives are sufficiently aligned, that partners have 'buy in' to the department's objectives, and that there is a common understanding of risks and how they can be managed, for example whether a joint risk register, or sharing of risk registers, is appropriate;**

ii) **reviewing whether there are adequate incentives for partners to manage effectively the risks for which they are responsible;**

iii) **being alert to changing circumstances such as increasing or changed demand for a service and having adequate information to monitor such circumstances and anticipate potential shortfalls in performance;**

iv) **assessing potential shortages in key skills and whether the department has staff who have sufficient experience of working with delivery bodies and vice-versa (which may often require taking a much longer time perspective); and,**

v) **evaluating cost effectiveness, particularly, if too many resources are being consumed by successive tiers of administration.**

39 **Fifth - Departments need to continue to develop their understanding of the common risks they share and work together to manage them**. Action by one department can have implications for another; for example, the emphasis which schools give to physical fitness will influence levels of obesity and children's general well-being. The complex interconnections between key government policies particularly in health, education and tackling social deprivation means that departments need to share their understanding of key risks. Not to do so can have significant implications for public services and also for value for money, particularly, in departments' commercial dealings. A good example of addressing common risks is work being done by the Office of Government Commerce to ensure that departments adopt a more strategic approach to individual market sectors and by co-ordinating the management of key suppliers, as well as by taking advantage of their collective buying power to secure better deals. At a strategic level the Civil Contingencies Secretariat co-ordinates cross-departmental responses to significant emerging risks, and other bodies examine interdependence of common risks in areas such as social exclusion or fraud. Shortfalls in other aspects of performance, such as major IT projects, however, indicates that there is scope for greater shared understanding of risks and how best to tackle them; as set out by the Committee of Public Accounts in its January 2000 Report *Improving the Delivery of Government IT Projects*.[10]

Recommendation

40 In assessing risks, departments need to be confident that they have considered the implications of their policies and programmes for other parts of the public sector, by developing networks to help foster understanding of the risks that they face. The risk improvement managers network set up under the Risk Programme, for example, provides one such forum, and could continue to be developed as a means of exchanging good practice beyond the end of the Risk Programme. Developing further experience of how to address common risks should include, for example, risk communication - building on the work promoted by the Risk Programme[11] to help departments to develop a common understanding of how they can best engage with the public and learn from each other to address issues of public concern about risks so that the public has confidence that risks are being well managed; service delivery - the need to share experience of how opportunities have been exploited and how well managed risks have been taken to improve public services; and innovation - the need to secure ideas and good practice in innovation from departments' activities so that they can be learned from and acted on elsewhere.

41 In December 2004, the Risk Programme comes to an end. Departments, with support of the Treasury and the Cabinet Office, need to ensure that the momentum to improve risk management continues. The examples of good practice in this report are intended to assist this. In addition, Annex 1 sets out a simple check list to help departments assess whether their risk management is fit for purpose to deliver the benefits identified in this report. Treasury intends to incorporate this into its risk management assessment framework.

10 Improving the Delivery of Government IT Projects, Committee of Public Accounts First Report, 1999-2000 (HC 65).

11 See for example: guidance on Communicating Risk at http://www.ukresilience.info/risk and Principles of Managing Risk to the Public at http://www.hm-treasury.gov.uk/media/CBD/D8/risk_principles_220903.pdf

Annex 1

Good practice in the application of risk management - self-assessment questions for departments

Has the Department...	Benefit	Example	
	Delivering better public services		
1 ... assessed the risks to delivering its Public Service Agreements, policies, projects and programmes inherent in the day to day actions of staff, and is it addressing these?	Assessing risks puts departments in a better position to deliver improved services	NHS	Assessing risks to the quality of care provided to patients has resulted in changes to delivery in some NHS trusts, for example the introduction of contact cards so patients can raise concerns they have after treatment, improved facilities for parents on children's wards, and immediate referral to a senior doctor of any patients who return to the Accident and Emergency department within six weeks.[1]
2 ... checked that staff have clear reporting chains and mechanisms to alert senior management to new and changing risks?	Active and open management encourages delivery networks to work effectively	HM Customs and Excise	To keep abreast of changes to smuggling operations, Customs staff are actively encouraged to complete reports on any new risks identified so that new types of smuggled goods, methods of concealment, or new sources of origin can feed into overall intelligence assessments to aid detection.
3 ... tested regularly its contingency and business continuity plans to check that service delivery can be maintained in the event of disruptions beyond the Department's control?	Effective continuity planning maintains service delivery in the face of the unexpected	DWP Department for Work and Pensions	To maintain payments to claimants in the event of a major IT failure, the Department for Work and Pensions tests, with Executive Team level ownership, the robustness under various disaster scenarios of its outsourced IT services. Effectiveness of tests is assessed by internal audit.
	Improving efficiency		
4 ... identified where its systems of oversight or control are unnecessarily elaborate, and where scope exists to reduce costs through taking well managed risks?	Taking well managed risks can help reduce costs	dti	To reduce the time taken to complete specific stages of the process for personal injury claims from ex-miners, the Department of Trade and Industry's Coal Liabilities Unit launched a website enabling solicitors acting for claimants to complete claims forms electronically, to obtain management information on progress of their claims caseload and to target their highest priority claims, for example in respect of seriously ill claimants.
5 ... deployed resources where they are likely to have the most cost effective impact on addressing risks, for example on the basis of thorough risk assessments at the outset of policies, programmes and projects?	Identifying key risks to delivery leads to better deployment of resources	HM Customs and Excise	To reduce the market share of smuggled tobacco and to protect tax revenues, HM Customs and Excise identified and analysed the risks to achieving reductions in illegal tobacco imports and devoted £209 million to tackle the problem. It used intelligence to refine its risk assessments and direct its interventions to supply routes, activities and ports of entry where illegal importation was most likely.

NOTE

1 *Achieving Improvements through Clinical Governance: A Progress Report on Implementation by NHS Trusts. National Audit Office, 2002-03 (HC 1055).*

Source: National Audit Office

Has the Department…	Benefit	Example
	Making more reliable decisions	
6 ... assessed how much risk it can take when seeking to improve services?	Deciding how much risk to take enables better management of change	To inform decisions about whether there is scope to manage the overall portfolio of risks to exploit opportunities but not become overly exposed, Prudential plc's Group Operational Risk Committee reports to the Chief Executive on risks arising in different parts of the business which, when taken together, may present an overall risk. It also identifies risk which may arise in one area but have the potential to affect the Prudential brand more generally.
7 ... encouraged all staff to report risks without fear of blame or censure?	Openness about risk makes for precision decision-making	To enable senior management to assess and take decisions on the overall risk the company is taking, Nomura, in its induction training, promotes from the outset a culture that encourages staff to be open about the potential risks they run in their day to day activities in the financial markets.
8 ... secured lessons from within the Department and drawn from the experience of other departments about how risks have been managed, in particular for new or untried service delivery?	Learning lessons from others helps anticipate risks, particularly with new and untried methods of service delivery	To enable others to draw from their experiences in setting up and running major and complex compensation schemes, staff in the Coal Liabilities Unit keep 'Storybooks' documenting work done in areas such as risk and audit, efficiency, stakeholder communications, learning and fraud. The Storybooks are updated every six months or so and will be made available for wider dissemination within the Department.
	Supporting innovation	
9 ... conducted risk assessments on the cost effectiveness of developing new services, including the opportunities for improved value for money?	Good risk management provides the means to develop new services successfully	National Savings and Investments launched a new product, the Easy Access Savings Account, which required creating a system for customers to access the new account through automated teller machines. Its staff's experience of launching financial products in the private sector enabled effective management of the risks of over stimulating demand and not being able to deliver the products to customers in a timely fashion.
10 ... satisfied itself that its approach to managing risks nurtures new ideas and secures their benefits?	Sound risk management can help harness the benefits of new ideas	To develop the confidence of partner organisations to undertake risky, innovative projects that are well managed, Culture Online commissions projects on the basis that the risks and costs are commensurate with audience or strategic benefits and devotes significant up front time with bodies prior to funding to assess risks to delivery and how they will be managed.
11 ... when assessing new ways of working, checked that its plans allow sufficient time and resources for staff to learn new working methods?	Risk management enables new ways of working	To utilise expertise in and knowledge of risks associated with high volume issuing of plastic entitlement cards gained from its Patient Services work, the Prescription Pricing Authority is in a good position to take on for the Department of Health a new area of work - implementing the European Health Insurance Card (E-HIC). This will result in the issue of plastic cards to replace the E111 form currently used by UK travellers to obtain medical treatment in European Union countries.

Part 1

Why risk management is important

1.1 All government departments face risk. External threats such as climate instability and terrorist threats may be mitigated through departments' contingency plans, but may be outside the power of departments to change. Other external threats that form a direct part of departments' business, such as the 2001 foot and mouth disease outbreak, with an economic cost to the private and public sectors of some £8 billion, could be avoided or mitigated through better identification of potential risks and taking actions to manage them.[12] Other risks arise from internal activity, departments' day to day business: the risk of failure to meet policy objectives and programme and project targets through not identifying obstacles to implementation, project overrun, poor management of finance and resources, or fraud **(Figure 3)**.

1.2 Figure 3 shows a range of risks, which if not addressed, can escalate to become major threats and may create vertical and horizontal links between risks of different magnitude and apparent importance. Failure to implement IT change, for instance, could result in inadequate systems at operational level leading to poor delivery of services to the public, jeopardising the ability of partners in a department's delivery network to deliver and providing opportunities for fraud, resulting ultimately in damage to a department's standing with external stakeholders. Skills shortages might be seen as a minor risk in individual operational areas, but cumulatively across a department could severely limit its capacity to deliver. HM Treasury offers a summary of the most common categories or groupings of risk to help organisations to consider the range of risks they face **(Figure 4)**.

Well managed risk taking creates opportunities and delivers benefits to citizens and taxpayers

1.3 Risk is often associated with avoiding or mitigating obstacles to achievement and high risk awareness can lead to risk aversion - a motivation to avoid risk at all costs and to stick to tried and tested ways of working. Conversely, failure to seize new opportunities and to implement innovation also has risks - the risk of opportunity cost and of failing to implement changes that would improve service delivery and benefit departments' customers.

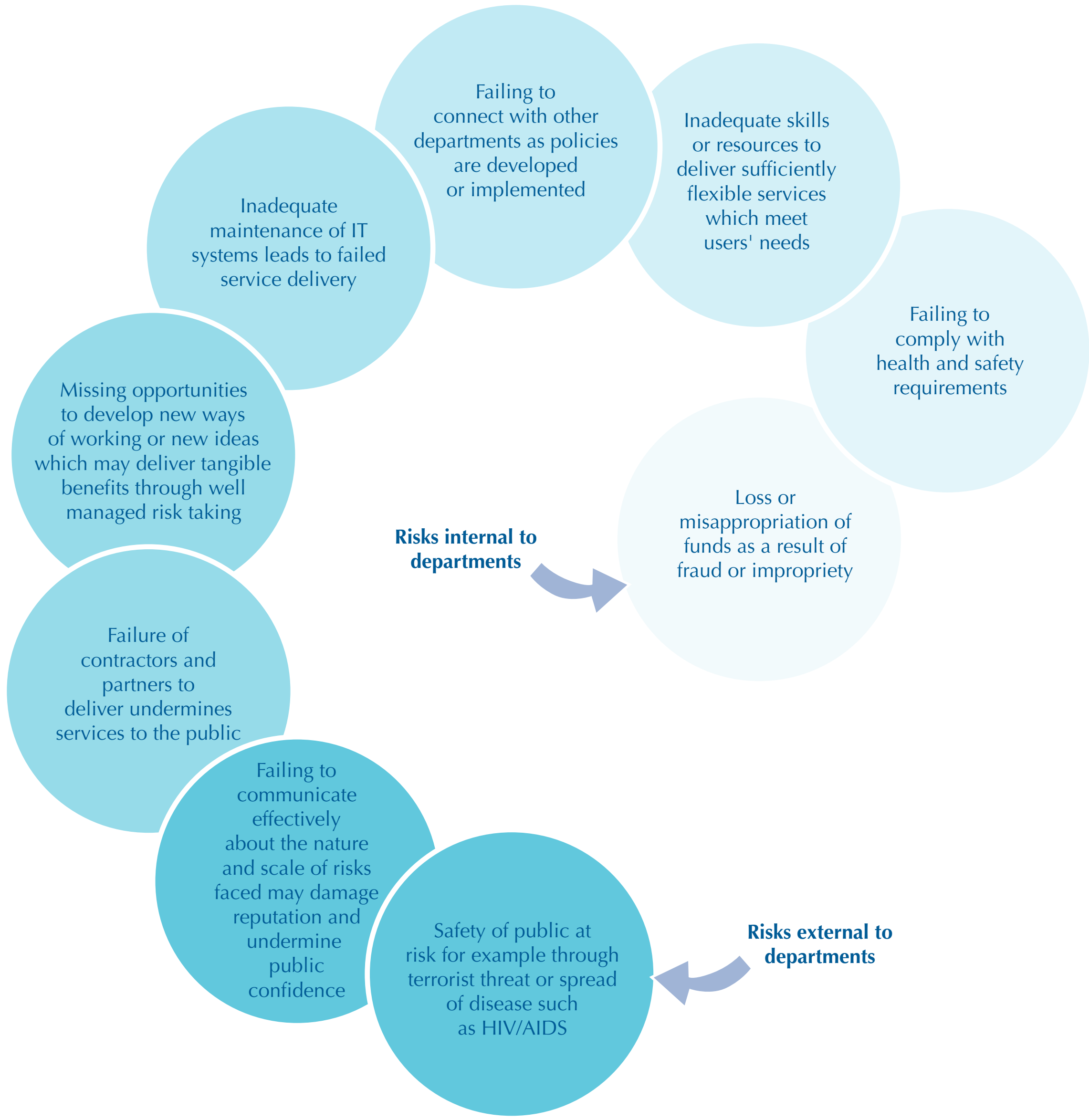
1.4 Departments have demonstrated that they can take well managed risks that improve service delivery and provide better value for money with tangible benefits for taxpayers:

a Through careful management of risks during the design and implementation of the policy, between November 1999 and December 2000, *the Department of Health's meningitis C vaccination programme* successfully distributed 18 million doses of meningitis C vaccine, sufficient for every child under 18 years of age.[13]

b *The former Radiocommunications Agency's joint venture company with CMG - Radio Spectrum International* - is a good example of identifying and managing opportunities. Radio Spectrum International is an innovative solution to the problem of the Agency obtaining IT services, provided by CMG, whilst allowing for commercial exploitation of the Agency's expertise in radio spectrum management by selling consultancy and IT systems to overseas administrations.[14]

12 *The 2001 Outbreak of Foot and Mouth Disease. National Audit Office, 2001-02 (HC 939).*
13 *Modern Policy-Making: Ensuring Policies Deliver Value for Money. National Audit Office, 2001-02 (HC 289).*
14 *The Radiocommunications Agency's Joint Venture with CMG. National Audit Office, 2000-01 (HC 21).*

3 Government departments face a range of internal and external risks



Source: National Audit Office

c Partly by taking a well managed risk, *the Defence Transport and Movements Agency,* part of the *Defence Logistics Organisation,* achieved a notable success in chartering transport vessels to provide sufficient shipping to transport equipment to the Gulf for Operation Telic. Through its well structured approach to the market, the Agency secured sufficient capacity at an early stage and at lower than expected cost. If the Agency had not secured these vessels in good time, it is highly unlikely that the UK's contribution to the Operation would have been as successful.[15]

Poor management of risk leads to programme and project failure

1.5 Failures that could have been avoided if departments had better anticipated and managed risks result in poor service to citizens, receive widespread media exposure, damage government credibility and feature frequently in National Audit Office reports; for example:

15 *Operation TELIC - United Kingdom Military Operations in Iraq. National Audit Office, 2003-04 (HC 60).*

4 Categories of risk

Category	Example
External (arising from the external environment, not wholly within the organisation's control, but where action can be taken to mitigate the risk)[16]	*Political*: Cross-cutting policy decisions, machinery of government changes *Economic*: Exchange rates affect costs of international transactions *Socio cultural*: Demographic change affects demand for services *Technological*: Obsolescence of current systems *Legal*: EU requirements *Environmental*: Buildings need to comply with changing standards
Operational (relating to existing operations - both current delivery and building and maintaining capacity and capability)	*Delivery*: Service/product failure - Failure to deliver the service to the user within agreed/set terms; Project delivery - Failure to deliver on time/budget/specification *Capacity and capability*: Resources - Insufficient staff capacity/skills/recruitment and retention; Relationships - Level of customer satisfaction with delivery; Operations - Insufficient capability to deliver; Reputation - Level of confidence and trust in the organisation *Risk management performance and capability*: Governance - Regularity and propriety; Scanning - Failure to identify threats and opportunities; Resilience - Disaster recovery / contingency planning *Security*: Security of physical assets and of information
Change (risks created by decisions to pursue new endeavours)	*Change programmes*: Programmes for change cause threats to delivery at current capacity *New projects*: Making optimal investment decisions *New policies*: New expectations but uncertainty about delivery

Source: HM Treasury, "The Orange Book", Management of Risk: Principles and Concepts, Revised August 2004

a Weaknesses in the business assumptions made at the start, and in the delivery of systems to process all types of application were key factors in the Criminal Records Bureau's problems, which impacted adversely on the intended level of service for customers. A lesson applying more widely from the Bureau's experience is that good risk management may require potentially courageous decisions to defer the introduction of a new service so that fully tested processes and systems, operated by well trained staff whose operational productivity has been established, are in place at service commencement.[17]

b The Department for Education and Skills failed to actively manage the design and implementation of the *Individual Learning Accounts* scheme. The Department's risk assessment and risk management gave insufficient weight to advice received on the risks of fraud and abuse or about quality of training.[18]

c The Lord Chancellor's Department procured a contract to provide services to 42 Magistrates' Courts Committees, over which it did not have real authority or control. It ran a poor competition, attracting only one bidder, and failed to take decisive action when its contractor ICL did not deliver what was required. ICL did not understand the Department's requirements, took on excessive risk and under priced its bid. It performed poorly throughout and could not meet the dates for delivery. As a result of these failures, costs have doubled in just four years to almost £400 million and magistrates courts still do not have the IT systems they need to manage their workload properly.[19]

Departments are under pressure to become more efficient - and good risk management can help

1.6 Managing risks to delivery and the achievement of targets and objectives is increasingly important. Successive Spending Reviews have set ambitious targets for improvements in key public services - education, health, transport and criminal justice - and have raised citizens' expectations of service delivery. Increasingly, citizens think of themselves as customers of government departments and agencies and bring to departments and agencies similar expectations of customer service they would have of any High Street retail chain or professional service. In a climate of public and media scrutiny and freedom of information, failure to meet these expectations and deliver is increasingly transparent.

16 *Analysis is based on the "PESTLE" mode, Strategy Survival Guide, www.strategy.gov.uk*
17 *Criminal Records Bureau - Delivering Safer Recruitment? National Audit Office, 2003-04 (HC 266).*
18 *Individual Learning Accounts. Committee of Public Accounts Tenth Report, 2002-03 (HC 544).*
19 *New IT Systems for Magistrates Courts: The LIBRA project. Committee of Public Accounts Forty-fourth Report, 2002-03 (HC 434).*

1.7 Departments are also under pressure to make more efficient use of resources,[20] which can imply radical rethinking of how services are delivered. Sir Peter Gershon's Efficiency Review, for instance, calls for rethinking how departments deliver services and the back office functions that support them and Sir Michael Lyons' review of the location of government offices encourages cost cutting by moving offices out of London and the South East. Successful implementation of these programmes and achievement of their targets while also achieving Public Service Agreement targets is dependent on good risk management. Without it, these programmes will fail.

1.8 To meet demands for change, departments will need to engage in well managed risk taking to innovate in how they deliver services and how they deploy their resources. Technological advances mean that key delivery stages need no longer be owned by or co-located with departments and private sector contractors may best provide the systems and skills required. This leads to slimmer departments focusing on core skills of policy-making, but complex delivery networks that carry inherent risks by moving control of critical stages of service delivery outside the immediate influence of departments.

1.9 Today's civil servants need to be risk managers with the skills to manage the associated risks of dealing with contractors, large budgets, complex delivery patterns, and the risks of delivery failure. To meet objectives and targets, managers must identify problems and threats to achievement quickly and take decisive action to deal with them. Good resource management and risk management are key tools to effective service delivery. Risk management enables departments to identify risks to achieving their delivery objectives and to deploy resources where they are most needed. Resource management enables them to maximise the outcomes achieved from the resources allocated to them.

1.10 Departments, however, need to apply risk management that is fit for purpose and which exploits the benefits that good risk management can offer, for example, the confidence to take well managed risks. There is a danger that reliance on processes at the expense of good judgement can create an environment in which individuals see risk management as a bureaucratic burden and, perversely, become more risk averse[21] **(Figure 5)**. Where departments are confident they have good processes in place, there is, however, a real opportunity to focus on improving the quality of their risk management.

Risk management has improved since 2000 but more needs to be done to deliver its full benefits

1.11 In 2000, the National Audit Office published *Supporting Innovation: Managing Risk in Government Departments*,[22] an examination of risk management that reported significant weaknesses in departments' risk management. In a climate of increasing demands on departments, our 2004 report examines how risk management has developed since 2000 and whether departments' ability to manage risk has improved. In **Part 2**, we demonstrate where departments' capacity to manage risk has improved and where weaknesses remain. In **Part 3**, we illustrate areas of work where departments are endeavouring to use risk management to improve service delivery and the benefits they have achieved. **Part 4** explains what more needs to be in place for departments to derive the benefits of good risk management. Our sources of evidence are in **Figure 6**. **Appendix 1** gives further details of our methodology.

1.12 In January 2003, the Prime Minister introduced the two year cross-Whitehall Risk Programme to help departments develop their approach to risk management. The Programme ends in December 2004. It has provided a catalyst to departments' efforts to manage better the uncertainties and has brought about real progress, but more needs to be done for risk management to become a standard feature of the way departments do business and for it to become part of their day to day activities.

1.13 Our report demonstrates that large public and private sector organisations are paying increasing attention to risk management. With clear accountability for risks being taken, integration of risk reporting into management reporting, sufficient information to respond to changing risks, and open communication about risks, risk management delivers clear benefits - **improved delivery, enhanced efficiency, better decision-making** and **well managed innovation.**

20 *Managing Resources To Deliver Better Public Services. National Audit Office, 2003-04 (HC 61).*
21 *The Risk Management of Everything. Rethinking the politics of uncertainty. Michael Power, DEMOS, June 2004.*
22 *Supporting Innovation: Managing Risk in Government Departments. National Audit Office, 1999-2000 (HC 864).*

5 The effectiveness of risk management depends on the way in which risk processes and capabilities are developed and applied

Informal risk management

Possible features

- Risk processes or policy are underdeveloped.
- Reporting of bad news may not be part of the culture.
- Information about risk may not trigger actions.
- Responsibility and accountability for risk may be unclear.

Impact on how risks are managed

- Blame culture may be in existence when things go wrong.
- Potential lack of accountability for risk.
- Resources allocated to manage risks may be disproportionate to the risks faced.

Possible development and application of risk management

Application of an explicit risk management framework encourages a systematic approach to risk

Possible features

- Processes and policies in place are subject to constant challenge.
- A combination of quantitative methods, organisational learning and scenarios are used to consider uncertainty and how to respond to it.
- Experimenting and individual professional judgement are encouraged in a culture free of blame.

Impact on how risks are managed

- Robust challenge helps keep process dynamic, relevant, and useful.
- Open dialogue, capturing learning and using relevant quantitative information helps inform judgements and decisions about risks.
- Provides confidence that innovation and risk taking can be well managed, and provides support if things go wrong.

Intelligent, explicit, systematic risk management

Over dependence on process may limit departments' ability to manage risk effectively

Possible features

- Risk processes and policies may be applied in a rule bound, inflexible way.
- Reliance on reporting information and completing registers may occur.
- Systems may be applied only to comply with requirements.

Impact on how risks are managed

- Over reliance on information at the expense of good judgement may occur.
- Potential dependence on process to defend the rationality of decisions made.
- Individuals become risk averse for fear of censure.
- Preoccupation with risks to reputation may occur over risks to citizens and taxpayers.

Danger of bureaucratic risk management

Source: National Audit Office

6 Our report draws on evidence from:

- a survey of the 20 main Whitehall departments;
- three focus groups of departments' risk improvement managers;
- the Risk Programme's progress reports to the Prime Minister and the Chief Secretary to the Treasury;
- a risk management survey of departments, agencies and non-departmental public bodies undertaken by HM Treasury in September 2002 to identify progress with the implementation of risk management in central government;
- cases studies of areas of work in five departments - Department for Culture, Media and Sport, Department of Trade and Industry, HM Customs and Excise, National Savings and Investments, and the Office for National Statistics - involving interviews and ten focus groups conducted on the National Audit Office's behalf by MORI, eight with staff of the departments, one focus group of Department of Trade and Industry contractors and one of Department for Culture, Media and Sport contractors;
- examples of specific aspects of risk management in departments, a research body, international bodies and a United Nations Agency;
- risk management in four major private sector corporations (GlaxoSmithKline, Nomura International, Prudential and Reuters); and
- a paper commissioned from the University of Aberdeen on risk decision-making in "high reliability industries", that is those working in hazard conditions with exceptional safety requirements.

Source: National Audit Office

In Part 2, we examine progress in improving risk management.

Part 2

Progress in improving risk management

2.1 Faced with the challenges and changes identified in Part 1, Government has developed initiatives to improve departments' management of risks. These include actions taken in response to the National Audit Office's (2000) report and subsequent recommendations of the Committee of Public Accounts.[23] **Figure 7** outlines key developments since 2000 to improve risk management.

2.2 **Figure 8** outlines responsibilities for risk management in government departments. Departments are responsible for managing their risks. The Cabinet Office, the Treasury and the Office of Government Commerce (OGC) are responsible for providing general advice, guidance and leadership for departments on risk management.

7 Recent developments promoting risk management

February 2001	**OGC Gateway Reviews established** to ensure all major central civil government projects are subject to rigorous tests, including identification of risks, and pass through a series of gates at critical points in the project lifecycle, to ensure all major projects are on track to deliver intended outcomes. By March 2004, 600 reviews had taken place across 45 central civil government departments and agencies. Three quarters of the reviews have related to IT or IT-enabled projects.
April 2001	**Statements on Internal Control (SIC) introduced by the Treasury** to replace Statements on Financial Control, drawing on best practice arising from the Turnbull report and the Combined Code in the private sector. The SIC confirms that Accounting Officers have reviewed the effectiveness of the system of internal control in their organisation, including systems of risk management.
June 2002	**OGC introduces a new red, amber, green system** to assess projects' critical stages to provide assurance that they are ready to move onto the next stage in their lifecycle. Red - to achieve success the project should take remedial action immediately; amber - the project should go forward with actions on recommendations to be carried out before the next OGC review of the project; and green - the project is on target to succeed but may benefit from the uptake of OGC recommendations.
November 2002	**Publication of the Cabinet Office Strategy Unit report *Risk: Improving government's capability to handle risk and uncertainty*** calling for a two year programme of change to: better embed risk in policy-making, planning and delivery; improve handling of strategic risks; develop management and communication of risk to the public; improve leadership and develop the right culture; and enhance skills and guidance.
November 2002	**The two year Risk Programme begins,** linked to the 2004 Spending Review, implementing the recommendations of the Strategy Unit report. The Treasury's Risk Support Team is established to lead the Programme, working through a network of Risk Improvement Managers in departments. The Risk Steering Group oversees the Risk Programme. It is chaired by Sir David Omand, Permanent Secretary and Security and Intelligence Co-ordinator, Cabinet Office, and includes Permanent Secretary representatives from the Department for Environment, Food and Rural Affairs, the Home Office, the Office of Government Commerce, the Department for Transport and the Ministry of Defence; senior representatives from the Treasury, the Health and Safety Executive and the Department of Health; and one external member. It meets every two months and reports to the Civil Service Management Board. The Programme has published three progress reports prepared for the Chief Secretary to the Treasury (in June 2003 and June 2004) and the Prime Minister (in December 2003).
May 2003	**Introduction of revised requirements in Dear Accounting Officer letter (09/03)** to ensure that the SIC process is firmly and clearly linked to the continuing development of risk management in central government.
October 2003	**Update to *Government Accounting,*** Chapter 21 on Risk management and the Statement on Internal Control.
December 2004	**Risk Programme's Final Report to the Prime Minister** due for publication.

Source: National Audit Office

23 *Managing Risk in Government Departments. Committee of Public Accounts, First Report, 2001-02 (HC 336).*

8 Who is responsible for risk management?

Cabinet Office

Prime Minister's Delivery Unit provides assistance and advice to departments on achieving their delivery priorities, requiring clear identification and management of risks.

Civil Contingencies Secretariat provides cross-departmental overview and co-ordination of responses to significant emerging risks, for example the foot and mouth crisis, and develops horizon scanning across Government.

Centre for Management and Policy Studies provides training and development to ministers, senior managers and other staff incorporating risk management.

Risk monitoring, assistance and co-ordination

Advice and training

HM Treasury

Risk Support Team provides leadership, advice and guidance to departments, for example risks in policy-making, contributes to Delivery Unit advice and provides risk input to other departmental networks for example business planning networks and departmental centres of excellence.

Treasury Spending Teams assess departments' delivery plans and risks to them six monthly. Delivery Plans must include risks identified and set out how they will be managed.

Assurance Control and Risk offers advice and guidance to departments on preparation of Statements on Internal Control (SICs), Audit Committees, and develops standards for Risk Management, for example in the 'Orange Book'.

Guidance, support and advice on risk management and corporate governance

Office of Government Commerce

Provides guidance, for example its *Risk Workbook*. Gateway Reviews of major projects and programme reviews.

Technical advice on managing project and programme risk

Departments are responsible for managing risks associated with their activities and delivering their objectives, assisted by an infrastructure including:

- Public Service Agreements
- Delivery Plans
- Statements on Internal Control
- A network of Risk Improvement Managers

Source: National Audit Office

2.3 The main impetus to improve risk management since 2000 has come from the two year Risk Programme set up in November 2002 to implement the recommendations of a Cabinet Office Strategy Unit report on government departments' approach to risk.[24] The core Programme covers the main 20 Whitehall departments;[25] although a number of smaller departments have also participated voluntarily. The Risk Programme has two aims:

- to provide a solid foundation for the sound management of risk by departments; and
- to provide a momentum for improvements in risk management.

2.4 The Risk Support Team (RST), based in the Treasury, was set up to support implementation of the Risk Programme. The Risk Support Team has facilitated the improvement of risk management in government in the following main ways. It has:

(i) Developed a structured tool (Risk Management Assessment Framework) to help departments systematically improve risk management, incorporating all findings of previous initiatives to improve risk management;

24 *Risk: Improving government's capability to handle risk and uncertainty. Cabinet Office Strategy Unit, 2002.*

25 *Defined as those with Cabinet Ministers, plus HM Customs and Excise, Inland Revenue, and the Health and Safety Executive.*

(ii) Supported risk improvement managers in departments by creating a network across all departments to share good practice including lessons from the private sector, and by holding one to one meetings to identify specific issues for departments and options for addressing them; and,

(iii) Provided tailored advice, guidance and events to address specific aspects of improving risk management, for instance risk in partnerships, leadership and risks in policy-making.

Examples of actions taken under the Programme to promote risk management in departments are set out in **Figure 9**.

9 Examples of actions taken under the Risk Programme by the Treasury's Risk Support Team to promote risk management in departments

The Risk Support Team (RST), based in the Treasury, was set up to support implementation of the Risk Programme recommended in the 2002 Strategy Unit report Risk: Improving government's capacity to handle risk and uncertainty. It has five members of staff and an annual expenditure of £216,000 (2003-04) to support departments through a network of departmental Risk Improvement Managers, development and maintenance of websites, and participation in events.

Activity	Example of action taken
Encouraging and supporting departments in creating a culture of good risk management and well managed risk taking	**Improved links between departments** - Established a network of Risk Improvement Managers in departments who meet every two months to share experience and identify common priorities needing attention in departments' approaches to risk, for example where further guidance may be needed. **Improved consistency of departments' approaches to managing risks** - Developed, with departments, a Risk Management Assessment Framework which enables departments to self-assess and evaluate their risk management performance on a common basis. It also assists with identifying areas for improvement action. **Identified and disseminated good practice** - Developed a website[26] on the Government Secure Intranet which acts as a repository for departments about the development of the programme, including examples of good practice and links to other information. **Learning from outside Whitehall** through learning from private sector companies' approach to risk management such as British Petroleum, AstraZeneca and Zurich. **Provided tailored support to departments** - Provision of one to one advice and support for departments on specific risk issues. **Developed risk training** - Provided input and advice to the Centre for Management and Policy Studies development of training courses, by encouraging consistent messages about risk across courses and keeping course directors up to date with the current thinking about risk. **Developed and issued guidance** - For example, guide on *Risks to successful partnership working, Guidance for boards on risk management* and *Tips for culture change* to be issued to departments in Autumn 2004. Input to departmental guidance on risks issued, for example, the Office of Government Commerce's *Risk Workbook* covering project and programme risk, Treasury's *Orange Book* covering Risk Management standards, and its *Green Book* on investment appraisal.
Raising awareness of the importance of risk management at senior levels	**Used risk management champions** - The Risk Programme Steering Group members (see Figure 7), and other Civil Service Management Board members, actively promote good risk management in their departments. Steering Group members, in particular Sir David Omand, the chair of the Steering Group, and the Risk Support Team have given a number of presentations at senior management *forums*, for example the Spring Sunningdale meeting of Permanent Secretaries and business leaders, Best Practice Showcase 2004. **Raised awareness of Ministers** - The Chief Secretary held a series of breakfast meetings in 2003 and 2004 on risk management for junior ministers, covering, for example risk in policy-making, risk in delivery planning and the spending review, and corporate governance. The Chief Secretary also covered risk issues in spending review and other meetings with colleagues.

Continued overleaf

26 www.hm-treasury.gsi.gov.uk/gfm/rst/index.htm

9 Examples of actions taken under the Risk Programme by the Treasury's Risk Support Team to promote risk management in departments (continued)

Activity	Example of action taken
Supporting departments in improving handling of risks to the public	**Developed government approach** - Published 'Principles of Managing Risks to the Public' following consultation, and launched guidance on 'Communicating Risk' with the Government Information and Communications Service (GICS). These tools have been incorporated into the Centre for Managment and Policy Studies (CMPS) and departmental training courses. **Developed implementation programme** - Ran an event in September 2003 around communicating about risk issues for communications directors, and established a network of communications directors from key departments to consider how to improve further communications with the public on risk. Ran a workshop in September 2003 with the Civil Contingencies Secretariat to share good practice with a view to improving horizon scanning across government.
Ensuring that policy decisions are underpinned by a good understanding of risks	**Developed guidance** - Prepared joint Treasury, Office of Government Commerce and National Audit Office guidance in March 2004 covering an analysis of the common risks to successful policy delivery for policy-makers in departments. This was then launched in a letter from the Prime Minister with a requirement that policy approval by collective Cabinet agreement be subject to an explicit appraisal of risks. Implementation activity is ongoing. Contributed to revised risk management section of Regulatory Impact Assessment Guidance.
Helping departments better embed risk management in core decision and planning processes	**Advised and challenged** - Provided tailored advice to spending teams and departments on risk management as a thematic issue in Spending Review 2004, and provided section on risk management in spending review guidance for departments, including a practical tool highlighting good practice, some current common weaknesses and links to further guidance. This resulted in the inclusion of targeted elements on risk management in settlement letters for most main Departments. Departments will be implementing these over the SR04 period. **Improved risk content of existing processes** - for example, Contributed a section on risks to the joint HMT/Prime Minister's Delivery Unit (PMDU) guidance to departments on delivery planning and has worked with Treasury spending teams and PMDU teams to help ensure effective management of the risks to the delivery of public service priorities. Raised awareness of risk management activity and guidance with other cross-departmental networks, for example business planners, project and programme managers, and departmental Centres of Excellence.

Source: National Audit Office

2.5 This part of the report considers the success of initiatives to develop departments' capabilities to identify and manage risk and outlines where further improvements can be made. It draws on a National Audit Office survey of the 20 main departments and reports to the Prime Minister and the Chief Secretary to the Treasury from the Treasury based Risk Programme. The two sources of evidence present a consistent picture of where departments have reached. We also draw on focus groups we held with 27 risk improvement managers on progress in their departments and the contribution of the Risk Programme.

Departments' risk management has improved since the NAO (2000) report

2.6. The Risk Programme has identified five aspects which need to be in place for departments' risk management capabilities to be effective **(Figure 10)**. These are part of a risk management assessment framework developed to help departments judge, on a common basis, their risk management capabilities and how far these are helping them to achieve their objectives. The framework has been used to assess:

- The five aspects of departments' capabilities: leadership; strategy and policies; people (for example, skills); partnerships and resources; processes;
- Two measures of results or effectiveness: the quality of risk handling; and the impact of this on achieving the department's outcomes.

10 What needs to be in place for departments' risk management capabilities to be effective

What departments need to have in place	Example
Leadership - senior management and ministers who support good risk management	Each time the **Ministry of Defence** Management Board considers performance, it considers risk too. The Department has, at Board level, a quarterly assessment of the key risks being managed across the department and their likely impact on performance.
A clear **risk strategy and policy**	The **Home Office** has set out its attitude to risk and defined structures for the management and ownership of risk; with a clear statement of the Department's risk policies and its approach to risk taking and innovation.
People who are equipped and supported to manage risk well	The **Foreign and Commonwealth Office** is integrating risk modules into existing training courses to establish consistency of risk management vocabulary and approach, for example in training for induction, management officers and Heads of Mission.
Effective **arrangements for managing partnership risks** and appropriate resources to support these arrangements	**Welsh Assembly** sponsor divisions work with Assembly Sponsored Public Bodies (ASPBs) and other partners to establish how risks are being managed. All ASPBs have developed risk management strategies and share their risk registers with the Assembly.
Processes which incorporate effective risk management	The **Department for Culture Media and Sport** discusses risks to delivery at Programme Boards for each of the Department's four Public Service Agreement targets; and risk management is an integral part of business planning.

Source: National Audit Office, HM Treasury (Report to the Prime Minister on the Risk Programme, December 2003)

2.7 Departments indicated in the Risk Programme's interim report to the Chief Secretary to the Treasury in June 2004 that they are either implementing or have implemented improved risk management arrangements, but few departments have fully embedded their risk management in the way the department works. Results so far point to some variability between departments **(Figure 11)**.

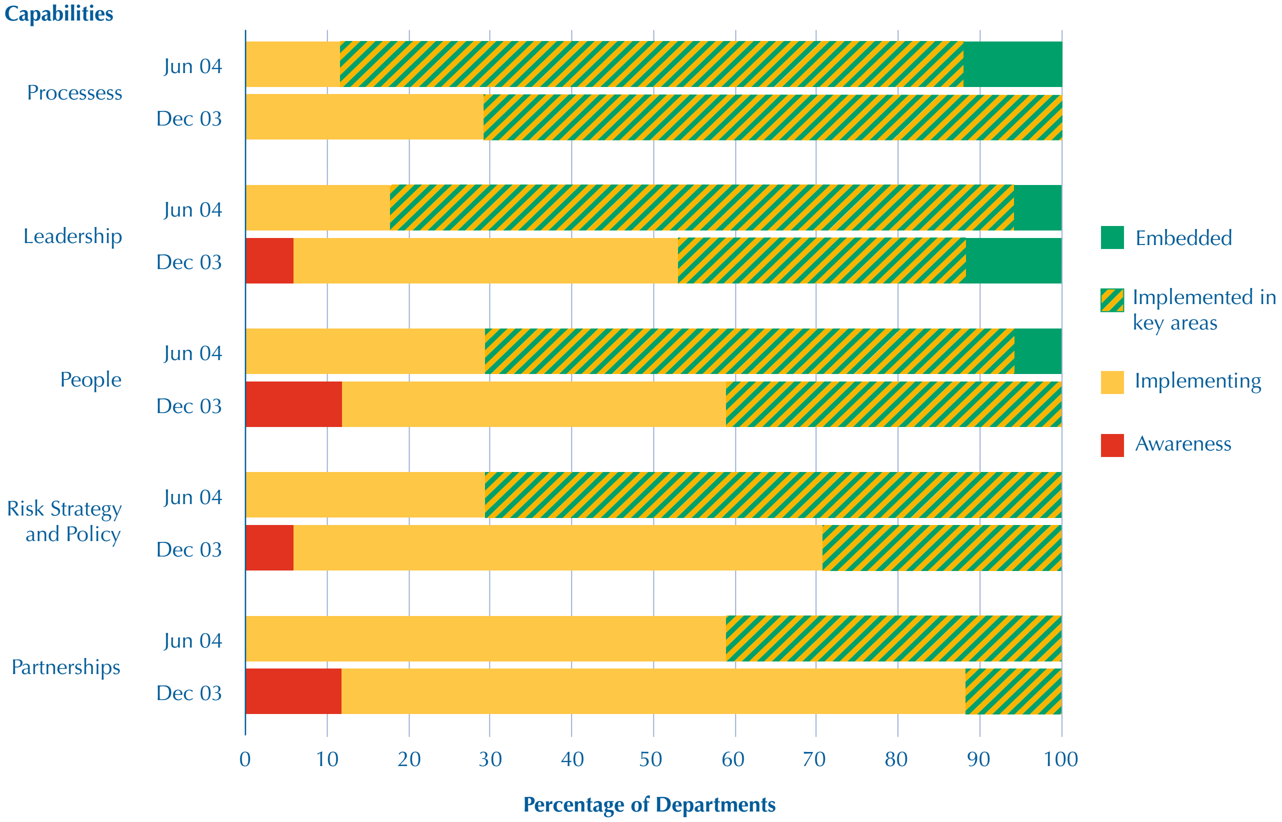
2.8 Our focus groups of departmental Risk Improvement Managers held in March-April 2004 reported that the main impact so far of the Programme was in helping to establish risk management machinery - processes and systems - and in developing risk thinking by engaging senior managers and establishing policies and strategies on risk **(Figure 12)**. The focus groups reported that the Risk Programme had had less impact on how managers in departments handle risks, how they work with their partners in the private and public sectors, or on their achievement of outcomes. The subsequent report from the Risk Programme to the Chief Secretary of June 2004 (the summary of this report is presented in Appendix 3), based on departments' own detailed assessments, shows a fairly even level of improvement in all of the seven areas of the Risk Management Assessment Framework.

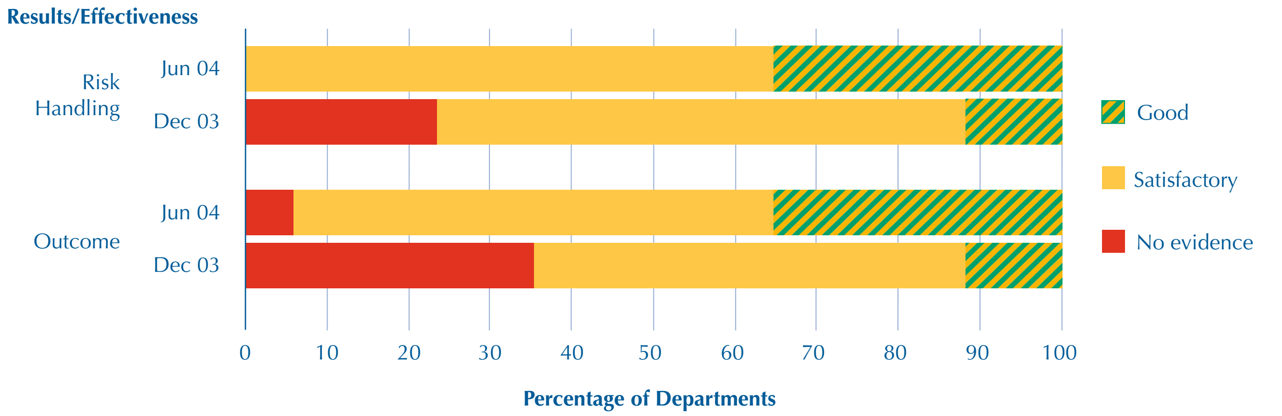
2.9 Our independent survey of progress of the 20 main Whitehall departments participating in the Risk Programme enabled us to compare how risk management capabilities have developed since our previous examination in 2000, where departments have improved and what more remains to be done. Departments' responses indicated they had made progress since 2000, particularly in setting out risk objectives, having clearly defined policies and processes to report changes in risks, and in seeing risk as an opportunity as well as a threat to their departments **(Figure 13)**.

2.10 The Risk Programme reports confirm this picture (see Appendix 3 for the summary of the June 2004 Risk Programme progress report). They also indicate that greater consistency of good practice has been achieved over the last four years. It is likely that this has been enhanced by the introduction of standard requirements through the Statement on Internal Control, and the increased focus on identifying and sharing good practice.

11 The main Whitehall departments have measured their progress against seven aspects of risk management [1,2]

Departments are either implementing or have implemented improved risk management arrangements, but few departments have fully embedded risk management in the way the department works, and departments are at different stages of implementation.





NOTES

1 These data have been collected by the Treasury's Risk Support Team from departments and reflect departments' use of the risk management assessment framework designed to assist them in evaluating their performance and progress in improving their risk management capabilities and its impact on risk handling and improved performance outcomes, for example, the contribution of risk management to achieving Public Service Agreement targets. The self-assessment framework was developed by the Treasury with departments, building on the 2002 Strategy Unit report and the NAO's 2000 report.

2 These figures reflect data from 17 main Whitehall departments.

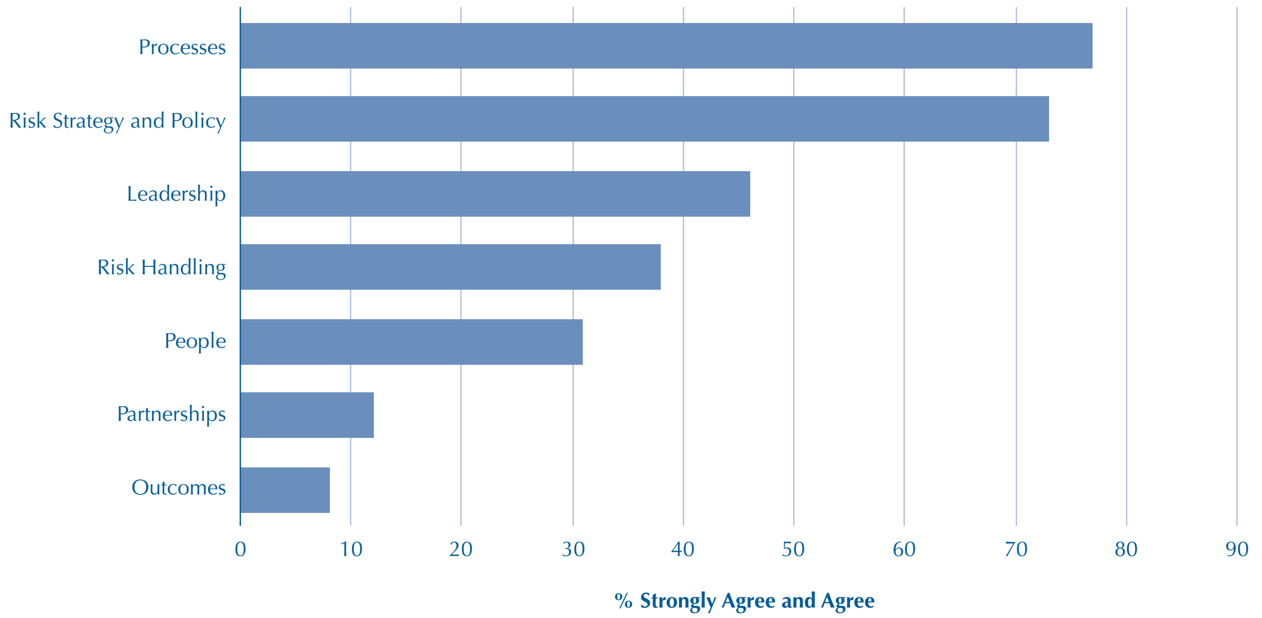
Source: HM Treasury, Risk Programme Reports to the Prime Minister (December 2003) and to the Chief Secretary to the Treasury (June 2004)

12 Risk Improvement Managers' assessment of the impact of the Risk Programme on their departments

The main perceived impact of the Risk Programme by March-April 2004 had been in helping departments establish processes and systems, establishing policies and strategies, and engaging senior managers.

"The Risk Programme has had an impact on... " :

n = 27

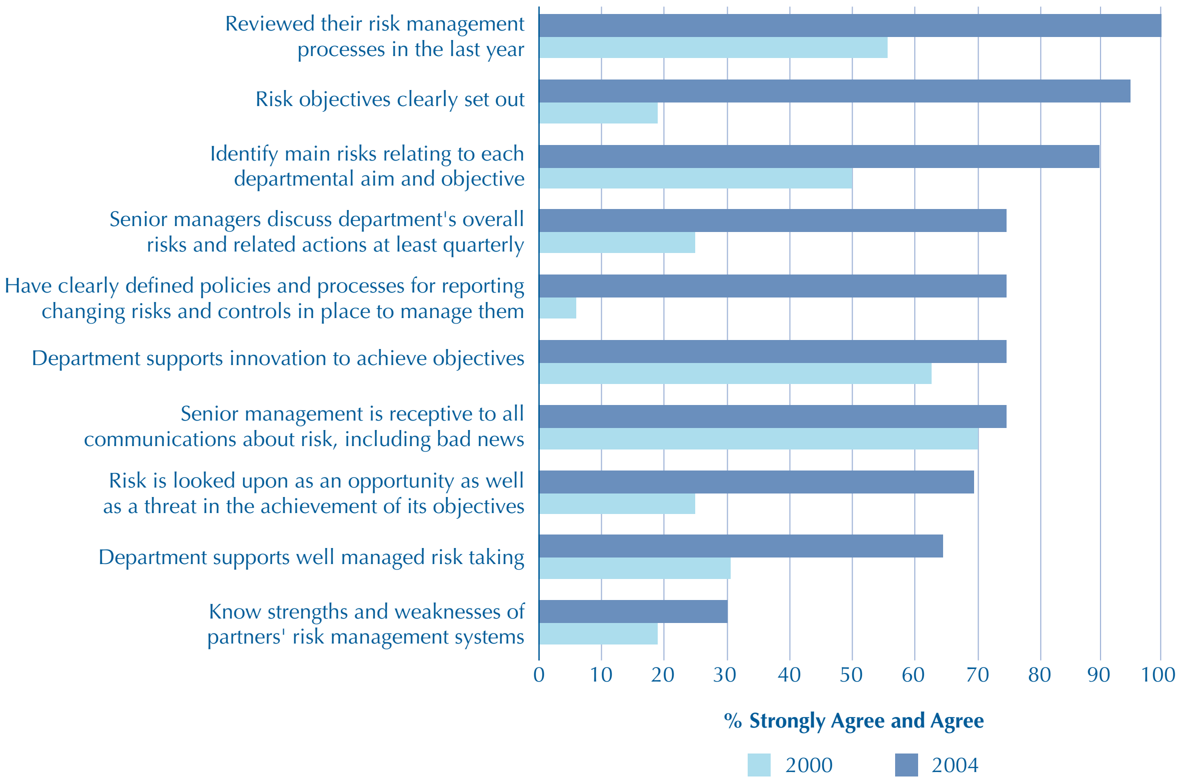


Source: National Audit Office, Focus groups of Risk Improvement Managers, March-April 2004

13 Risk management then and now - the National Audit Office's 2000 and 2004 risk surveys compared

Since 2000, departments have made particular progress in reviewing risks and risk management arrangements, setting out clear risk objectives, having clearly defined policies and processes to report changes in risks, and in seeing risk as an opportunity as well as a threat.

n = 20



Source: National Audit Office surveys February 2000 and May 2004

2.11 In our 2004 survey, we also asked departments if they had assessed the impact of risks to their performance, for example, the risk of not delivering key targets. Departments had moved forward in understanding how risk could impact on their performance and had introduced risk registers with "traffic light" systems to indicate which risks were becoming critical and could have major impact **(Figure 14)**: a risk marked "red" needs attention; a risk marked "green" is being adequately controlled. Departments were weaker on some aspects of risk management which we observed had developed in the private sector companies we visited and in some of our departmental case studies. Weaker areas were risk exposure - understanding the overall scale and nature of the combined risks in the policies, programmes and projects the department was currently handling, including how much risk the department can take, and "risk culture" - creating a management culture that encourages openness when problems arise and errors occur and rewards well managed risk taking.

2.12 In addition to asking departments about the impact of risk management generally, our 2004 survey also asked about the effectiveness of different components of risk management. Responses were compared with those of central departments in 2000. All the components were judged by the majority of departments to now be operating effectively or very effectively, with ownership, regular risk reporting, risk indicators, and the use of appropriate tools to record risks, being judged particularly effective **(Figure 15)**.

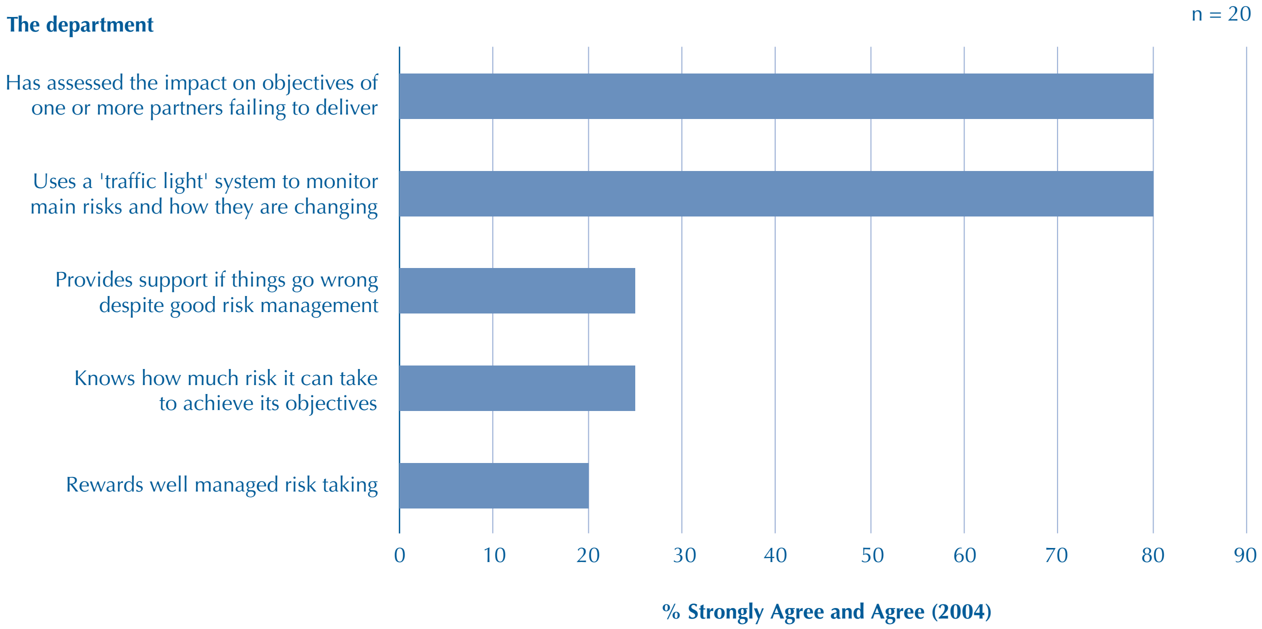
2.13 The overall picture of improvement since 2000 with departments moving from an awareness of the importance of risk management to its implementation in practice is reflected in the Risk Programme's assessment of the likely path of progress of risk management in government (included in Appendix 3) which is based on the Risk Support Team's assessments against its Framework, developments in Statements on Internal Control and the results of surveys by NAO and Treasury.

Departments have put in place the machinery for better risk management …

2.14 **Departments are now in a better position to know what their risks are and when they change**. Departments have systems to enable them to manage risks better. This reflects a focus over a number of years on developing better controls and processes to improve identification and management of risk. Statements on Internal Control, in particular, have been a key driver in focussing senior management's attention on the importance of having a systematic process in place to identify, assess and manage risks **(Figure 16)**. Risk registers are widely used, guidance is available on how to manage risk, and internal auditors review the operation and effectiveness of risk management processes.

14 **Departments assess risks to delivery but developing a culture which encourages well managed risk taking is less common**

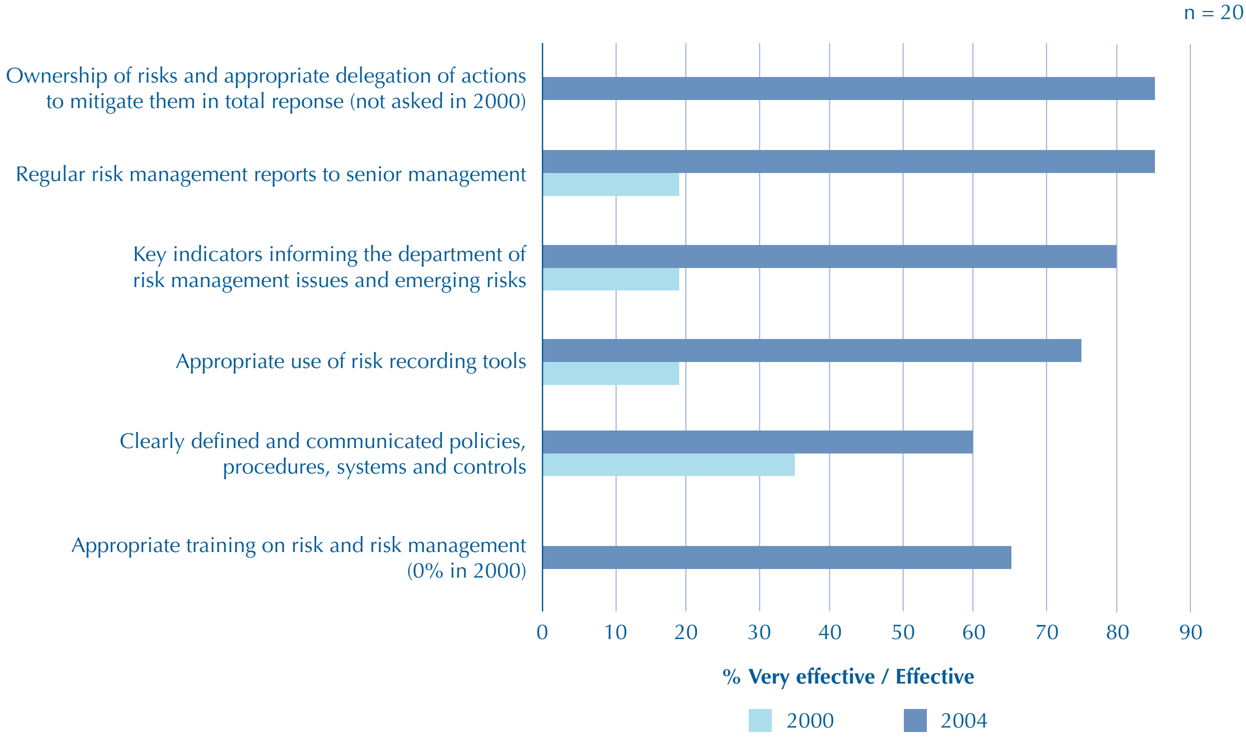
The majority of departments monitor how their top risks are changing and assess the impact of partners on delivery. They are less likely to know how much risk they can take, to provide support if things go wrong, or to reward well managed risk taking.



Source: National Audit Office survey, May 2004

15 Departments judged key components of risk management in their departments to be operating more effectively than in 2000

In 2004, components of risk management are viewed as more effective than they were in 2000



Source: National Audit Office survey, May 2004

16 Statements on Internal Control and developments in corporate governance

Since 2001-02, the Treasury has required departments to produce Statements on Internal Control (SICs). These published statements are signed by Departmental Accounting Officers in respect of the financial year to which they relate and provide some assurance that the department has strategic risk identification and management processes in place to enable the whole range of risks that the department faces to be managed effectively. The Treasury sets out the requirements governing what SICs should cover (in Chapter 21 of the Treasury's Government Accounting Manual) and provides advice and guidance to departments preparing them. The NAO reviews whether SICs prepared by departments are consistent with evidence from their audits of annual financial accounts and all their other work, and if not, advises the department of this and where internal controls need to be reviewed. The NAO does not issue any formal endorsement of departments' SICs. These arrangements are an adaptation of similar requirements of listed companies as specified in the Combined Code.

Preparation of Statements on Internal Control form an important part of departments' corporate governance. Treasury is currently leading on a review of corporate governance in central government. It is expected that the review will report by the end of 2004. The Terms of Reference for the review are:

To review the arrangements for corporate governance in central government Departments (including in non-Ministerial Departments) with particular regard to:

- how Ministers' responsibilities relate to officials' responsibilities within the governance structures in Departments
- the role of the Accounting Officer
- the roles and responsibilities of Departmental and agency management boards and the relationship between them
- the role and responsibilities of non-executives on boards and Audit Committees
- the relationship between (a) Departments and (b) their executive NDPBs and other central government bodies with which they have an arm's length relationship

And to make recommendations to Ministers for establishing a high level set of principles for Departments which promote good performance, accountability and transparency.

The Review is being overseen by a high level Steering group, chaired by Sir Andrew Likierman, and including representation from Permanent Secretaries, the private sector, the National Audit Office and professional bodies.

Source: HM Treasury and the National Audit Office

2.15 All the departments in our 2004 survey had reviewed their risks and risk management processes in the last year; whereas in our 2000 survey, just over half of the main departments had done so. Three quarters of departments in 2004 said they had clearly defined policies and processes for reporting changing risks and controls in place to manage them, compared with less than ten per cent of departments in 2000.

2.16 **Departments are much clearer about what risk management is intended to achieve**. When we carried out our previous study, just 19 per cent of the main departments said their risk management objectives had been clearly set out. In 2004, 95 per cent reported they had clearly set out their risk management objectives and policy.

2.17 **Senior managers are paying attention to risk**. Reports from the Risk Programme indicate that many senior managers and Ministers now take an active interest in risk management. Most departments' management boards review risk registers regularly and take responsibility and ownership of key strategic risks. Through our survey, we found that 75 per cent of main departments discuss overall risks and related actions at least quarterly, a significant improvement on 2000. Two thirds of the Risk Improvement Managers in our focus groups had a direct line of reporting to their departmental board. This enabled them to engage the board on risk issues and to get buy in to risk improvement at board level; for example, by establishing regular reviews of risks and risk registers and raising awareness about risk at senior levels in their departments.

2.18 **Departments identify the main risks to achieving their aims and objectives**. Increasingly, departments' processes for managing risk focus on their performance. Our 2004 survey found that 90 per cent of main departments identified the main risks relating to each of their aims and objectives; whereas in 2000 half did so. In 2004, 80 per cent used a "traffic light system" to monitor their main risks and how they are changing. Of the four that do not, three departments were developing such systems.

2.19 **Staff can access training and guidance on risk management**. Risk Programme data indicated that departments consider they have made good progress in broadening their training and development to cover risk management, with a range of guidance available to most staff **(Figure 17)**. Most departments are confident that they have adequate training arrangements in place, either embedded in other training or in specific risk management courses and, in contrast to our survey in 2000, two thirds of departments rate training on risk management as effective or very effective.

2.20 **The Risk Programme has improved communication between departments about risk and a common understanding of risk has developed within and between departments**. Departments found their participation in the Risk Programme encouraged them to benchmark their development of risk management against other departments. Our focus groups considered that the Risk Programme also delivered benefits within and between departments in terms of raised awareness, sharing good practice and experience, and providing a common framework for assessing progress and improving consistency of risk policies.

… but more needs to be done in how risk management is used to improve service delivery

2.21 **Many departments have yet to establish an overall view about their risk exposure**. Our survey departments reported having better systems in place for assessing the impact of individual risks to their objectives and for managing them (Figure 12). Departments are less confident, however, about their understanding of the total range of risks the department seeks to manage at any one time and how much risk it can take. For example, a department may be overly dependent on external partners or contractors to deliver its programmes and would need to analyse the percentage its spend forms of individual suppliers' turnover and the resilience of suppliers' supply chains to assess risks to service delivery. Failure to take an overall view of what risks are being taken could leave departments over exposed, especially when going through complex changes.

2.22 **Departments' arrangements for managing risk with partners are too often still weak**. Partnerships are increasingly important for managing risks to delivery, whether the partnerships to deliver services are between departments, agencies and non-departmental public bodies, or involve private sector companies and voluntary organisations. Departments are increasingly dependent on complex supply networks to deliver their objectives. In our 2004 survey, although 80 per cent of departments said they had assessed the impact on their objectives of one or more parties failing to deliver, relatively few (30 per cent) knew about the risk management arrangements of their partner organisations; just a modest improvement on our 2000 survey (20 per cent). Together with reports from the Risk Programme, these data suggest that managing the risks of working with partners remains a key area of challenge for departments. Risk Programme reports also indicated that areas of concern include the difficulty of communicating through complex delivery networks, lack of clear accountability for risks, and weaknesses in ensuring that responsibility for transferred risks is understood clearly by all parties.

17 Examples of central guidance available to staff on risk management[27]

General Risk Management Guidance	
Guidance	**What it sets out**
The 'Orange Book' (HM Treasury)	A strategic approach to risk management for departments and smaller bodies. This is now being developed by HM Treasury into a second edition which covers risk principles and concepts.
Management of Risk high level briefing materials (OGC)	The Successful Delivery Toolkit, available on the OGC website (www.ogc.gov.uk/sdtoolkit) includes risk related materials such as a risk management briefing overview, risk management guidelines for managers, Best practice briefings on risk allocation and managing partnerships, Gateway Review documentation and a Centre of Excellence information pack (including the NAO/OGC list of common causes of failure for IT projects).
Management of Risk: Guidance for Practitioners (OGC)	A detailed user guide for those involved with managing risk in programmes, projects and at an operational level, for example in the development and implementation of projects, drawing on experience from a variety of experts from the public and private sectors. It includes a route map for risk management, checklists, advice on tools and techniques, and business continuity.
Risk Management Guidance embedded in other processes	
Guidance	**What it sets out**
Managing risks to successful delivery	An analysis of the common risks to successful delivery of policies, jointly developed by the Treasury, OGC and NAO.
The Prime Minister's Delivery Unit *Delivery Toolkit*	How departments should identify and manage risks as an integral part of their delivery priorities.
The Treasury *Delivery Planning Toolkit*	How departments should identify and manage risks associated with delivery of their Public Service and Service Delivery Agreements, providing Treasury with an overall process for judging the likelihood of delivery based on departmental risk assessments.
Communicating Risk	A guide for policy, information and communications staff on communicating to the public about risks, jointly developed by the Government Information and Communications Service (GICS) and the Risk Programme.
The 'Green Book' (HM Treasury)	The 'Green Book', *Appraisal and Evaluation in Central Government* (HM Treasury) Guidance on appraisal and evaluation of policies, programmes and projects.
Project and programme guidance	How to manage projects with PRINCE 2, Managing Successful Programmes, and managing risk in IT-enabled service delivery, procurement guidance.
Risk management training	
Cabinet Office's Centre for Management and Policy Studies (CMPS)	CMPS has supported departments' need for improved training by reviewing its portfolio of courses to ensure that risk management is sufficiently covered, organising ministerial breakfast meetings on risk (for example on risk in policy-making and communicating about risk), and seeking to embed risk in training courses, particularly in policy-making. It is planning new courses on risk, including a half day executive briefing for Senior Civil Servants, and a Business Continuity and Horizon Planning course to be delivered jointly with the Emergency Planning College and the Civil Contingencies Secretariat.[28]

Source: National Audit Office

27 *There are a number of sources of general risk management guidance, and sections on risk management specific to particular processes are being embedded in wider guidance, for instance project and programme management, delivery planning, business planning. In addition, most departments have incorporated risk management into their departmental guidance and training.*

28 *Review of Risk Content on CMPS Training Courses, CMPS, August-October 2003.*

2.23 **More progress is needed to embed risk management in the day to day activities of departments**. Data from our survey and from the Risk Programme indicate that there is still much to do to develop an environment where risk management is a fundamental part of the culture in all aspects of departments' activities. Treasury Risk Programme data suggest that although risk management strategies and policies are in place, these are not always well developed and, despite departments' confidence about their staff's access to training in risk management, there is little evidence to show how well staff use them. More work is needed to ensure that all staff in departments are covered by training, and that greater awareness is established of the need to incorporate risk management into day to day activities.

2.24 **Departments have yet to establish a culture of risk taking and innovation**. Innovation is necessary if service delivery is to be improved, but whilst some departments are seeking to encourage innovation and a spirit of well managed risk taking, there are obstacles to their achievement. In our 2004 survey, 75 per cent of departments said they supported innovation to achieve objectives, compared to 63 per cent in 2000, and two thirds (65 per cent) supported well managed risk taking to achieve objectives, compared to one third (31 per cent) in 2000 (Figure 13). Just 20 per cent in 2004, however, agreed that their department rewarded well managed risk taking (Figure 14). Despite support for the concept, in practice there is a perception that there is little incentive for civil service managers to take well managed risks.

In Part 3, we explain the benefits departments can obtain from good risk management.

Part 3

How risk management can deliver tangible benefits

3.1 There is a danger that departments might see the administrative processes of risk management as an additional exercise without clear benefits. Drawing on our case study evidence, this Part of the report illustrates how departments can secure the benefits of risk management in practice.

3.2 Good risk management has four key benefits. It can help departments to:

(i) Deliver better public services;

(ii) Improve efficiency;

(iii) Make more reliable decisions; and

(iv) Support innovation.

Benefit 1: Deliver better public services

Assessing risks puts departments in a better position to deliver

3.3 Failure to identify risks could put Public Service Agreement targets in jeopardy. It is important therefore that departments have the means to identify those risks and to take early action to deal with them. For instance, poorly designed or inadequately controlled systems can result in seemingly trivial clerical or procedural errors causing significant knock-on effects. These effects may be outside the immediate focus of staff in their day to day jobs. For example, data errors in compiling official economic statistics may suggest the economy is growing slower than it is in reality, which can affect decisions on interest rates. Systems weaknesses can be addressed by re-engineering to eliminate them and by staff re-training to ensure understanding of how their actions can contribute to or mitigate key departmental risks. Through its Risk Programme, the Office for National Statistics is focusing on delivering timely and, above all, accurate information so that its customers, which include key decision-makers in the Treasury and the Bank of England, can take decisions with increased confidence **(Figure 18)**.

18 Office for National Statistics

High profile data errors in recent years, such as mistakes in average earnings data and regional economic data, have undermined users' confidence in official statistics. To address this, the Office has implemented a programme of risk management which has included identifying key sources of error in its systems and procedures, including simple clerical mistakes such as merging spreadsheets. This has resulted in changes to systems and procedures to eliminate or control practices that otherwise contribute to data error.

Source: National Audit Office examination

3.4 Training can help staff to deal with threats to key business objectives. HM Customs and Excise, for example, identified the need for an improved training programme **(Figure 19)** to address the risk of not achieving on two of its main objectives - to collect the right revenue at the right time from indirect taxes (including tobacco) and to reduce crime and drug dependency by detecting and deterring the smuggling of illegal drugs and other prohibited and restricted goods.

19 HM Customs and Excise

A series of high profile High Court trials, in which prosecutions collapsed due to mistakes and omissions in procedure, led Customs and Excise to create a new programme of professional standards training to reduce the risk of officers making costly mistakes that can damage the Department's reputation. The aim is to maximise the likelihood of a conviction by ensuring that when intercepting smuggled goods Customs Officers follow precise legal rules and procedures. Customs Officers in our focus groups found that the training had made them clearer about procedures and much more aware of the direct bearing of their actions on the achievement of the Department's performance objectives.

Source: National Audit Office examination

Active and open management encourages delivery networks to work effectively

3.5 The paper we commissioned from Professor Rhona Flin of the University of Aberdeen examines risk decision making in the context of high reliability organisations such as the oil and gas extraction industries, aerospace and the military. The core business of such organisations often involves danger and physical risk and therefore demands unusually high reliability; that is, they operate in high risk environments but persistently have less than a proportionate share of accidents. The environments in which managers in these industries work are significantly different from government departments. Analysis of major incidents in high-reliability industries - the Challenger disaster, Piper Alpha - however, show common causes of failure; namely poor communication of risks up the management hierarchy. In these instances, operatives are both aware of the risks and of those risks that are not being managed, but their "signals" and "messages" never reach those with the power to act.

3.6 Good risk management depends therefore on staff having clear reporting chains and mechanisms to alert senior management to new and changing threats. Customs and Excise has gone further than most departments in integrating risk as part of the day to day work of front line staff. Systems have now been put in place and Customs Officers responsible for searching vehicles at ports trained to report systematically new and emerging risks. These can be evaluated and transmitted rapidly to alert Customs Officers at other locations **(Figure 20)**.

20 HM Customs and Excise

HM Customs and Excise

Sophisticated smuggling operations constantly change their method to keep ahead of law enforcement. To keep abreast of changing patterns, Customs and Excise must have effective and speedy systems for communicating new risks. This relies on effective intelligence operations in the UK and overseas, but also on the ability of front line Customs Officers to identify and report new trends. Staff are actively encouraged to complete reports on any new risks they identify, such as the arrival of new types of smuggled goods, new methods of concealment, or smuggled goods arriving from new destinations. This information is sent to the Intelligence Unit, which disseminates information rapidly, immediately if necessary, to Customs Officers at other ports. Individual Officers' reports are collated and new trends analysed. If sufficiently high risk, the new trend is incorporated into the priority indicators used by Customs Officers to stop and search vehicles.

Source: National Audit Office examination

Effective continuity planning maintains service delivery in the face of the unexpected

3.7 Departments must expect and plan for disruptions to service delivery that are beyond their control; for instance postal strikes, power failures, weather disruptions, as well as more dramatic events such as terrorist strikes. The Prescription Pricing Authority, for example, has identified the risk of a postal strike as the key and overwhelming threat to its main objective - to process prescription payment claims from pharmacists and dispensing doctors quickly and accurately. Senior level risk workshops analysed how to address the risk in the short term and, in the longer term, the need to reduce dependency on a single means to receive claims for payment. This combined with the potential to make use of new technology has resulted in planned changes to the Prescription Pricing Authority's systems to enable pharmacists and doctors to lodge claims for payment electronically **(Figure 21)**.

21 Prescription Pricing Authority

NHS Prescription Pricing Authority

Pharmacists and dispensing doctors send prescriptions following dispensing to the Prescription Pricing Authority (PPA) monthly, which calculates and authorises payments accordingly. A postal dispute could cause financial hardship, particularly to small pharmacy businesses, whose cash flow may be dependent on payments from the PPA. To address this risk, in the short term, amongst other measures, the PPA secured a contract with an alternative provider of collection and delivery services to help ensure that dispensers would receive prompt payments in the event of postal disruption. The PPA also recognised that in the longer term the risk of reliance on postal services was too high and is planning to introduce changes in its working methods through e-prescribing, now included as part of the NHS National Programme for IT. One of the many benefits from the change of working methods would be to enable pharmacists and dispensing doctors to lodge records of prescriptions dispensed more quickly and efficiently, while reducing dependency on postal services.

Source: National Audit Office examination

3.8 To address external risks such as strikes, power failures and system failure, departments are in the process of drawing up contingency plans. The Department for Work and Pensions has developed contingency planning further by vesting ownership in the Executive Team and establishing regular tests of its plans, which are assured by internal audit **(Figure 22)**.

22 Department for Work and Pensions

Each day, the Department makes 3.5 million payments, such as income support, jobseeker allowance and pensions, to citizens on low incomes who are highly dependent on regular payments. In the event of a major IT failure, the Department needs to continue to (i) make benefit payments, and (ii) provide a jobbroking service for jobseekers. Major IT failure is one of the Department's strategic risks, each of which is owned by a Departmental Executive Team member. The consequences of this risk arising are addressed through a set of business continuity plans and Disaster Recovery rehearsals.

The Department tests its plans regularly through scenarios designed to test different components of its IT systems and processes. The most recent Disaster Recovery rehearsals were in July 2003, February 2004 and May 2004. Internal audit are actively involved in the planning and execution of each rehearsal and report on the test's effectiveness in maintaining services. Executive Team members are kept up to date on the progress of rehearsals. The Department's Business Continuity Team and internal audit also advise individual units on how to gain assurance about the effectiveness of their continuity plans. The Department has not so far had to activate its Disaster Recovery plans in a real life situation.

Source: National Audit Office examination

Benefit 2: Improve efficiency

Taking well managed risks can help reduce costs

3.9 If departments have the means to identify clearly and get the measure of the risks they run, they have the scope potentially: (i) to create greater efficiency by reducing overly elaborate or unnecessary systems of oversight or control, beyond that justified by the risk identified or (ii) to exploit the opportunity to take well managed risks, often in partnership with others in the delivery network, leading to new or better services that, in turn, create scope to reduce costs **(Figure 23)**. Improvements to products, systems and working practices always involve risks but can help reduce unnecessary processes or provide alternative and more efficient ways of doing things. The Department of Trade and Industry, for example introduced a web based claims system, making it more efficient and transparent for claimants and solicitors and reducing risks of lost paperwork **(Figure 24)**.

23 National Savings and Investments

National Savings and Investments is one of the largest savings organisations in the United Kingdom, offering savings and investment products to personal savers and investors. It is also a Government Department and Executive Agency of the Chancellor of the Exchequer. The investments that customers place are used by the Treasury to help manage the national debt cost effectively; contributing towards the Government's financing needs. NS&I and its partner Siemens Business Services recognise that their success depends upon both partners having a clear understanding of the relationship between risk and operational costs. SBS is responsible for NS&I operations, for example development of its IT systems, maintaining, opening and closing accounts, and customer service.

SBS handles 50 million customer transactions annually. The main incentive for SBS is that it can generate improved returns and increased profitability by reducing operational costs. NS&I can generate an increased return to the taxpayer by sharing in these lower costs. NS&I encourages SBS to propose areas of its operations for cost reductions; for example the introduction of lower cost channels for sales of NS&I products, such as the internet or greater use of call centres. NS&I assesses the risks associated with proposals including their impact on customer service, before deciding whether to proceed. Promotion of the call centre and website channels, for example, has resulted in an increase from 750,000 calls in 2001-02 to 1.4 million calls in 2002-03 and 2 million calls in 2003-04, and a trebling of visitors to the website, resulting in £147 million in sales.

Source: National Audit Office examination

24 Department of Trade and Industry' Coal Liabilities Unit

When the Department of Trade and Industry inherited the health compensation liabilities of British Coal for ex-miners, it inherited the biggest personal injury schemes in British legal history and possibly the world. The Unit has received 684,000 claims covering respiratory and vibration disease and so far has paid out £2 billion in compensation. To process claims more quickly, the Unit launched a claims website **www.coalclaims.com**, to enable solicitors acting for claimants to submit forms electronically and to agree aspects of claims online, in particular employment histories. The system also helps claimants' solicitors by identifying priority claims. The system has resulted in less risk of errors in claims processing and less risk of lost documents or disagreements about when claims were lodged and how far they have been progressed.

Source: National Audit Office examination

Identifying key risks to delivery leads to better deployment of resources

3.10 Applying the discipline of risk management allows departments to regularly review and refocus their resources better to meet emerging priorities or new threats. HM Customs and Excise, for example, faced with a rapid and increasing risk in tobacco smuggling, made a comprehensive analysis and risk assessment of the markets and likely supply routes for illegal imports of tobacco. Rather than focusing purely on increasing the number of seizures of smuggled goods, Customs and Excise targets its intelligence resources to disrupt supply routes to stop smuggled goods reaching the UK, and deploys customs officers at ports of entry into the UK to stop illegally imported goods entering the country on arrival **(Figure 25)**.

25 HM Customs and Excise

HM Customs and Excise

By 2000, 1 in 5 cigarettes smoked in the UK was smuggled, costing around £2.5 billion in lost tax revenue, creating serious law and order problems and undermining government health objectives. Customs and Excise conducted an analysis of this illegal trade, which underpinned its *Tackling Tobacco Smuggling* strategy announced in March 2000. The Department identified the risks to achieving a reduction in illegally imported tobacco, and invested £209 million over three years to tackle the problem. The Department refined its risk assessments on the basis of new intelligence analysis, which enabled it to refocus resources to disrupt smuggling and reduce its profitability by directing its interventions to supply routes, activities and ports of entry where illegal importation was most likely. Since 2000, this has enabled the Department to reverse the growth in cigarette smuggling for the first time in a decade. Volumes have been reduced by 2.5 billion cigarettes, cutting the illicit market share of smuggled cigarettes to 18 per cent compared to the 34 per cent that was predicted by this time prior to the introduction of the strategy, and protecting some £3 billion more for the Exchequer.

Source: National Audit Office examination

3.11 Sometimes, departments embark on projects and programmes having invested insufficient time and resources at the outset, resulting in delays and wasted money later on.[29] This is especially true when IT is involved, so it is important that close control is exercised at a planning stage, for example, through early OGC Gateway reviews. To improve budgetary control, the Department for Culture, Media and Sport's Culture Online team is applying expertise derived from commissioning projects in a commercial media and broadcasting environment. It is seeking to move away from arts funding based on grants towards a commissioning system that pays on the basis of what is delivered. It requires, as a condition of funding, that contracted bodies make a thorough risk analysis of the planned project, including specifying how it will deal with the risks identified **(Figure 26)**.

26 DCMS[1] Culture Online programme

cultureonline
Department for Culture, Media and Sport

The Department set up Culture Online to explore new approaches to funding and delivery of arts and culture projects to a wider range of citizens, particularly those from hard to reach audiences. Culture Online has a budget of £13 million to finance new projects designed to extend the reach of culture and the arts, using new technologies. Prior to making a commitment to fund a project, the team develops detailed plans with potential delivery partners setting out exactly what they expect the project to achieve, what the risks are to delivery and how they will be managed. Getting this stage right manages the risk of money being wasted in production and sends a clear message to delivery partners that timely outputs must be delivered within agreed budgets.

Source: National Audit Office examination

Benefit 3: Make more reliable decisions

Deciding how much risk to take enables better management of change

3.12 Where businesses are driven by market pressures they are more likely to have made assessments of how much risk they are prepared to take - commonly known as their risk appetite. National Savings and Investments, for example, recognised the need to migrate its banking products from its legacy IT systems to a commercial banking platform if it was to continue to meet the demand for its products, in the face of competition from other financial service providers **(Figure 27)**.

27 National Savings and Investments

To address known weaknesses of its elderly IT systems, NS&I agreed that its partner SBS should move its products onto Thaler, a commercially available IT system for banking products. The most recent transfer was of NS&I's Premium Bonds database with records representing an investment value of £24 billion, covering 23 million customers - one of the biggest databases of its kind to be migrated. To mitigate the risk to its reputation and potential loss of sales if errors were made in customer data in the transfer, NS&I devoted two and a half years to implementing the migration and timed it for the Easter weekend 2004, when fewer people would be making Premium Bonds transactions. To further manage the risk, NS&I held back on marketing campaigns for Premium Bonds to reduce demand and pressure on its partner SBS and undertook six months of parallel running of the new system before the go-live date.

Source: National Audit Office examination

29 *The Cancellation of the Benefits Payment Card Project. National Audit Office, 1999-2000 (HC 857).*

3.13 Private sector companies make assessments about the specific risks they are prepared to take against a wider context of the overall risks to which the company is exposed. This is done by constructing a portfolio of risks and including an understanding of whether and how acceptable risks in individual business areas may compound to create an unacceptable risk for the company as a whole (aggregation risk). This informs decisions about whether risks are increasing or decreasing and whether there is scope to adequately manage the overall portfolio to exploit opportunities but not become overly exposed **(Figure 28)**.

28 Prudential plc

As an insurer, risk assessment is an absolute part of Prudential's core business. By reviewing the range of risks that the business faces, Prudential's Group Operational Risk Committee, which reports to the Chief Executive, is in a position to identify the likelihood of *aggregation risks*, that is, risks that arise in different parts of the business which, when taken together, may present an overall risk. The Committee, through its overview of risks across the business, also seeks to identify *contagion risks* (which may arise in one business area but have the potential to affect the Prudential brand more generally, for example, if one of the companies' products was receiving unfavourable reviews or, conversely, was performing well and in high demand).

Source: National Audit Office examination

Openness about risks makes for precise decision-making

3.14 Organisations that are open about the risks they face and have a "no blame" culture generally find that staff are more likely to report risks without fear of censure, which helps to bring risks out into the open. This also serves to make risk management an integral part of the way business is conducted. In the banking world, Nomura emphasises the importance to staff of openness about risks through its induction training of new employees **(Figure 29)**.

29 Nomura

As an investment bank, Nomura's traders and bankers make decisions which could result in the bank gaining or losing millions of pounds in minutes. In the wake of competitors' financial disasters through unmonitored and unmanaged trading losses, Nomura has changed its induction training to promote from the outset a culture that encourages staff to be open about the potential risks they run, so that these can be assessed by senior management and decisions taken to either reduce or increase corporate risk.

Source: National Audit Office examination

3.15 Professor Rhona Flin's paper identifies the importance in safety critical industries, such as aircraft, air traffic control, and energy companies, of drawing in all expertise relevant to identifying potential risks and how they will be managed **(Figure 30)**.

30 High reliability organisations

In "high reliability" or safety critical organisations, the consequences of poorly managed risks can be catastrophic disasters. To address this, in the planning phase of new complex operations, all the divisions or agencies involved meet to share previous experiences, to identify critical decision points where risks can manifest, and to plan how they could be handled. This creates the opportunity to minimise wrong decisions by determining appropriate actions and responses in advance. Responses to threats can be maximised, while minimising the risks of missing business opportunities.

Source: Flin and Crichton, 2004

Learning lessons from others helps to anticipate risks, particularly with new and untried methods of service delivery

3.16 Learning from other departments and organisations about how they have approached and managed risks assists departments' decisions about implementing major programmes of work. For example, the Office for National Statistics contracted the BBC to host its website for the release of 2001 Census data after learning from the difficulties experienced by the Public Record Office during its release of the 1901 census forms **(Figure 31)**.

31 Office for National Statistics

When the Public Record Office posted the 1901 Census forms on its website in January 2002, it did not foresee the enormous popularity of the site with members of the public interested in family research. The service was designed to provide access to a peak of 1.2 million users over a 24 hour period, yet experienced 1.2 million users per hour, overwhelming the site. The service was not made fully available to the public until 11 months later, in November 2002.[30] Foreseeing the risk of similar problems with data from the 2001 Census, the Office for National Statistics approached the BBC - which has capacity to handle millions of users daily - for use of their website. The Census 2001 data were published in August 2002 with some 90,000 users accessing data on the website in its first week, easily within the technical capacity of the BBC site. Usage has since risen to 163,000 users a week (March 2004).

Source: National Audit Office examination

30 *Unlocking the Past: The 1901 Census Online, National Audit Office, 2002-03 (HC 1259).*

3.17 Effective management to share knowledge and experience across projects, and securing lessons learned, provides a useful reference for departments. The Department of Trade and Industry, for example, nominated knowledge managers in each of its teams in its Coal Liabilities Unit so that other members of staff know who to approach for information. Staff of the Unit keep "Storybooks", including an Audit and Risk Management Storybook on how they dealt with risks, so that learning and good practice can be shared with others **(Figure 32)**.

32 Department of Trade and Industry Coal Liabilities Unit

Coal Liabilities Unit staff are responsible for updating a number of "Storybooks" that detail where improvements have been made to claims handlings, including an Audit and Risk Management Storybook, an Efficiency Storybook, a Stakeholder Communications Storybook, a Learning Storybook, and a Fraud Storybook. Contractors also contribute. The Efficiency Storybook also estimates savings made by improvements. The Storybooks seek to describe key areas of learning from the setting up and operation of such large compensation schemes so that others can draw on the Unit's experience.

Source: National Audit Office examination

Benefit 4: Support innovation

3.18 Departments are under increasing pressure to improve the ways they deliver new and existing services. Major policy changes, for instance the Working Families Tax Credit, require departments to develop from often high level concepts and deliver entirely new services that may require a different knowledge base and skill set from that currently existing in the department.

Good risk management provides the means to develop new services successfully

3.19 New services or activities provide the scope for departments to introduce risk management as an integral part of rather than an appendage to existing management processes. Introducing new services requires management grip as new activities associated with them are often perceived as having greater risks than existing procedures and processes, where inertia or habit inhibit the introduction of change. New activities are also subject to greater ministerial, media and public scrutiny, making failure more immediately visible.

3.20 National Savings and Investments has been tasked with delivering to the Treasury added value for the taxpayer through being cost effective in raising funds from savers compared to the cost of raising funds through the capital markets. To do this it must develop new products which can attract savers' funds by competing with savings products offered by the private sector **(Figure 33)**.

33 National Savings and Investments

NS&I's staff view its mix of private and public sector experience as a key asset in creating a culture that combines willingness to take risks while operating within a public sector control environment. In January 2004, NS&I launched a new type of savings account, the Easy Access Savings Account, which involved major changes to NS&I's business, including creating a system for customers to access the new account through automated teller machines (ATMs). Staff with experience of launching financial products in the private sector were aware of the risks of over stimulating customer demand and not being able to deliver the product to customers in a timely fashion. Good risk management enabled NS&I to achieve an effective product launch.

Source: National Audit Office examination

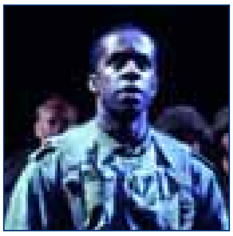
Sound risk management can help harness the benefits of new ideas

3.21 If new ideas are to be launched successfully and turned into services with benefits for citizens, they need both creative freedom and support. Good risk management has benefits for bodies funded by or contracted by departments, as well as for departments themselves. Smaller organisations, whether private or voluntary sector, may need more support and guidance. Culture Online has invested resources in working with a wide variety of organisations, both big and small, some of which have no experience of risk management, to put risk management in place **(Figure 34)**.

34 DCMS' Culture Online programme

As a new initiative within the Department for Culture, Media and Sport, Culture Online has the advantage of having no historical legacy in the way it delivers its targets and manages risk. It has brought together a tailor-made team with experience of commissioning media projects and project management. This is important, given Culture Online's remit to deliver innovative arts projects, often incorporating new technological developments previously untested. Culture Online funds projects on the basis that the risks and costs are commensurate with audience or strategic benefits, as well as fulfilling Culture Online's remit to bring culture and the arts to new audiences. The projects are innovative not only for Culture Online, but also for its delivery partners. A key aim of Culture Online is to embed project and risk management principles in the bodies it contracts with so that projects these organisations undertake in the future are managed well and the bodies have more confidence in undertaking risky innovative projects.

Stagework



Adrian Lester as the King in the National Theatre's modern dress Henry V.

Stagework is delivered through a website (www.stagework.org.uk) produced by the National Theatre and regional theatres. It aims to increase understanding of theatre as a creative industry and to make young people aware of its career possibilities. *Stagework* takes visitors to the website behind the scenes to understand how theatre productions are created. Productions include *His Dark Materials, Henry V* and *Beauty and the Beasties. Stagework* supports Key Stages 3 and 4 of the National Curriculum in English and Drama, Citizenship, Religious Education, Performing Arts, ICT and Communication skills.

Source: National Audit Office examination

3.22 To test new ideas thoroughly often requires new ring fenced forms of funding that are prepared to risk higher failure rates than normal in order to realise the potential of the ideas that work. The more flexible funding regime of resource accounting can help support innovation. As part of its wider strategy to encourage departments to make better informed investment decisions, the Treasury has undertaken two initiatives to help fund risky innovative projects - Cambridge-MIT Institute Limited, to encourage innovation in science and technology essential to the UK economy and involving imaginative scientific and technological solutions, and the Invest to Save Budget (**Figure 35**).

35 HM Treasury - Invest to Save Budget

The Invest to Save Budget is a joint Treasury/Cabinet Office initiative to encourage innovation and partnership in the public sector, in order to explore ways of improving the quality and cost-effectiveness of public services. So far, £358 million has been allocated to projects. The Invest to Save budget finances small, but significant projects that are innovative, and promotes new ways of joint working between organisations. By their very nature they are risky, requiring the creation of new links between organisations on new projects, but may open the way for more substantial engagement between partners. Most projects are pilots, designed to provide evidence for future policy decisions.

The *External Marking and Data Collection Process Improvement for Tests and Examinations project*, for example, was an innovative partnership between four UK Authorities for education qualifications - the Qualifications and Curriculum Authority, Awdurdod Cymwysterau Cwricwlwm Ac Asesu Cymru, the Scottish Qualifications Authority and the Council for the Curriculum Examinations and Assessment, Northern Ireland. The project received three years' funding in 2001-04 to invest in new technology for centralised marking and data collection of examination scripts. The project improved quality and speed of marking and decreased risks to the security and confidentiality of scripts. Subsequently, the partners have transferred the technical expertise and lessons learned to other projects and areas of work.[31]

Source: Invest to Save Budget/National Audit Office

31 *ISB Project 152 Evaluation: External Marking and Data Collection Process Improvement for Tests and Examinations, April 2004, www.isb.gov.uk*

3.23 Both are departures from standard Treasury funding, in that those seeking funding are encouraged to focus on innovative projects with high inherent risks. Appraisal of projects such as Cambridge-MIT can now be addressed through the Gateway Process to appraise high risk procurement projects. While Gateway was intended primarily for procurement projects, it is applicable to other high risk, high value initiatives.

36 **Office for National Statistics**

New technology has transformed the ability of organisations to create, share and use knowledge instantaneously and has created new customer demands for data. Two key changes in demand for economic statistics are the growing need for regional data and the increasing importance of the service sector in the economy. To keep pace with the changing demands of the information market, in 2000 SR2002 provided the Office for National Statistics with funds to launch a ten year Modernisation Programme to put in place new methods, standards and processes and the IT systems to deliver them. The Office is using the Modernisation Programme as an opportunity to transform its way of working into an advanced e-business with an integrated, enterprise-wide information systems architecture. Delivery of the modernisation plan has significant risks and depends on implementing technical solutions that are novel within the environment of a national statistical office. A risk management infrastructure aims to ensure that risks in each element of the Modernisation Programme are formally assessed and managed.

Source: National Audit Office examination

Risk management enables new ways of working

3.24 New areas of work also provide opportunities using the latest technology to create up to date delivery mechanisms. Increasing use of sophisticated new technology facilitates new ways of working, but creates risks of novel systems and procedures that are unfamiliar to staff and need robust risk management to install. The Office for National Statistics is moving towards new technological solutions **(Figure 36)**. The Prescription Pricing Authority's risk awareness allows it to make better informed decisions about its strengths and new areas of work it can take on board **(Figure 37)**.

37 **Prescription Pricing Authority**

Risk management can prompt departments to assess what should be delivered in house rather than outsourced, but also can assist in identifying strengths and opportunities that may minimise the uncertainty of taking on new areas of government work. The Prescription Pricing Authority has built up expertise in, and a knowledge of, risks associated with issuing plastic cards to patients, which provide evidence of prescription charge exemption or prepayment. This enabled the Authority to take on additional work on behalf of the Department of Health in a new area of work - issuing the European Health Insurance Card (E-HIC), to replace the form E111 used by UK travellers to obtain medical treatment in European Union countries.

Source: National Audit Office examination

In Part 4, we explain what more departments need to do to make risk management work effectively for them.

Part 4

What more needs to be done for risk management to work effectively

4.1 The Risk Programme concludes at the end of 2004. It has clearly been the driving force behind much of what has been achieved by departments to develop systems and capabilities to manage risk. The Treasury is working with departments to develop arrangements for beyond the end of the Programme, to maintain the momentum of improvement. It will be a significant challenge for departments to maintain the pace of change and use the new capabilities effectively, so that threats are minimised, opportunities taken and services to the citizen are generally improved and made more reliable. We identify five key areas which departments need to address to take risk management forward beyond the end of the Programme. These are:

- Good risk management requires time and top level commitment;
- Responsibility and accountability for risks needs to be clear, backed up by scrutiny and robust challenge to provide assurance;
- Departments need to base their judgements about risks on reliable, timely and up to date information;
- Risk management needs to be applied throughout departments' delivery networks; and,
- Departments need to continue to develop their understanding of the common risks they share and work together to manage them.

i Good risk management requires time and top level commitment

Key findings from our survey and focus groups

- In three quarters of departments, senior managers discuss overall risks and related actions at least quarterly.
- But three quarters of participants in case study focus groups rated time pressures as a major barrier to managing risks in their day to day job as well as they would want.

Source: National Audit Office examination

4.2 Departments need to signal their commitment to risk management by drawing a direct link between the structures and processes they have put in place and the better achievement of organisational objectives and targets **(Figure 38)**. Changing behaviours so that key staff understand how to identify and respond to risk is a major task which inevitably takes time, particularly in large organisations. A sustained effort is needed by departmental boards to make sure that the benefits of good risk management are clearly communicated to staff and that they have the information, training and support to make them work. These include the potential benefits to be secured from innovative or novel approaches to developing and delivering services through well managed risk taking.

4.3 Private sector experience is that it can take five years or longer for risk management to be fully embedded and effective. All of the case study departments included in our examination considered that they had further to go. National Savings and Investments for example, believed that it was only in the last twelve months that risk management had become routine to the way the business was run.

38 **Demonstrating commitment to risk management**

There's a very open culture encouraged from the top of the Unit. I don't think there's any point at which anyone feels that they can't talk to their line manager about a certain issue. No one feels - I'm having problems with this so I'd better tuck myself into a corner and hide.

DTI Coal Liabilities Unit staff focus group participant

The Chief Statistician has been good on that (supporting risk management) and that has fed through to everybody else and is demonstrating that he really believes it. He says 'if something is going wrong, tell me early on,' and when that has happened he has been supportive and he has been part of the solution.

Office for National Statistics focus group participant

Source: National Audit Office examination

4.4 Linking risk reporting to key objectives helps ensure that risks are correctly prioritised for Executive Board attention rather than risk management being a "bolt on" activity or control mechanism with no clear link to performance. Risk registers, for example, should be a means to better performance rather than ends in themselves. If risk registers are maintained separately from management reporting they are not likely to meet their intended purpose. Instead they are likely to become no more than a vehicle where every possible risk is filed however small and then forgotten, rather than an effective management tool for purposeful action **(Figure 39)**.

4.5 A key issue is the extent to which staff feel confident that they can report problems, failures and threats without fear of unjustified censure or penalty. While it is important that each top risk is "owned" by an executive director who has overall responsibility for managing it, a mature risk culture recognises that when risks are taken they will not always succeed and creates a greater incentive for all staff to acknowledge and learn from difficulties rather than to conceal them, and to report and manage threats to delivery sooner rather than later. This allows departments to manage problems before they spiral out of control.

39 **Reuters - Risk management needs to be designed to be more than a compliance tool**

REUTERS

Reuters operates in the highly competitive businesses of news provision and financial information, where good risk management is key to maintaining its competitive edge. Risk analysis and identification are an integral part of objective setting for business units. Focusing on those risks that impact on major objectives helps Reuters to move away from simple catalogues of potential risks leading to no action to identifying those that need active senior management input if the business is to succeed.

Source: National Audit Office examination

ii Responsibility and accountability for risks needs to be clear, backed up by scrutiny and robust challenge to provide assurance

Key findings from our survey and focus groups

- Eighty per cent of departments considered that all staff had a role to play in identifying risks but only 40 per cent considered that they had a role in assessing risks.
- All but one department has a non-executive chairing its Audit Committee and for 85 per cent of departments a non-executive director was a member of both the Audit Committee and management board.

Source: National Audit Office examination

4.6 If staff are not clear about their responsibilities risk management will be weak and ineffective. At worst, important aspects of service delivery could "fall between the cracks" with no one taking responsibility. Lack of clarity could either lead to staff being unduly risk averse for fear of blame if things go wrong or to excessive risks being taken when staff are not clear about the limits of their authority at which decisions should properly be referred to more senior staff.

4.7 Risk needs, therefore, to be an automatic part of how organisations and people think and act in their jobs and the tasks they carry out. This includes having clear accountability and ownership of risk. For this to work effectively staff need to have the training and expertise to apply the tools and techniques of risk management to their daily tasks so that there is consistency across the organisation and its partners in determining the priority assigned to different risks. Part of this is also agreeing both responsibilities for key risks and for reporting changes in their status.

4.8 Risk management is likely to be much stronger if it is subject to effective accountability arrangements. This requires (i) an environment which encourages staff to be open in explaining their risk management decisions and (ii) processes which help ensure risk management decisions are adequately and objectively reviewed. In this way departments have to justify their judgements and decisions about risk. Review of risk management decisions should be based on consideration of the evidence that was available on which to base the decision and whether the decision was within the authority of the person who took it. Robust constructive challenge can often bring new or different perspectives and experience, for example from external scrutiny; it can support effective accountability and provide assurance about the effectiveness of risk management decisions. This is now much more widely accepted in the private sector where following ENRON and other major corporate failures, companies recognised that public confidence needed to be re-established, partly by strengthening external accountability and transparency of decision-making. GlaxoSmithKline **(Figure 40)** like many similar organisations relies heavily on its Audit Committee to challenge regularly its approach to risk management.

4.9 Audit Committees are a key element of a robust constructive challenge process and are now having a more prominent role in departments. Their effectiveness is enhanced by having non-executives in their membership and they can provide overall assurance on the way in which departments manage their risks. Such assurance also underpins the Accounting Officer's annual Statement on Internal Control. To assist Audit Committees, the NAO has prepared good practice on how they can assess the effectiveness of departments' arrangements for handling risk **(Figure 41)**. The Treasury also produced an Audit Committee handbook in October 2003, which included a set of questions for Audit Committees to consider, including questions on the strategic processes for risk, control and governance.

40 **GlaxoSmithKline - How Audit Committees can strengthen risk management through challenge and scrutiny**

In the pharmaceutical industry, errors can cost human life. GlaxoSmithKline seeks to strengthen its management of risks which might result in such errors through a series of committees and audit functions that oversee key requirements such as regulatory compliance, research and development and clinical practice. The Audit Committee consisting entirely of non-executive directors meets with the compliance and audit functions to provide constructive challenge to their identification and handling of risk.

Source: National Audit Office examination

41 **Self-assessment developed by the NAO to assist Audit Committees in their review of departments' approach to risk management**[32]

Assessing the scope of internal and external audit

- Does the Committee satisfy itself that the organisation's main risk areas are being reviewed by internal and external audit?

Monitoring risk management arrangements

- Does the Committee's role include monitoring the Executive Board's processes for assessing business risks and the financial implications?
- Does the Committee ensure that internal and external audit report to them on what they perceive as key risks now and in the short and long term?
- Do senior executives report to the Committee on how key business risks and their financial implications are being dealt with?
- Do internal and external audit comment on the Executive Board's reports on how key business risks are being dealt with?
- Is the Committee involved in reviewing the effectiveness of internal control?
- Does the Committee consider whether corporate governance is treated as a compliance exercise or is being used to provide benefit to the organisation?
- Does the Committee consider whether the system of internal reporting gives early warning of control failures and emerging risks?
- Does the Committee consider whether each of the significant risks is sufficiently owned by a member of the Executive Board?
- Does the Committee consider the need to raise the awareness of junior staff to the importance of risk management?

Source: National Audit Office

32 *http://www.nao.org.uk/guidance/checklists/auditcommittee_checklist.pdf*

iii Departments need to base their judgements about risk on reliable, timely and up to date information

Key findings from our survey

- Three quarters of departments have clearly defined policies and processes for reporting changing risks and controls in place to manage them.
- Eighty per cent of departments use a "traffic light" system to monitor risks and how they are changing.
- Three quarters of departments consider management is receptive to all communications about risk, including bad news.
- But, just one quarter of departments consider they know how much risk they can take to achieve objectives.

Source: National Audit Office examination

4.10 Without reliable information risk management cannot function. Departments need information on costs, the preferences and needs of key beneficiaries of public services and data on a wide range of aspects of performance such as waiting times, productivity and quality of service. Equally importantly they require data on likely future happenings such as climatic changes or shifts in population and estimated economic performance. Advances in information technology - in particular the development of global and international networks - and market research mean that departments can often be deluged with data. They need to form careful judgements about the level of information needed to manage risks effectively. Too little and decisions can be flawed; too much and there can be information overload, paralysing decision-making as every piece of data is analysed for its implications.

4.11 In their Report (Appendix 2) prepared for the NAO, Professor Rhona Flin and Dr Margaret Crichton of Aberdeen University draw comparisons with the experience of safety and critical incident management in industries used to dealing with high level risks, such as offshore oil, aviation and nuclear power. These industries are highly dependent on precise, well focused information provided in real time together with an ability to assimilate, interpret and act on the data very quickly. The article also highlights different types of decision-making and the various types of information required. While the risks government faces may often be different, the principles are very similar, with departments more likely to make better decisions on risks if they understand how best to respond to different circumstances.

4.12 In one scenario a decision-maker may have to read the situation and quickly retrieve corporate memory or prior personal experience to respond effectively rather than generate new options. In departments this might be in responding to flooding, industrial action in a key public service, or a major health hazard. Such an event has generally occurred before and there should be considerable prior experience to draw on. The key issue is how quickly such information can be retrieved.

4.13 Another circumstance could require a more analytical decision making strategy involving the identification of the situation, deciding on a range of possible responses and then rigorously evaluating them to select the best fitting solution. Such a situation would rely less on corporate memory but much more on data to analyse the underlying problem.

4.14 Departments, therefore, need to have a good understanding of the typical risk circumstances they most often face and have confidence that the data and "intelligence" they routinely collect and monitor will allow them to identify the problem early enough to take action. Historically departments have not always been very effective in activating quickly enough corporate memory to deal with events of which they have prior experience.

4.15 Departments need to subject their data requirements and sources to regular review to be confident that they have sufficiently reliable information about risks at each stage of risk management (see Figure 1) - identifying risks, assessing their impact and likelihood, determining how to address them and reviewing and reporting on them.

4.16 Information underpinning risk management can be made fit for purpose in other ways. For example, it should be:

- **Assembled and collated on a consistent basis against a common set of standards**. The Prescription Pricing Authority, for example, uses a computer software package whereby risks are identified, assessed and ordered at each successive level of management, and within its Risk Management Framework. This process results in a top level report to management that highlights the key organisational (strategic and operational) risks and how they are derived.
- **Easy to assimilate and interpret**. Reporting of risks and support procedures needs to be clear and simple with staff regarding them not as an administrative chore but, in fact, helpful to reporting performance **(Figure 42)**. Board members in the Department of Trade and Industry for example,

receive for board meetings a single page summary with relevant performance indicators, budget information and risk status for the departmental objectives for which they have responsibility. Prudential has also found that other less formal routes of communication, such as face to face discussions and ongoing dialogue, are useful to supplement its regular risk reporting about how risks are being managed **(Figure 43)**.

- **Portfolio based**. A single piece of information may be misleading or provide little indication of a potential risk. It is only when information is collated or triangulated with other data that a pattern begins to emerge. One way to ensure this is to adopt a portfolio approach whereby a range of information on specific risks is regularly reviewed in the context of the overall objective of the department or provision of key services. For example high levels of error in the processing of benefits may simply indicate that the guidance to assessors needs improving. It could indicate however a much more fundamental problem in the design of the benefit. One source of data would not necessarily indicate this.

- **Communicated clearly**. There need to be clear channels for communicating information on risks which staff have the confidence to use **(Figure 44)**. HM Customs and Excise for example, has strengthened and clarified its methods by which staff reported intelligence gained from stopping vehicles at ports. This has been further enhanced by establishing an "intelligence based Pre-Selection Hub" at Dover that became operational in May 2004. This is developing criteria to improve the selection of vehicles to stop and search.

- **Provide early warnings of risks**. Information should provide sufficiently early warning of potential risks so that action can be taken to prevent them having an adverse impact or at least to mitigate this. For the United Nations World Food Programme anticipating and responding to humanitarian crises worldwide is its core business. It anticipates crises scenarios by monitoring forecasts, data, and alerts on natural hazards and socio-political developments worldwide from a wide range of specialised institutions around the world. Early warning monitoring and identification of potential crises may lead the organisation and its partners to initiate preventative or preparedness action to respond to the risk of new humanitarian crises **(Figure 45)**.

42 Keep communicating information on risks relatively simple

Some of our contractors try to set up these frameworks and they've come up with so many risks that you can't see the wood for the trees. I think the beauty of the system that is set up here is that it's not that complex. That makes it easier for everyone to buy into it and it doesn't take too much time.

DTI Coal Liabilities Unit staff focus group participant

What works is that you are only recording what we discuss, sometimes on a daily basis, on a particular problem anyway. So that success is that it gives you a chance to actually write down and clarify your thinking.

DCMS Culture Online staff focus group participant

Source: National Audit Office examination

43 Prudential - Face to face communication on risk is also important

PRUDENTIAL

As an insurer, Prudential is at the heart of the risk business and needs to assess the risks of those it agrees to insure. Risk reporting is part of the monthly and quarterly portfolio of management information routinely provided to senior management, but the paper exercise is supplemented by monthly meetings and informal dialogue between senior managers and their line managers for face to face discussions of risks and how they are being managed.

Source: National Audit Office examination

44 Clear communication channels make for well informed judgements about risk

Communication as far as that's concerned has improved vastly. There are clear routes to inform others. It's responding to the individual officers' requests really, which is what the station needed.

Customs and Excise focus group participant

There is a structure so you don't have to sit and think who should I report this to. It is clear straight away who you are going to report that through and how to do that as well.

Office for National Statistics focus group participant

It has made me better in my job. I feel I practice with confidence because there is a structure and because it is shared as well. The structure I think is key because we can take the risk because we are not doing it blind.

DCMS Culture Online staff focus group participant

I think primarily because everyone who bought into it realises that it works and that it's actually improved the way that we work.

DTI Coal Liabilities Unit staff focus group participant

Source: National Audit Office examination

45 United Nations World Food Programme - Importance of having early warning indicators

Every day some 24,000 people die from hunger and related causes.

In 2003, the World Food Programme fed 1,094 million people at risk from natural and human-made disasters. To get food to starving people quickly means, among other things, monitoring and anticipating crises that may have an impact on food security. In 2003, the World Food Programme set up an Emergency Preparedness and Response Unit to work with partner agencies, non-governmental organisations and donors to improve how it identifies and anticipates risks to trigger the necessary preparedness actions for humanitarian response. This involves monitoring data, forecasts and alerts from a wide range of specialised institutions worldwide - floods, drought, tropical storms, political developments, environmental and climatic data and research - to alert it to when and where food security crises may appear, and to trigger preventive and preparedness action in the organisation, such as contingency planning. The Unit monitors key indicators to produce risk assessments of slow onset disasters, such as droughts and crop failures, refugee crises, and complex emergencies involving conflict, widespread social and economic disruption and/or large population displacements.

The Unit provides staff and senior managers, and partner bodies, with daily and monthly updates on potential food crises and has an emergency situation room at its Rome headquarters for convening crisis teams. Improving risk prediction creates the potential for the World Food Programme to innovate in the way it anticipates, prepares for and mitigates against new humanitarian crises, with overall enhanced programme quality delivery. This in turn is leading to encouraging donors to provide more flexible forms of funding that can be directed proactively towards any emerging crisis rather than reactively towards particular disaster relief operations.

Source: National Audit Office examination

iv Risk management needs to be applied throughout departments' delivery networks

Key findings from our survey

- Eighty per cent of departments reported they had assessed the impact on achievement of objectives of one or more partners failing to deliver, yet only 30 per cent of departments were confident they knew the strengths and weaknesses of the risk management systems of other organisations they worked with.

Source: National Audit Office examination

4.17 Delivery of modern and efficient public services increasingly requires reliance upon a range of partners often in complex delivery chains and networks of organisations including local authorities, non-departmental public bodies operating at arm's length, private sector suppliers and voluntary organisations. Inevitably, this creates new and increased risks and departments need to apply the same principles of accountability, challenge and openness that they apply to their internal risk management so that responsibility for managing risk is clear throughout the delivery network.

4.18 Outsourcing through contractors offers new, often innovative ways to deliver services but, in turn can result in complexities and interdependencies that create a new set of risks; the more complex the delivery network the more those risks compound **(Figures 46 and 47)**.

4.19 Whatever arrangements are in place failure to understand and exchange practice on risk management can leave all those in the delivery network exposed. The importance of a common understanding of risks and how best to manage them, for example through a joint risk register or sharing of risk registers, is particularly important for departments where they are ultimately accountable for delivery of services and use of public money but have little direct control over delivery mechanisms. This can often be the case in the education sector and in instances where local authorities deliver services directly funded by departments.

4.20 Establishing formal partnerships or contractual arrangements can assign responsibility for risks but these should not be so detailed that they become too bureaucratic and allow little discretion to adapt services to reflect local needs and circumstances. Where much smaller organisations such as those from the voluntary sector are involved models of corporate governance expected of much larger organisations may not be practical. In these situations departments need to work with smaller organisations to develop arrangements and processes that are more commensurate with their size and the risks they are likely to encounter.

46 **Department of Trade and Industry Coal Liabilities Unit - Developing a common understanding of risk with suppliers**

We had contractors blaming each other and again it was an educative process for them to clarify that they're all interdependent. If they do something, it will affect another contractor and there's no point in blaming another contractor.

Certainly in the three years I've been involved the amount of dialogue has increased dramatically between the stakeholders and the contractors and indeed the DTI. When risks change you know about it and can assess them very quickly. They are not this great surprise which a year or so they might have been.

I think the fact that they share the risk register and its content is really important.

DTI Coal Liabilities Unit contractor focus group participants

The Department's Coal Liabilities Unit processes claims for personal injury compensation from former miners. Ten major contractors including Capita-IRISC, ATOS Origin and Iron Mountain, employing 1,500 staff are involved in processing 684,000 claims. Estimated total payments are likely to be in the region of £7 billion. There are many risks with such a scheme, such as claims taking too long to process causing distress to severely ill claimants, mistakes and basic error, fraud, and prohibitive administrative costs. To minimise and manage these risks the Unit has worked closely with all the contractors on which it relies to process claims and provide advice. Workshops are held regularly to discuss new emerging risks and to surface emerging problems sufficiently early.

Source: National Audit Office examination

47 **National Savings and Investments - Working in partnership to manage risk so that both parties benefit**

National Savings and Investment (NS&I) entered into partnership with Siemens Business Services to take over its back office functions in April 1999. This represented an innovative and pioneering though high risk public-private sector partnership and one of the largest outsourcing operations ever undertaken by a UK government department. The estimated benefit of the partnership was a saving of £158 million over the life of a 15 year contract compared with retaining operations in house, but the early years of the contract left Siemens with a loss. To develop a more positive relationship where both parties benefit, NS&I and Siemens have developed a "whole business approach". By adopting a shared understanding of customers' requirements, such as the need to promote continuous improvements to customer service and the need to develop new products to remain competitive, NS&I and Siemens have developed a shared understanding of risks across the business. This approach has also stimulated Siemens to identify cost savings, which in turn will benefit NS&I. This has required a mature approach to business partnerships that recognises the need for all parties to be securing benefits.

Source: National Audit Office examination

v Departments need to continue to develop their understanding of the common risks they share and work together to manage them

Key findings from our survey

Departments consider that actions taken in response to risks have contributed to:

- Better value for money for half of departments.
- Improved communication of risks to the public for 40 per cent of departments.
- Less fraud for 35 per cent of departments.
- Increased public confidence that risks are well managed for just 10 per cent of departments.

Source: National Audit Office examination

4.21 It is important that departments take a wider view on risk than just those issues that affect their immediate organisation as action by one department can have implications for another; for example the emphasis which schools give to physical fitness will influence levels of obesity and children's general well-being.

4.22 Risks (and opportunities) do not conveniently arrange themselves around organisational boundaries, and departments need effective mechanisms to work together, to share knowledge, information and understanding about risks, and how to address them. Not to do so can have significant implications for public services and also for value for money. Examples include their commercial dealings with suppliers to manage common risks and to maximise their collective buying power. The Office of Government Commerce has provided good leadership in this respect but faces the ongoing challenge of getting departments to act on its advice and good practice and to share information on the commercial risks they encounter. Communication is another risk where if not well managed departments can convey conflicting or ambiguous messages which can undermine public confidence and trust. The need to engage effectively on issues of major public concern is also important. This is well illustrated by the efforts made by the Department for Environment, Food and Rural Affairs to engage with the public over genetically modified organisms **(Figure 48)**.

48 Department for Environment, Food and Rural Affairs - Facilitating a public debate

European Union member states were expected to have to make decisions in 2003 on the growing of GM crops. In preparation, the Department for Environment, Food and Rural Affairs, together with the Department of Trade and Industry, the Office of Science and Technology and the devolved administrations in Scotland, Wales and Northern Ireland, were responsible for supporting *GM Nation?*, a public debate on the issues surrounding GM technology. The public debate was managed by an independent Steering Board at a cost of £560,000, plus VAT. The GM debate comprised nine foundation workshops to establish an understanding of current attitudes, a package of stimulus material, a booklet, CD and video and the *GM Nation?* events which ran for six weeks from June 3 to July 18, 2003. Key channels of communications were the open public meetings, opportunities for stakeholders to voice their concerns, and an independent website that allowed a free and ongoing debate (www.gmnation.org).

There was widespread public interest in the debate, with hundreds of public meetings and 37,000 feedback forms returned. The GM debate together with a parallel review of the economics of GM crops, the science underpinning GM technology and the results of a four year programme of farm-scale evaluations of GM crops informed government policy-making. In March 2004, the Secretary of State published a GM Policy statement setting out the conditions under which GM crops would be permitted for cultivation. In the event no additional GM crops are likely to come forward for approval for cultivation until 2008 at the earliest.

Source: National Audit Office examination

4.23 Other areas where departments need to work together and share information to tackle risks include shortfalls in aspects of performance such as implementation of major IT projects, and also how ideas and good practice in innovation are secured so that they can be learned from and acted on elsewhere. Departments can best do this by developing networks to help foster understanding of the risks that they face and by ensuring that their identification and assessment of risks focuses very clearly on the interconnections and dependencies with other departments. They need then to engage in regular dialogue about how their respective risk management strategies support one another. Departments are already working together through the Civil Contingencies Secretariat to address major strategic threats such as extremes of weather and disruptions to infrastructure and other bodies examine interdependence of common risks in areas such as social exclusion or fraud. It is important that fora such as the risk improvement managers network set up under the Risk Programme continue to be developed as a means of sharing good practice between departments about risk management and the impact it can have on improving the quality and efficiency of public services.

Appendix 1 Methodology

Aspect	Methodology	Purpose
Progress in improving risk management	i Examination of reports prepared as part of the Risk Programme interim reports on progress of the Programme to the Prime Minister in December 2003 and to the Chief Secretary to the Treasury in June 2004.	To determine the extent to which five aspects of risk management have been implemented in departments.
	ii Interviews with managers having some central responsibility for improved risk management, including those representing: ■ Treasury's Risk Support team ■ Treasury's Delivery Unit ■ The Prime Minister's Delivery Unit ■ The Civil Contingencies Secretariat ■ Cabinet Office's Centre for Management and Policy Studies ■ The Office of Government Commerce	To identify responsibilities for developing risk management and initiatives taken to encourage departments to better manage risks to delivery.
	iii A survey was sent to 20 main Whitehall departments[33] in May 2004 and results compared with main departments responding to equivalent questions from an NAO survey in 2000.	To provide an independent assessment of how key aspects of risk management had developed since our 2000 report on risk management.
	iv We commissioned three focus groups of 27 departmental risk improvement managers (RIMs), run in March-April 2004 using the Department of Trade and Industry's Future Focus facility and independently facilitated by Alister Wilson of Waverley Consultants on behalf of the National Audit Office.	To examine: ■ progress in developing risk management; ■ the effectiveness of the Treasury's Risk Programme; and, ■ what needs to be improved for risk management to be more effective in departments.

33 *Cabinet Office; Department for Education and Skills; Department for Culture, Media and Sport; Department for Environment, Food and Rural Affairs; Department for International Development; Department of Trade and Industry; Department for Transport; Department for Work and Pensions; Department of Constitutional Affairs; Department of Health; Foreign and Commonwealth Office; Health and Safety Executive; HM Customs and Excise; HM Treasury; Home Office; Inland Revenue; Ministry of Defence; Northern Ireland Office; Office for National Statistics and the Office of the Deputy Prime Minister.*

Aspect	Methodology	Purpose
How risk management can deliver tangible benefits	v We undertook case studies of risk management practice covering areas of work in five departments selected to represent different types of service delivery. Interviews were carried out with key senior managers, supplemented by desk research, material from our survey and by two focus groups independently facilitated by MORI. Focus groups were mainly of staff at middle and senior management levels. 1 HM Customs and Excise Law Enforcement Directorate (one focus group of uniformed Customs Officers and one of their team leaders and managers at the port of Dover and the Customs and Excise Eurotunnel facility at Coquelles, France); 2 The Department for Culture, Media and Sport, Culture Online team (one focus group of staff and one of Culture Online's contractors); 3 Department of Trade and Industry, Coal Liabilities Unit (one focus group of staff and one of the Department's partners/contractors); 4 National Savings & Investments (two focus groups of middle and senior management); 5 Office for National Statistics, economic and social statistics staff (two focus groups of middle and senior management).	To examine practical aspects of risk management, the benefits it has delivered, good practice and lessons learned with the potential for wider application. Focus groups were designed to gather views and experiences of applying risk management from staff involved in the wider delivery network, and, in DCMS and the DTI, to compare the partners'/contractors' view of the department's risk management practice with views of staff in the department.
	vi We consulted four private sector companies who featured in the NAO's 2000 report on risk management - Prudential plc, Nomura investment bank, pharmaceutical multinational GlaxoSmithKline and news and financial services information provider Reuters.	To consider how risk management had progressed in the four years since 2000 in these companies and to provide pointers for further development of risk management in departments.
What more needs to be done for risk management to be effective	In addition to the case studies and private sector reviews above, we: vii Commissioned a research paper Risk Based Decision-Making: Mitigating Threat - Maximising Opportunity from Professor Rhona Flin and Dr Margaret Crichton of the Industrial Psychology Research Centre, University of Aberdeen; viii Consulted Dr Patrick Lagadec, Laboratoire d'économétrie, Ecole polytechnique, Paris; ix Consulted Professor Michael Kelly, Executive Director of Cambridge-MIT Institute Limited; x Consulted the United Nations World Food Programme.	To provide context for how risk management is developing and to draw on lessons from beyond the UK Public sector.

Appendix 2 Risk Based Decision-Making: Mitigating Threat - Maximising Opportunity

UNIVERSITY OF ABERDEEN
Industrial Psychology Research Centre

Report prepared for the National Audit Office

June 2004

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Executive Summary

This report was commissioned by Mark Davies of the National Audit Office: The remit was to examine how addressing risk improves decision-making. The Industrial Psychology Research Centre at the University of Aberdeen specialises in the application of psychology to the study of safety in high reliability industries. In this report, we have drawn on our experience of safety and critical incident management in industries used to dealing with high level risks, such as offshore oil, aviation and nuclear power.

Part 1 argued that technical expertise is not enough for effective risk management. Non-technical skills are also required and this section outlined the cognitive skills required to make effective decisions in high risk environments. It highlighted the importance of situation assessment, especially the need to accurately judge available time and level of risk when evaluating a novel situation. Four different risk based decision-making strategies were then described, intuitive (recognition-primed), rule based, analytical (option comparison) and creative. The appropriateness of each type depends on the given situation, especially in relation to time. Two techniques for training non-technical skills were suggested.

Part 2 looked at the risk management approaches adopted by high reliability organisations in relation to a) risk identification, b) organisational mindset and c) responding to changing risks. Examples were provided from the high reliability organisations to demonstrate how this is achieved in hazardous settings. The central concept of organisational 'mindfulness' (alertness) was introduced as this is the bedrock for effective risk management in a changing world.

Part 1: Non-technical skills

In risk conscious organisations from aviation (Flin et al., 2003), acute medicine (Fletcher et al., 2003) and nuclear power production (Crichton & Flin, 2004), there has been a shift of focus from a concentration on technical skills to an understanding of the complementary non-technical skills. In European aviation these are described as, *'the cognitive and social skills of flight crew members in the cockpit, not directly related to aircraft control, system management, and standard operating procedures' - i.e. the technical skills* (Flin et al., 2003). The non-technical skills consist of the following behaviour categories: decision-making, situation awareness, leadership, and teamwork, which are all underpinned by communication skills. In major event analysis across organisations (for example, Barings Bank, Fuel Crisis, Herald of Free Enterprise, Challenger) these same behaviours repeatedly emerge as critical skills for the management of risk. The two main categories of cognitive skills, situation awareness and decision-making are particularly relevant to risk management.

1a: Situation awareness

Situation awareness is the perception of bits of information from the environment *(what?),* the comprehension of their meaning *(so what?)* and the projection of their status in the near future *(now what?)* (Endsley & Garland, 2000). This describes the process of gathering information from a given situation, which is then interpreted using pre-existing knowledge, to give the situation meaning. Situation awareness is fundamental to effective decision-making where the first step in the decision-making task is situation assessment, i.e. to evaluate the situation. The ability to 'think ahead' and to anticipate how a given situation will develop is a key component of effective decision-making, especially when the unfolding events are unfamiliar.

Research at NASA with airline pilots (Orasanu & Fischer, 1997) has shown that more accidents are caused by pilots misreading the situation, then correctly responding to the situation they think they are in, than by pilots who correctly judge the situation but enact the wrong responses. Analyses of critical incidents in government settings have revealed that misjudgements in the initial assessment of the situation can result in inadequate decision-making, poor risk management and missed opportunities (Cabinet Office, 2002). Starting with the wrong perspective influences the decision, or response, that is selected. **Chart 1** (based on Crichton & Flin, 2002) illustrates the relationship between situation assessment and decision-making - i.e. selecting a course of action.

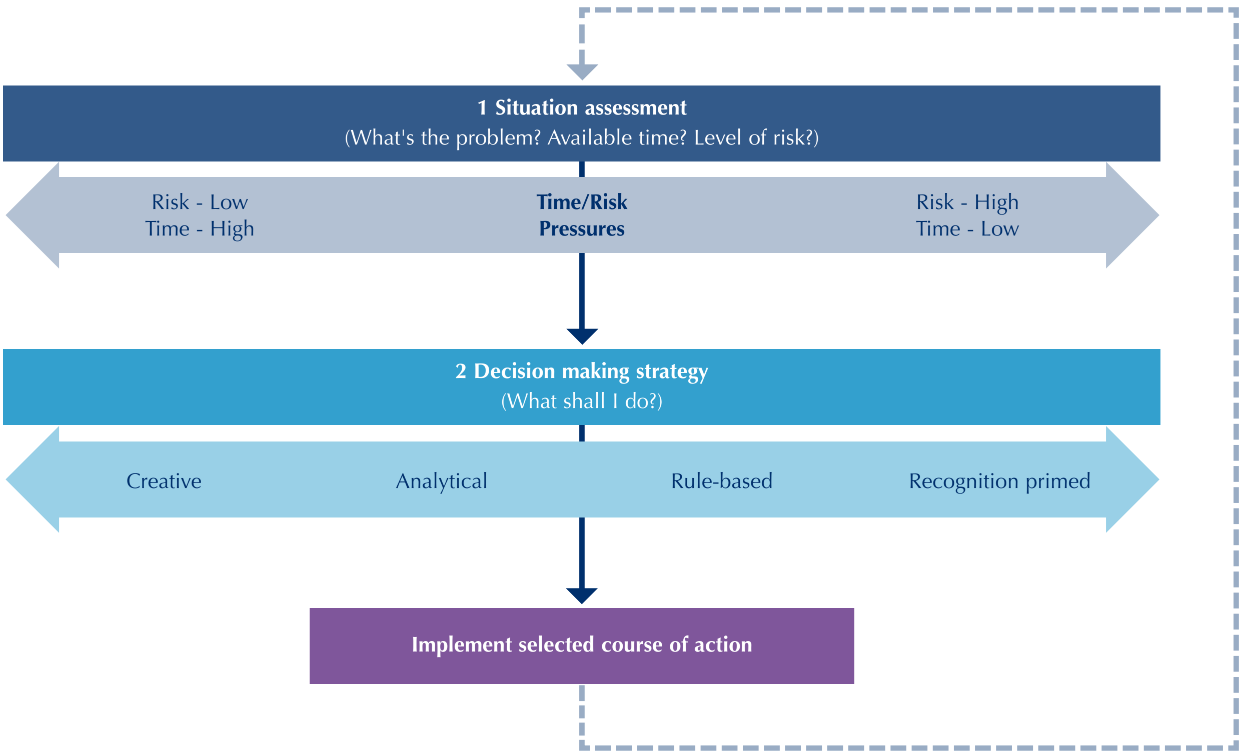
Orasanu's work has also shown that a critical component of situation assessment (that distinguishes experts) is the ability to accurately estimate available time and level of risk. The calculation of these factors determines the subsequent decision-making strategy. The ability to accurately estimate available time to think about the problem and to assess level of present and future risk is as important for decision-makers in a government department as it is on the flight deck.

1b: Decision making

Once an initial situation assessment has been made and the problem identified, the next step is to decide on a course of action (CoA) appropriate to the given situation. The choice of decision-making strategy depends upon the influencing factors at that particular phase of the event, such as levels of risk, amount of information available, and time available in which to make a decision. The four decision-making strategies shown in Chart 1 differ in the level of cognitive resources (or thinking power) required, ranging from high demand for creative or analytical strategies to less demand for rule based or recognition-primed strategies (see Flin (1996) for more detail).

- *Recognition-primed,* or intuitive, decision-making is a fast decision-making strategy. This occurs when there may not be an actual written rule or procedure, but the decision-maker rapidly recognises the type of situation and immediately recalls an appropriate course of action, based on prior experience (Klein, 1989). Assessing and classifying the situation to find a matching response (CoA) is the focus of mental effort, rather than generating options. An experienced decision-maker in a familiar domain can essentially 'read the situation', so that the selection of a course of action appears to be obvious. This strategy relies on the rapid retrieval of patterns from long term memory. It uses very little working memory (conscious processing of information) as the decision-maker is only considering one option at a time, rather than conducting a comparative evaluation of several options concurrently. The strengths of this strategy are in speed of response, but considerable practice and feedback are required for this method.
- *Rule based* decision-making refers to the use of procedures or rules, such as Standard Operating Procedures (SOPs). This involves the identification of the problem and subsequent retrieval from memory, or published manuals/checklists, of the rule or taught method for dealing with the particular situation. Procedures are widely used in high risk industries and are frequently practised in training. They are often an integral part of system design and are devised against specific acceptability criteria. SOPs are generally well known, and can be recalled easily from memory, or if less familiar can be supported by the use of check sheets, manuals, or cue cards. In essence, the decisions have been pre-thought by the organisation with suitable responses determined. This method is very useful for novices and for rapid response, but is very dependent on procedures being accessible and suitable for the current risk profile.

Chart 1: Model of situation awareness and decision-making



Source: Crichton & Flin

- *Analytical* decision-making strategy involves identifying the situation, then generating optional responses, rigorously evaluating them, and then selecting the best fitting solution (Gilhooly, 1988). Analytical decision-making employs concurrent comparison of several courses of action, which requires significant use of working memory. (This conscious processing of alternatives is very susceptible to disruption caused by distraction, stress or fatigue). There are many formal analytical techniques, such as Bayesian statistics or multi-attribute utility theory (Newell & Simon, 1972). This type of process can really only be used effectively when the decision-maker has the following:
  - Sufficient time in which to make an informed decision (risks are not escalating);
  - An accessible database of information to evaluate alternatives;
  - Regular updating of the information; and,
  - Peace to think without interruption or distraction.

Analytical decision-making is likely to be the optimal decision-making approach, if these conditions are met.

- *Creative* decision-making is the process used when the decision-maker is faced with an entirely novel circumstance. In this case, he or she has to diagnose an unfamiliar situation, but also has to design a novel course of action, as no stored rules or memories of suitable actions are available. Some notable examples include the Apollo 13 incident in 1970 (Klein, 1998) and the 1989 Sioux City DC-10 incident (Haynes, 1992). In time pressured, high risk domains, this method will be extremely difficult to maintain, although military commanders may disagree (Larken, 2002). However, in less demanding circumstances, this may be where opportunities for innovative, creative decision-making in relation to controlled risks can occur. If there are few time constraints, immediate risks are low and all necessary information is available, then decision-makers can be encouraged to think beyond the obvious solutions.

So in terms of risk management, when time is available (for example during planning), then an analytical decision-making strategy is likely to be most effective. But in all cases, the key skill for the decision-maker is to evaluate the situation, especially the time and risk factors, so that the appropriate decision strategy can be utilised. For military commanders, the aim is often to translate risk to advantage. In the words of Rear Admiral Larken (2002), Captain of HMS Fearless in the Falklands campaign, *"Win the information high ground, retain it and exploit it. It is essential always to know the present situation and how it is developing. Without accurate and timely processed, high quality information you are lost. Based upon sound strategy, thorough analytic preparations and exhaustive 'what iffing', naturalistic (recognition-primed) decision-making can, with discrimination, sensibly be applied beyond the envelope of your previous experience. This prepares the ground for creative decision-making also, as best may be"*.

Cultural influences in government departments may foster particular styles of decision-making. Training in both situation assessment and in different strategies of decision-making may help to strengthen the desired culture shift to a climate of risk-awareness and the practice of well managed risk taking.

1c: Training for non-technical skills

Many organisations operating in risky environments, such as nuclear power, medicine, maritime, and air traffic control, have introduced training to address non-technical skills called Crew Resource Management (CRM). CRM was initially developed in the aviation domain after analyses of aviation accidents, for example the Tenerife runway collision in 1977, identified problems characterised by failures in cognitive and social skills rather than lack of technical ability (O'Connor & Flin, 2003). The main non-technical causes of aviation accidents were identified as failures of interpersonal communication, crew co-ordination, decision-making and leadership. CRM training therefore targets the social and cognitive skills of operational teams (Boehm-Davis, Holt, & Seamster, 2001). It is generally classroom and simulator based and it focuses on decision-making and situation awareness, as well as communication, leadership, team working and stress management. This is now regarded as an integral part of risk and safety management by organisations operating in high hazard domains.

Part of a CRM programme is simulation training - this is a key method through which to demonstrate the impact of risk on decision-making. Placing decision makers 'in situ' using a scenario requiring decisions to be made in response to credible situations, are particularly useful for sharpening situation awareness and risk based decision-making. Low fidelity simulation methods, such as Tactical Decision Games have been shown to be particularly useful training techniques (Crichton, Flin, & Rattray, 2000). Participants can work through the decisions that might be required, evaluating risks and contingencies. The benefits of this training are increased with a structured debrief which specifically targets:

- What decisions were made;
- How they were made; and,
- Why they were made.

In this way, participants reflect on their own risk judgements, decision-making, and also have the opportunity to discuss differences in situation assessment and chosen responses. Problems with interactions within the organisation, and plans can also be identified. The second part of this report examines how high reliability organisations manage to operate successfully in risky environments.

Part 2: Managing Risk

A person can take risks in order to achieve desired benefits and maximise opportunities but in doing so, they can expose themselves to potential losses. Uncertainty, according to Lipshitz and Strauss (1997) should be viewed in the context of action, as a sense of doubt that blocks or delays response, thus coping with uncertainty lies at the heart of decision-making and risk taking. If decision-makers cannot cope with uncertainty, this will result in losses, as there is an opportunity cost of not being willing to take risks. In many occupations what is required for maximal performance is controlled risk taking. Innovation and change both require venturing onto new terrain, dealing with unfamiliar concepts, understanding different ways of working - these all involve an element of risk taking and therefore good situation awareness skills. A good illustration is to look at surgeons who strive to continually refine and improve their techniques; this can involve significant risk taking but in a calculated and controlled fashion (see Ruhlman, 2003). An observational study by Edmondson (2003) of cardiac surgeons learning to use a new technique shows that the surgeon's leadership style and the quality of teamwork play a critical role in determining success in this high risk setting.

Objective calculations of risk include statistical calculations and estimations that can be predicted and quantified using techniques such as probabilistic risk assessment or hazard analysis (Pidgeon, 1991; Reason, 1997). Subjective risk assessments are based on 'beliefs, attitudes, judgements and feelings towards hazards and the risks associated with them' (Royal Society, 1992). From a psychological perspective, subjective assessment of risk is more relevant, as this will drive individual risk taking behaviours. One theory proposed to explain risk taking behaviour is that of risk homeostasis (Wilde, 1982). This suggests that people or organisations accept a specific level (target level) of risk in a given activity in return for benefits that accrue from that activity. The target level of risk is the level of risk that is deemed to be acceptable, based on four elements: the costs and benefits of relatively cautious behaviour, and the costs and benefits of relatively risky behaviour. Changes in one or more of these elements leads to a commensurate change in target level of risk. Whether or not the homeostasis argument is accepted, there is general agreement in psychology that some kind of expectancy based evaluation of outcome will mediate between risk perceptions and risk behaviours. For a cultural shift away from caution, decision-makers' beliefs need to be strengthened to accept that this will produce a better payoff for the individual and the organisation. This can be influenced by subtle factors, such as how the situation or problem is 'framed'. If a situation is described in a negative sense (i.e. in terms of potentially generating a loss) then a more risk averse decision is likely to be invoked, than if the situation had been presented in terms of possible gains (Kahneman & Tversky, 1981).

Three aspects of organisational risk management can be considered:

- Identification of risks;
- Organisational mindset; and,
- Responding to changing risks.

2a: Identification of risks

When diagnosing possible primary risk areas, Reason (1997) suggests that the following should be considered:

- Errors committed by key front line staff - especially where control of a system (for example, finance, IT) is centralised in the hands of a relatively few individuals;
- Insidious accumulation of latent conditions within operational or managerial areas that may subsequently contribute to failure - lack of training, inadequate risk assessment, weak controls, poor working conditions;
- Third parties - where lives, livelihoods, and the well-being of individuals not directly employed by the organisation are threatened; and,
- Personal injury or damage - where the workforce are in close contact with the hazards (emergency services, healthcare, industry).

According to Reason (1997), whereas personal injury risks are implicated with individual accidents, the other three risk areas are associated with organisational accidents. A salient example of where, due to failures in risk factors, the risks have been realised is that of the Challenger disaster (Vaughan, 1996).

Vaughan (1996) described a culture of deviance in NASA, where standards gradually drifted further and further from the requisite level of risk management. She commented that the Challenger disaster was not an anomaly peculiar to NASA. Rather, this tragedy was shaped by factors common to many other organisations. Incidents such as Piper Alpha (Cullen, 1990) and the King's Cross Underground fire (Fennell, 1988) share similar organisational symptoms of an insidious drift to accept increasing levels of risk. In fact, the Inquiry into the subsequent loss of the Columbia space shuttle questioned whether the appropriate organisational lessons had been learnt from Challenger (Columbia Accident Investigation Board, 2003). In an organisation where creative decision-making is required and encouraged, very great vigilance must be maintained to ensure that basic risk controls remain in place.

Organisational patterns that contribute to failures of foresight are norms/culturally accepted beliefs about risks and hazards, poor communication, inadequate information handling in complex situations, and failure to comply with existing regulations instituted to assure safety (Perrow, 1999). Technical systems have potential for failure and catastrophe, but technical failures are inadequate in explaining how tragedies such as Challenger occur. In all these cases, limitations in non-technical skills were found to play an essential role.

Risk identification techniques

Various techniques can be implemented within organisations in an attempt to identify potential risks. Probabilistic risk assessment (PRA) often uses a technique based on Monte Carlo analysis (MCA) as a method of quantifying variability and uncertainty in risk. PRA aims to provide a complete and transparent characterisation of risks and uncertainties. Risk estimates, i.e. representing the likelihood of risk levels, are calculated using standard equations often computer based. A PRA requires as much information as possible to be available to reduce uncertainty, although assumptions and inputs can be used. For example, this technique has been employed to assess risk and hazards in patient safety (Battles & Lilford, 2003). Even though PRA is employed for decision analysis, there is growing awareness of the importance of 'soft data' (for example, public perception or political considerations) in the decision-making process (Khadam & Kaluarachchi, 2003).

Challenger incident (1985)

A space shuttle and seven astronauts were lost when an O-ring on one of the rocket boosters was faulty, allowing flames to ignite an external fuel tank. The Challenger incident was an example of an organisational-technical failure - technical in that the 'O' rings did not do their job, and organisational in that the incubation period of the technical failure was characterised by poor communication, inadequate information handling, faulty technical decision-making, and failure to comply with regulations instituted to assure safety. In addition, the regulatory system failed to identify and address the risks associated with programme management and design problems.

Another relatively simple management technique is that of a risk matrix (similar to that presented in NAO, 2000) where risks are identified, defined, and listed. These risks are then categorised within a two dimensional matrix: one dimension being the level of the risk (low, medium, high), the other dimension being manageability (high, medium, low) (see **Chart 2**). From the numbered list of identified risky events (see example in **Table 1**), those with a high level of risk, and a low level of manageability appear in red, whereas low level risks with high levels of manageability appear in green. Such matrices are often used within high reliability organisations such as the offshore oil and gas energy industry.

In this way, risks are identified, and located on the dimension of manageability. As decisions require to be made, decision-makers can readily identify the riskier (red) issues and can take more effort to control for risk. The risk matrix can be reviewed at various stages throughout a planning process with the aim of reducing the number of items in the red squares.

Lagadec (2002) refers to specific projects developed by EDF (Electricité de France) which propose four dimensions to be considered for identifying potential crises (Madet, 2001 cited in Lagadec, 2002), which can be applicable to risk identification:

a The probability of the event, ranked at 4 different levels: highly probable; very possible; not to be rejected; accidental;

b Possible impact, ranked at 4 different levels: crucial (organisation survival); major (organisation survival endangered); medium (difficulties for organisation functioning); minor (some difficulties for overall organisation functioning);

c Appearance timing, ranked at 4 different levels: progressive (no surprises); chaotic (relatively rapid appearance with unforeseeable outcome); unforeseeable (risk subject to probability calculus); hostile (immediate appearance due to third party involvement);

d Degree of technical control over the problem, ranked at 3 different levels: strong (technical problem that can be resolved by the organisation); medium (solving the problem depends on party other than the organisation); poor (problem is of a societal nature).

An example of cross-industry identification of risk in relation to crisis is given below.

Raising awareness of crises - prevention and management

The Villette-Entreprises Foundation (Lagadec, 2002) brought together diverse organisations (automobile, insurance, pharmacy, electronics, transportation) to discuss crisis and trust. The aim of this meeting was for organisations to learn from each other by sharing experiences. Interviews were conducted with members of the organisations, and plenary meetings held. The outcome of these events was that participants familiarised themselves with crisis preparations across organisations, and shared elements of common interest. These elements included:

- engaging organisations in even the most minimal preparation;
- involving top level leaders;
- sharing lessons learned from past experiences;
- preparing for emerging crises;
- sharing sensitive questions;
- re-building trust;
- overcoming collective fatalism.

Similar meetings are convened within high reliability organisations, such as oil companies. During the planning phase of complex operations, all relevant divisions or agencies meet to share previous experiences, to identify critical decision points, and to discuss potential risks or serious incidents that could affect the normal operations of the organisation. In this way, all participants have a clearer understanding of where critical decisions may arise, and determine in advance how such decisions will be managed. Contingencies can be generated for all possible incidents no matter how remote the likelihood of their occurrence. Having these business continuity and consequence management strategies in place reduces the risk based decision-making that might otherwise have been required. Decision-making therefore becomes more rule based, as courses of action are determined beforehand, or analytical, in that potential courses of action are reviewed as they relate to the actual situation. In this way, the response to threats can be maximised, while minimising the risks of missing business opportunities.

Table 1: Risk identification list

Item	Desciption
1	Example of risk identified
2	
3	
22	

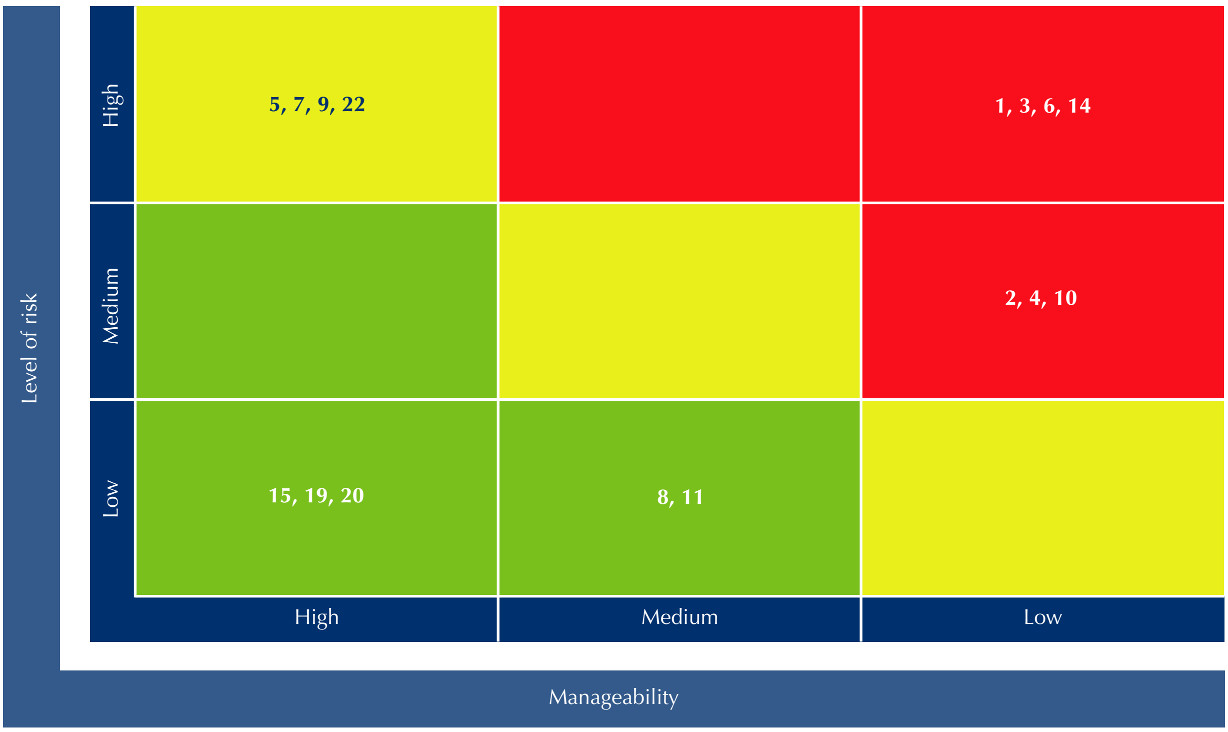
2b: Organisational Mindset

Once a department's current risk profile has been mapped, strategies for action can be established to reduce the probability of threats being realised or opportunities being missed. But risk identification is not a one shot process. Organisations need to maintain a state of continuous alertness with regard to changing patterns in their operating environment (social, political, fiscal, legal, physical). There may be lessons to learn here from the High Reliability Organisation (HRO) theorists. They used the term HRO to describe organisations that operate in high risk domains but persistently have less than their fair share of accidents. This concept was developed following studies of aircraft carriers, nuclear power plants and air traffic control (Roberts, 1993). Weick and Sutcliffe (2001, p10) in their book on HROs, *Managing the Unexpected,* say that there are five hallmarks of these organisations; taken together these can be characterised as 'Mindfulness'.

- Preoccupation with failure (any lapse is treated as a symptom that something is wrong with the system; experiences of near misses are elaborated or analysed for what can be learned);
- Reluctance to simplify interpretations (deliberate steps are taken to create more complete pictures and to appreciate complexity);
- Sensitivity to operations (attentive to the front line where the real work gets done);
- Commitment to resilience (develop capabilities to detect, contain, and bounce back from inevitable errors - HROs are not error-free but errors do not disable them); and,
- Deference to expertise (diversity is cultivated; decision-making is pushed down so that authority migrates to the people with the most expertise - note, not necessarily the most experienced personnel)

That is, the key characteristics of HROs is their organisational mindset in relation to risks. They demonstrate determined efforts to act *mindfully*, in that the unexpected is noticed at an early stage, leading to steps being taken to halt or contain it. Organisations who encourage mindfulness, rather than mindlessness, throughout all levels within their structure, are more capable of noticing early warning signs that things are not going well, that personnel can operate flexibly and adaptively rather than rigidly. Moreover, they constantly update and share what they know and what they are doing. This in essence is organisational situation awareness.

Chart 2: Example of Boston Squares risk identification matrix



2c: Responding to changing risks

Reason's model of accident causation (1997) describes how risks in the form of latent conditions, hidden in the organisation, can incubate, therefore organisations must institute measures to ensure that internal risks can be identified at an early stage. The aim is to encourage foresight, rather than relying on hindsight from previous incidents especially where lessons may not be learned. This involves strategic intelligence and anticipation requiring that personnel must be trained to assess current and future situations, to make timely decisions, and to engage in effective communication.

A common theme emerging from cases of mindlessness in organisations is that of managers being buried in routine, and of ignoring warning signs. The Group Treasurer for the late Barings Bank missed the signals for Nick Leeson's increasingly hazardous trading activities because "there was always something more pressing" (Reason, 1997). The car manufacturer, Chrysler, faced a massive financial crisis in the 1970's. According to the incoming Chief Executive, the organisation was locked in denial, *"There was no real committee set-up, no cement in the organisational chart, no system of meetings to get people talking to each other"*. Furthermore, the company had fragmented into small sub-sections with no-one attending to what anyone else was doing (Iacocca & Novak, 1985) and consequently latent risks began to incubate.

When risks have incubated and produced an adverse event, then the quality of the organisation's risk response strategy will determine the extent of the eventual fallout. When the French company Perrier initially responded inadequately to contaminants being found in their bottled water in 1990, this undermined public confidence in their products (Seymour & Moore, 2000). Perrier originally left subsidiary companies to deal with the situation, and evaded questions from the press and public about the risks and the extent of the problem. Only after recalling bottles of water across the globe, instituting effective communications with the media, and a carefully planned re-launch, was the company considered by the public to have acted responsibly. While Perrier had to enact a rescue bid, it may have saved their company. In contrast, companies such as Quaker Oats (breakfast cereals) and Fisher-Price (toys) responded with rapid and positive action with the recall of their products in similar circumstances. Tylenol, a medication product by Johnson & Johnson, was sabotaged with cyanide in 1982. The company's response of recalling all of this product was extensively and publicly communicated, a free hotline was established, full-page advertisements placed in the press, the medical community was alerted, and executives took part in media interviews. Such prompt actions signalled effective risk management and reduced the potential for public concern and corresponding loss of trust in the organisation (Seymour & Moore, 2000). There may be unexpected benefits here. Organisations who are deemed to have responded effectively to a crisis, often see an improvement in share price and share trading volume due to enhanced market confidence in their ability to manage risk (Knight & Pretty, 1998).

It is the slow moving nature of latent risks that can really challenge organisations. To be able to respond effectively, organisations must identify and anticipate when issues are becoming problematic, without delays caused by the fear of dealing with uncertainty (discussed above). Risk communication and well managed risk taking are enhanced by an open and positive organisational culture. In high reliability organisations, open communication, participative leadership and teamwork, combine to encourage employees to monitor and challenge each other's actions (Weick & Sutcliffe, 2001). Error reporting is rewarded, even for those who have committed the error. In this way, potential dangers can be identified, steps taken to correct them, and the system can be modified. This kind of culture is very supportive for innovation as it allows risk taking but can quickly identify negative reactions. Organisational effectiveness is underpinned by the skill base of its staff.

Conclusion

The purpose of this report was to examine how addressing risk improves decision-making. The aim of risk based decision-making lies in mitigating threat while maximising opportunity. But to avoid adverse events, creative and innovative activities need to be underpinned by an effective risk management strategy. Examples were provided from the high reliability organisations to demonstrate how this is achieved in hazardous settings. Reliance on technical systems for risk management is not enough, what these organisations have realised is that good risk management needs a mindset of continuing alertness, effective communication, and the ability to recognise changing risks. This requires effective training so that staff can anticipate and respond to events in a way that encourages creative and innovative activities. The hallmark of high reliability government departments is well managed risk taking.

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Appendix 3 The Risk Programme's Report to the Chief Secretary to the Treasury, June 2004

Background

1 The two year Risk Programme is now entering its final phase (ending December 2004). The Second Report to the Prime Minister last December, demonstrated overall progress in improving government risk management, and outlined plans for further improvement. The key challenges identified included: embedding risk management in business processes; managing risks with partners; improving management of risks to the public; ensuring policy decisions are underpinned by a good understanding of the risk and actions needed to manage them; further improving leadership of improvement by Ministers and senior officials; and developing corporate governance arrangements. This report provides an update on progress.

Current position

2 Departments are continuing to improve their risk management (see summary of assessments at Annex A).[1] There are very significant challenges still to be tackled, but progress has been in line with expectations in December's report to the Prime Minister, and there is good evidence of continued commitment. All Departments have improved, with the lowest performers improving most strongly. There is some evidence that some of the stronger performers are now finding further improvement more challenging. All Departments have plans to improve further, nearly all setting clear targets, a number of which are very stretching.

3 All Departments have moved well beyond awareness of the need to change. They now have increasingly well established risk processes, which are in turn increasingly contributing to effective business planning, performance management and project and programme management. In particular, departmental boards are paying greater attention to managing risks, especially to delivery of PSAs.

4 There is emerging, but patchy, evidence that this is helping Departments to handle risks well (anticipate threats; make good risk based decisions e.g. on resource allocation; apply contingency plans successfully; identify cross-cutting risks). Some departments are also beginning to see an influence on improved service delivery, achievement of targets, innovation, and successful implementation of projects and change programmes. Risk was a key theme in the Spending Review, and there is reasonable assurance that Departments' PSAs will be underpinned by a better level of understanding of risks and action to manage them. This will need to be followed up in the forthcoming delivery planning round.

5 All Departments are committed to further improvement of their capabilities - they are aiming to further embed risk management in their core processes, and improve their leadership and skills by the end of the year. Their ambitions are broadly consistent with those reported in December. Some Departments have set very challenging targets, and considerable effort will be needed to ensure they are achieved. Others appear much less stretching. Further one to one discussions are planned with all Departments to review and support their improvement plans, and to help them learn from good practice in government, from elsewhere in the UK, and from other countries.

1 *A detailed analysis, with extensive examples of good progress and good practice is also available.*

Challenges and further action

6 The main challenges reported by Departments are:

- Moving from a focus on establishing processes, strategies and policies to one of bringing about **culture change** (this will require active leadership and ensuring that risk management becomes **embedded** as an integral part of the way we work - integrating with performance management both at an individual and organisational level will be key here);
- Further engagement with **Ministers** (e.g. in managing risks to delivery of PSAs, in considering risks during policy making, and in handling risks to the public);
- Improving risk management in **delivery partnerships** (particularly where there are non-contractual relationships, e.g. with NDPBs. Some, including DH, are exploring risk-based approaches to dealing with arm's length bodies);
- Improving the **early management of risks to successful delivery** - with a focus on policy making - implementing the approach in the Prime Minister's letter of 29 March;
- Further improving **management of risks to the public**, especially through **better policy making** (e.g. using forthcoming guidance on policy appraisal, and engaging with the professionalisation agenda) and communications (e.g. building on Freedom of Information changes and civil contingency arrangements);
- **Focusing on results**: demonstrating the effectiveness of risk management arrangements in helping to handle risks better and improve achievement of outcomes.

7 These challenges are consistent with those reported to the PM last December. Departments' assessments report some progress in all areas, but it is clear that there will be an enduring need for attention here. The remainder of the Risk Programme will focus on helping Departments to address these issues, and maximise the overall pace of improvement.

8 Departments report that full embedding of risk management, and the necessary culture change, is a long term aim, with a 5-10 year timescale overall. The Risk Support Team are developing proposals for post-programme arrangements, to ensure continuing pursuit of this aim.

Risk Support Team, HM Treasury

July 2004

Annex A: Assessments of progress

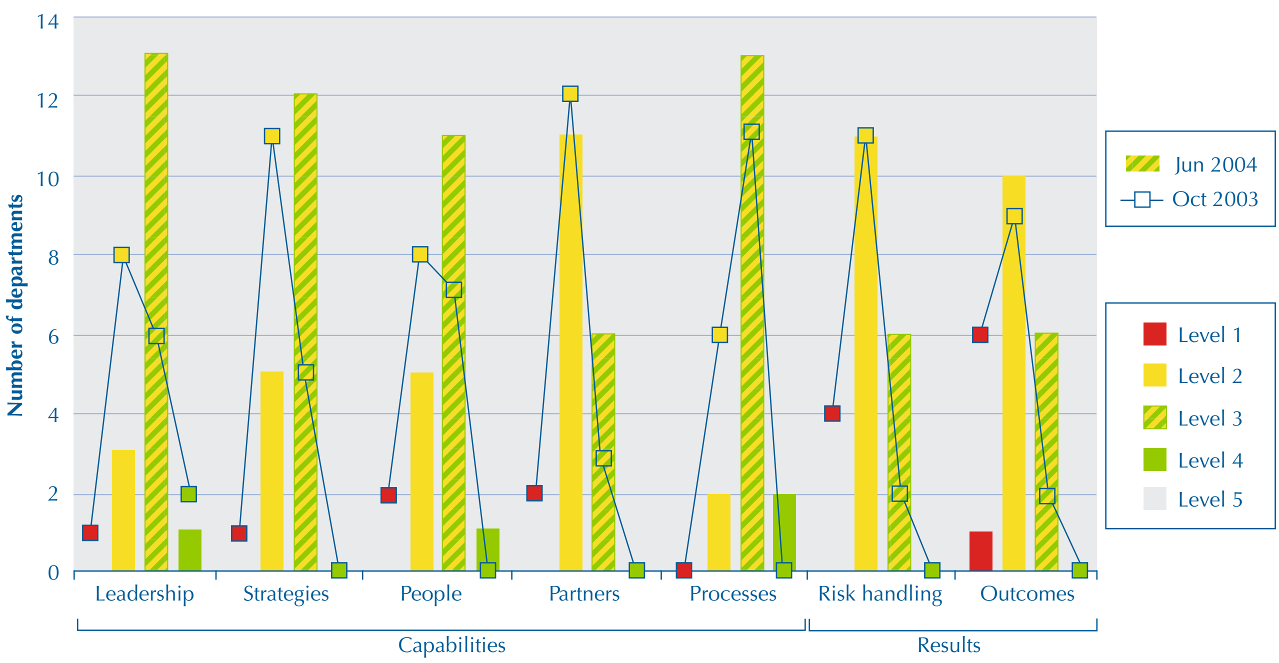
1 Departments used a structured assessment framework to assess their performance for the first time last December.[2] The summary chart below shows how performance is improving steadily across each of the categories.[3]

2 A noticeable change is that Departments have virtually eliminated level 1 scores (awareness only) and have been implementing and consolidating improved approaches. There is a significant increase in those judging themselves to be level 3 (implemented change) and a small increase in those at level 4 (change embedded). Leadership, strategies, policies and processes are becoming increasingly well developed. Partnerships continue to be the weakest area of capability. Departments also report that improving the skills, experience and performance of all relevant people is a long process, though many are making good progress with implementing risk management training and other support, and integrating with competencies and objectives. **Chart 1** shows that it is still relatively rare for Departments to have reached level 4, even though many have targets to achieve at least some level 4 scores by the end of the programme.

3 **Chart 2** shows the total scores for capabilities (i.e. the sum of five individual scores) for the main Departments. It shows that over half now judge that they have reached level 3 overall, with many moving well beyond the minimum requirement of the Statement on Internal Control. The cumulative total of Departments shows how there has been an overall improvement, with lower scoring Departments improving slightly more than those with higher scores.

4 Most Departments have set themselves clear targets for improvement by the end of the programme. They are aiming for capability scores ranging from a little below level 3s overall (around 14 points) to level 4s across the board (20 points). For outcomes and risk handling they aim for 3s or 2s.

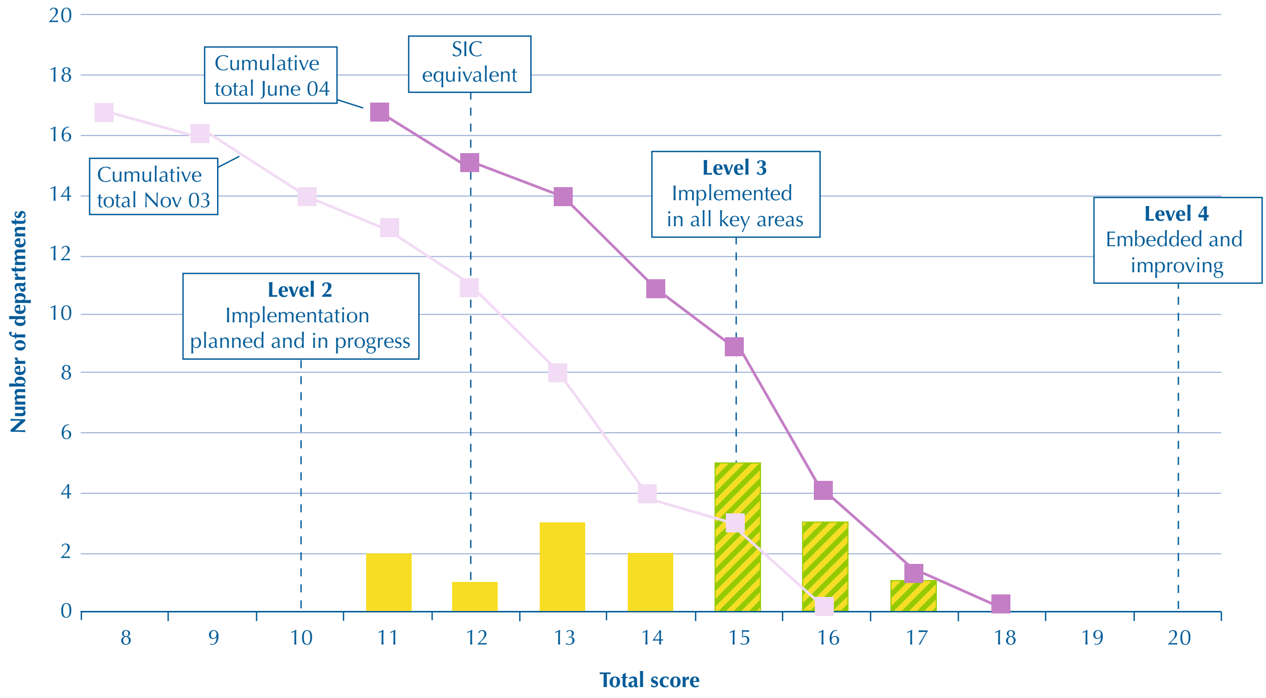
Chart 1: Assessment Summary



2 *The framework was used by Departments to assess: five aspects of their capabilities (leadership; strategy and policies; people (skills etc); partnerships and resources; processes), and two measures of results or effectiveness: (the quality of risk handling; and the impact of this on achieving the Department's outcomes). Evidence was gathered for each criteria and a five point scale (1, low - 5, high) was used to score the level attained.*

3 *The charts in this report are based on assessments from 'main Departments', defined as those with Cabinet Ministers, plus Cabinet Office, Customs and Exercise, Inland Revenue. A number of other Departments, and the devolved administrations also provided assessments. The scores of main Departments have improved slightly faster than those of other Departments, since the previous assessment.*

Chart 2: Summary of capabilities



5 The previous report extrapolated a possible future path for progress (see **Chart 3**), showing a broad average position in Departments and giving an idea of the likely spread. This has been updated by adding the reported scores for the current report (assessed in May) and Departments' latest targets for the final report (to be assessed in October). The main points are:

- The current position is very close to the projection made last December (the lowest scores have increased slightly more than expected, but with the average score slightly lower). This has been achieved through a lot of hard work, and by focusing hard on areas of low performance and priorities for improvement;
- Departments' targets for the end of the programme are, overall, above what we had projected, both at the top end and at the bottom.

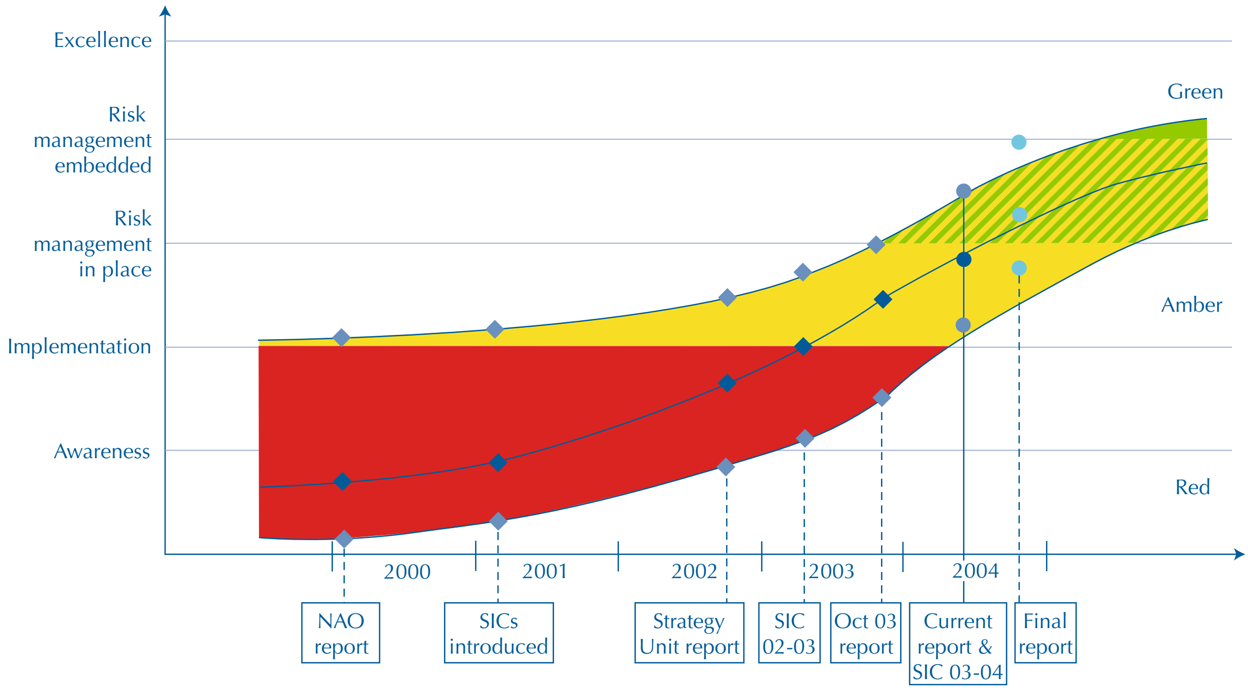
6 Overall, this might suggest that we should revise upwards the projected path of improvement. But we do not advise this for now, as:

- There is relatively little evidence to date of Departments achieving the level 4 scores to which many are aspiring;
- It is clear from a number of Departments' comments that achieving the targets they are setting themselves will require very significant effort, and will need to be delivered against a very challenging back drop of efficiency savings and other reforms; and,
- Even though a few Departments do not appear to have set very challenging targets, on balance, we may undershoot overall.

7 The Risk Support Team should continue to provide one to one support to Departments to help them achieve the targets that they have set, but we should not expect this level of progress to be easily achieved.

8 In the longer term, it will be important to maintain the momentum, in order to ensure all Departments have fully embedded risk management in the way they work, and that there is a culture of managing risks effectively and "well managed risk-taking". Departments believe that full culture change will require 5 - 10 years from the start of the Risk Programme.

Chart 3: Progress of Risk Management in Government - the likely path



Appendix 4 Progress against recommendations made by the Committee of Public Accounts in 2001

	Conclusion/Recommendation[34]	Achievement	NAO's assessment
i	For risk management to become a standard feature of the way in which departments carry out their activities the benefits of risk management in improving service delivery and safeguarding public money need to be understood and accepted by their staff. In reviewing departments' risk frameworks the Cabinet Office should ensure that the aims and benefits of risk management and responsibility for it are clearly defined.	In March 2000, NAO found that 19 per cent of main departments had set clear risk management objectives. By May 2004 our survey found this figure was 95 per cent.	The aims of risk management are now set out.
ii	Some departments have much more developed frameworks than others. The Cabinet Office should seek improvements where departments appear not to have fully assessed the risks which they face, or not to have reliable arrangements in place to manage such risks.	The Risk Programme, through the development of the Risk Improvement Managers network, has raised the overall awareness, consistency of understanding and approach to departments' management of risk. Our 2004 survey found that 90 per cent of main departments identified the main risks to each of their aims and objectives, whereas in 2000 half did so. Variation remains between departments on the extent to which risk management has been implemented.	All main departments have now achieved a minimum standard, but more needs to be done before they have effective risk management fully embedded in the way they work.
iii	Departments should ensure that they identify and assess the risks inherent in any new programme sufficiently early so that effective action can be taken to manage them.	Ninety per cent of main departments consider that they approach and address risks in their business planning and 80 per cent in their programme and project proposals. Just 45 per cent, however, say that they identify and assess risks in policy-making. The Office of Government Commerce's Gateway process, introduced in February 2001, now offers departments a systematic way of tracking risks and how they are being managed at critical stages in projects and programmes. The Treasury wrote to Accounting Officers in February 2003 (DAO(GEN)01/03) setting out new requirements for them in respect of decisions to initiate new IT-based projects, including the need to confirm that risks have been adequately identified and addressed. The Prime Minister wrote to Cabinet colleagues in March 2004 setting out a framework for the *Early Management of Risks to Successful Delivery in departments' policy development.* The guidance was prepared jointly by the Treasury, NAO and OGC.	Systems for identifying risks are in place; more work is needed for risks to feature at the outset in policy design.

34 *Managing Risk in Government Departments. Committee of Public Accounts. First Report, 2001-02 (HC 336).*

	Conclusion/Recommendation	Achievement	NAO's assessment
		A follow-up letter to DA0(GEN)01/03 was issued by the Treasury in March 2004 (DAO(GEN)07/04) advising Accounting Officers that the requirements have now been extended to include all acquisition based programmes and projects.	
iv	The Cabinet Office expects that their initiatives to improve risk management will lead to higher levels of performance by departments and will reduce the likelihood of major failures in service delivery. The Cabinet Office should carefully monitor departments' implementation of their risk frameworks, assess their impact in improving risk management and seek corrective action by departments to address deficiencies.	The Treasury's Risk Programme has assisted departments' development of risk through its Risk Assessment Framework, a tool for self-assessing risk management capability which has been applied by all the main departments. The Spending Review 2004 requires departments to identify in their Delivery Plans to the Treasury risks and how they will be managed.	The Risk Programme has been effective in encouraging and monitoring implementation of risk frameworks; departments now need to apply these to secure better performance. More needs to be done to demonstrate the benefits that improved risk management is delivering.
v	The delivery of a major public service is frequently the responsibility of a number of departments and agencies, as well as private sector and voluntary organisations who need to co-operate to that end. Failure of one organisation to deliver that part of the service for which it is responsible can put the whole service at risk. Departments should assess the strengths and weaknesses of risk management systems in partner organisations with which they work.	Understanding the risks of working with partners remains a weakness, identified both by the Treasury's Risk Programme and by our survey. In 2004, although 80 per cent of departments assessed the impact on their objectives of one or more parties failing to deliver, relatively few (30 per cent) knew about the strengths and weaknesses of the risk management systems of their partner organisations; a modest improvement on our 2000 survey (where the equivalent figure was 20 per cent). OGC issued *guidance, Effective Partnering: An overview for customers and suppliers* in 2003, summarising the key issues around considering, planning and creating a partnership relationship with an IT systems provider. Guidance on managing risks with delivery partners was being prepared by the Treasury's Risk Support Team and OGC in June 2004.	The weakest aspect of development, where most remains to be achieved. Needs to be a priority beyond the end of the Programme.
vi	There needs to be greater awareness and acceptance by staff in departments that risk management is the responsibility of those involved in the delivery of services and management of programmes and not just finance and internal audit staff. Senior management in particular should take the lead in risk management.	Many senior managers and ministers now take an active interest in risk management. Most departments' management boards review risks regularly and take responsibility for and ownership of key risks. Our survey found that three quarters of departments now discuss overall risks and related actions at least quarterly, an improvement on 2000. In 2004, eighty per cent of departments considered that all staff had a role to play in identifying risks, whereas 40 per cent considered that staff had a role to play in assessing risks.	Departmental leaders need to continue to bring clarity to the responsibilities of all staff for assessing and managing risks, in particular those delivering services.

	Conclusion/Recommendation	Achievement	NAO's assessment
vii	Where a Private Finance Initiative project concerns the delivery of an essential public service the department may have no option, if the project fails, but to take back responsibility for delivering the service. In these circumstances it would be misleading for the contract to be drawn up on the basis that the risk of failing to deliver the service had been wholly transferred to the private sector supplier. It is therefore important that departments should carefully follow Treasury guidance that optimum, not maximum, risk should be transferred to private sector suppliers.	Treasury has emphasised in its PFI guidance, most recently in *PFI Meeting the Investment Challenge* (July 2003) and in standard PFI contract terms (updated in 2004) that value for money is achieved where there is optimum risk transfer - that is to say the party best able to manage a risk should bear it - rather than total risk transfer to the private sector. Treasury continues to work with departments to support their use of the guidance and this will also feature in the forthcoming Value for Money Assessment guidance.	Departments now generally understand the concept of optimum risk transfer.
viii	The Accounting Officer Memorandum requires the Accounting Officer to seek a Direction if required by the Minister to implement a proposal which the Accounting Officer does not consider to represent value for money. The Memorandum does not however explicitly mention the need to consider the level and allocation of risk. We note the Treasury's assurance that risk is an integral part of value for money decisions which Accounting Officers should consider. In order to put the matter beyond doubt, we recommend that the Treasury should amend the Accounting Officer Memorandum to make explicit the consideration of risk in relation to assessing value for money.	The Accounting Officer Memorandum was amended in October 2003. The amendment to make it clear that the Accounting Officer's duty to draw relevant factors relating to economy, efficiency and effectiveness to the attention of his or her minister and to advise them accordingly may include an assessment of the risks associated with the proposed action and the impact these would have on the value for money provided by the action should some or all of these materialise. If the Accounting Officer's advice is overruled and the proposal is one which he or she would not feel able to defend to the Committee of Public Accounts as representing value for money, he or she should seek a written instruction before proceeding.	Issue has been fully addressed.

	Conclusion/Recommendation	Achievement	NAO's assessment
ix	The Cabinet Office are providing training on risk management for departmental staff but have limited information on the extent to which departments are providing their own training in risk management. If civil servants are to develop greater competence in risk management they need to be trained in how to identify, evaluate and manage risks. The training required and how best to provide it should be a key element of departments' action plans to implement their risk frameworks.	Departments have provided information about progress and plans to further develop risk management skills in their reports on the Risk Programme. Departments report that they are addressing skills at a range of levels, and both through specific risk training and, increasingly, by embedding this into development courses and training to develop skills around core functions, for example, business planning and project management. In 2004, two thirds of departments considered their training on risk management is effective or very effective, compared with no departments in 2000.	Momentum needs to be maintained for risk management to become a consistent feature in departments' training programmes and in training programmes run by the Centre for Management and Policy Studies, in particular policy-making.
x	The Cabinet Office should seek to identify examples of good practice in risk management and disseminate them so that departments are able to learn from each other's experience.	The Risk Programme has created a network and forum for the interdepartmental sharing of good practice. This includes drawing on experience of managing risk in the private sector from companies such as British Petroleum, AstraZeneca, Rothchilds and Zurich, Marks and Spencer and Rank. The Treasury is also a partner in City University's Risk Hub - which brings together practitioners from the private and public sectors to share good practice. Examples of good practice have been collected from departments and summarised in reports to the Prime Minister and Chief Secretary, and made available on the Treasury's risk support website; www.risk-support.gov.uk	Continued sharing of practical examples and how they deliver benefits is needed.

Source: National Audit Office