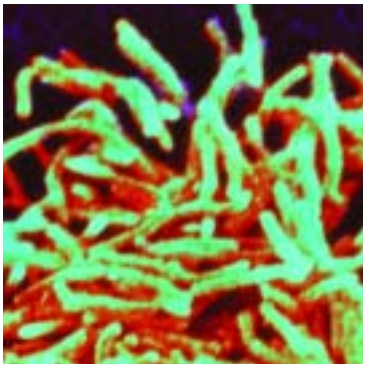
Getting the evidence:
Using research in policy making

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executive summary

In this section

1 The Government's Science, Engineering and Technology budget in 2000/01 was £7.2 billion or 0.7% of GDP. As illustrated in **Figures 1 and 2**, civil government departments spent £1.4 billion on research and development in support of a number of different objectives. For example, the Department for Environment, Food and Rural Affairs commissions research to inform its policy on managing fish stocks and the Home Office commissions research into effectiveness of current and future crime prevention measures. Each department is responsible for identifying its research needs, for setting research strategies, for determining its research budgets, for procuring the research, managing it and assuring that research supports its departmental objectives.

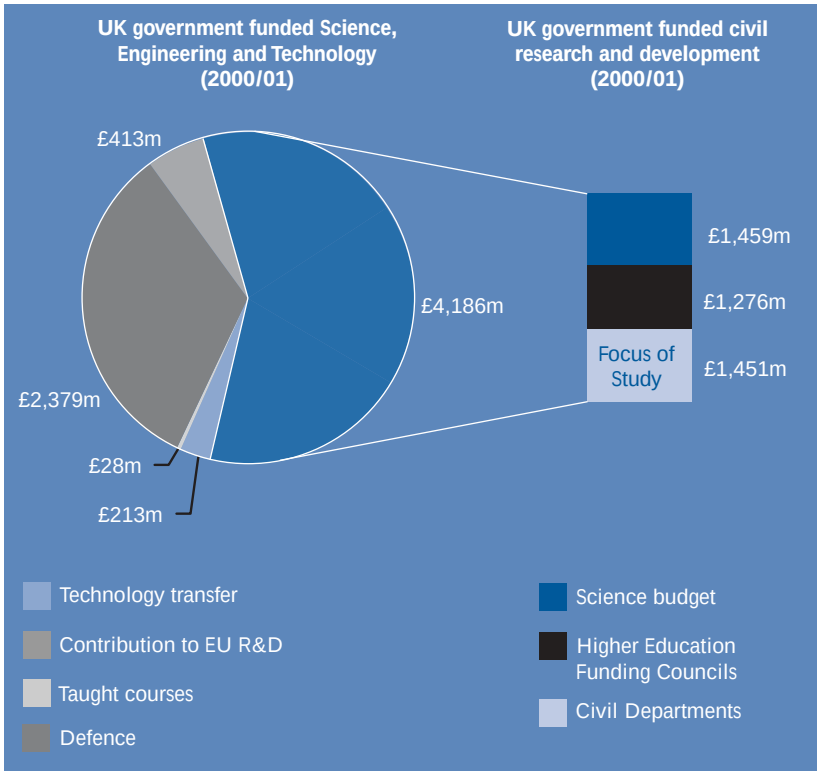
2 The Office of Science and Technology has a central role in formulating policy aimed at improving the way in which research is used across government. Following the publication of the "Cross-Cutting Review of Science and Research" and the government's science strategy, "Investing in Innovation", the Office of Science and Technology is implementing a rolling programme of external scrutiny and benchmarking of departments' research activities to facilitate the exchange of good practice and to encourage improvements in the ways departments use and manage research.

3 This report assesses how government departments procure research, against the background of the Office of Science and Technology's programme of rolling reviews. It is based upon an assessment of research activities in three government departments and an international review comparing how five other countries procure research, as well as discussions with other departments and stakeholders. The departmental case studies were: the Department for Environment, Food and Rural Affairs' food borne zoonoses[1] and (animal) tuberculosis research programme plus one of its Executive Agencies, the Centre for Environment, Fisheries and Aquaculture Science; the Department for International Development's Social Science Research Unit; and the Office of the Deputy Prime Minister's housing, homelessness, urban and planning research programme.

4 The report is structured around three different stakeholder perspectives - research managers, research providers and research users - and draws out wider messages about the management, provision, dissemination and use of research.

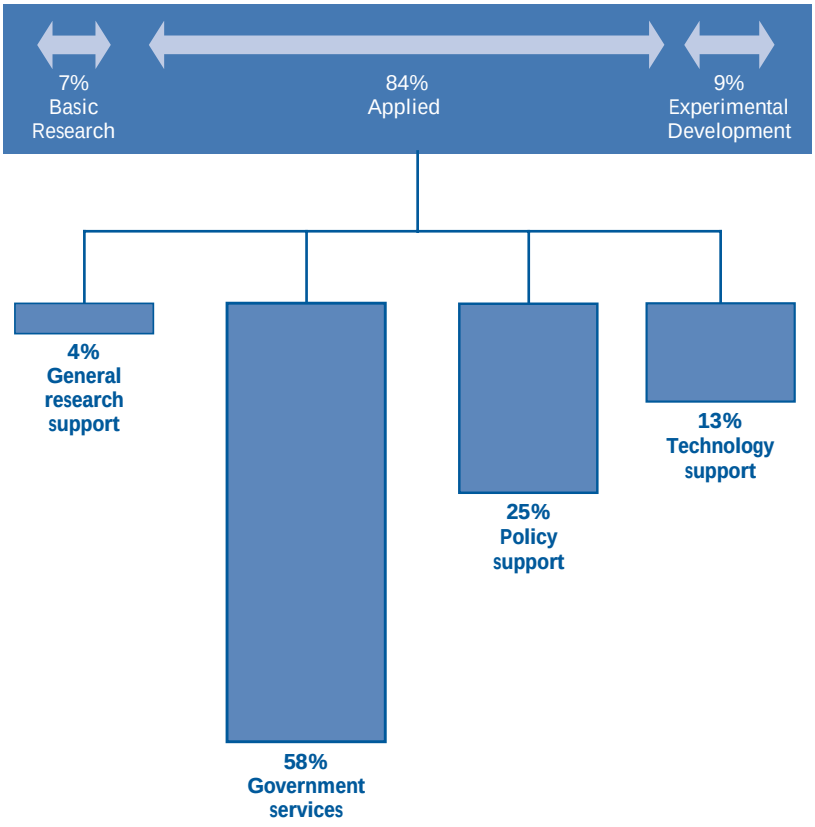
1 *Zoonoses is the transmission of animal diseases into humans.*

1 Government expenditure on science, engineering and technology



Source: Science, Engineering and Technology (SET) Statistics

2 Activities and purposes of Government department research



Key findings

5 We have made a number of observations that are applicable to research managers, research providers and research users, and we have identified areas of best practice based on innovative examples of how departments manage research.

6 **On strategy** - Following the publication of the 2000 White Paper "Excellence and Opportunity: A Science and Innovation Strategy for the 21st Century", most departments have developed and published science and innovation strategies in support of their objectives. These documents set out the purpose of the departments' research and development activities in the context of the departments' over-arching objectives and Public Service Agreements. In formulating their science and innovation strategies, departments need to have a clear understanding of their long-term strategic research aims, including future demand (i.e., research questions) and supply (i.e., research capacity and capability) of research, and consult research users to help identify and prioritise their research requirements.

7 Examples of best practice in this regard include: (a) a fellowship programme jointly funded between the Office of the Deputy Prime Minister and the Economic and Social Research Council which explicitly aims to build research capacity in both technical excellence and strategic thinking; and (b) the Department for Environment, Food and Rural Affairs' horizon scanning research programme which aims to identify emergent risks affecting its policy domains (such as the increasing prevalence of tuberculosis in cattle), and to explore novel ways of framing long-term research problems, by consulting both research users and providers.

8 **On statistics** - There is uncertainty about the calculation and reporting of research and development budgets. In our study we depended on the research and development statistics compiled by the Office for National Statistics. However, departments queried their accuracy and utility. Despite the Office for National Statistics' efforts to confirm data accuracy with departments and provide assistance with any difficulties in the provision of data, departments sometimes find it difficult to work with the official internationally agreed definitions and they sometimes run duplicate procedures for calculating and reporting research and development budgets. As a consequence, departments may present information in different ways to the outside world, and comparability of data provided by the different departments is not guaranteed.

9 **On commissioning** - Departments have to make a number of different choices when commissioning research. They can opt for either a direct competition (where a detailed specification is prepared) or an indirect competition (where departments issue a call for research in a broad topic, such as poverty elimination); for an open competition (which is advertised to all interested parties) or a closed competition (which is limited to invited providers); and for formal competition (using pre-specified objective criteria for evaluating bids) or an informal competition (relying on professional judgement and expertise). These decisions need to be made in the context of EC procurement law and in accordance with guidance and good practice promulgated by the Office of Government Commerce.

10 The appropriate approach will be determined by the strategic research aim of the department and an assessment of the transaction costs associated with commissioning research. For example:

- The Department for International Development's Social Science Research Unit runs a Responsive Research Programme that commissions a wide range of research activities in support of the department's objectives. As the aim of the programme is to encourage researchers to generate and answer relevant research questions, the competition is open (to encourage new ideas) and indirect and informal (as there is no pre-specified research question or methodology). In evaluating research proposals over £100,000 to the Responsive Research Programme, the Social Science Research Unit seeks professional judgement from technical experts (such as academics) to review the quality of the proposed research, and research users (such as internal policy staff) to review the relevance of the proposal in supporting the department's objective. This combination of technical and relevance review helps ensure the utility of the research and its translation into practice.
- One of the objectives of the Office of the Deputy Prime Minister's housing, homelessness, urban and planning research programme is to answer specific research questions and therefore it operates a policy of phased competitive tendering for contracts. For regular research projects, expressions of interest are submitted by potential contractors and are used as the basis for selecting 3-6 suitable organisations to tender for research contracts. This ensures that transaction costs are kept to a minimum, without preventing new entrants from submitting an expression of interest.

11 **On quality assurance** - Following the confusion at the Institute of Animal Health in 2001 over the origin and composition of sheep and cattle brain samples whilst testing for the presence of BSE in the national flock, the Department for Environment, Food and Rural Affairs is, in consultation with others, drafting a code of practice for quality assurance. Initially, research providers will be expected to make efforts to comply with the code, which will be auditable. In the longer term, the Department will expect compliance with formal standards. The draft code distinguishes between the quality of the science, which addresses the aims and methods of the project, and the quality of the research process, which addresses the procedures used to gather and interpret data. In requiring providers to assure the quality of the research process, departments need to be certain that the system is appropriate for the type of research and that the additional costs incurred ensure value for money by providing greater confidence in the reliability of the findings.

12 **On knowledge transfer** - Getting research into practice is widely acknowledged to be a difficult process. For research with potential commercial outcomes, a number of schemes are available to help researchers realise the economic potential of their findings, such as seed funding for protocol and pre-market development. However, for research that aims to improve service delivery and inform policy, the outcomes often are not commercially exploitable. Yet, for non-commercial research, there is also a need to help researchers realise the social benefits of their

findings. It is especially important as policymakers often describe research reports as being inaccessible. Research managers are aware of this and have experimented with a number of different approaches. Examples of best practice include: (a) id21, an internet dissemination service (www.id21.org) established and funded by the Department for International Development to communicate research findings to policymakers and practitioners; and (b), the concept of 'Linkage and Exchange' developed by the Canadian Health Services Research Foundation to involve policymakers in all stages of the research procurement process, on the premise that this is the best predictor for seeing research findings applied.

13 **On evaluation** - Although government departments carry out evaluations of ongoing and completed research, they have no systematic mechanisms for measuring the overall impact of their research effort, or for identifying and sharing best practice through interdepartmental benchmarking. Measuring the performance and results of research is problematical as they are often not quantifiable and it is difficult to attribute a policy impact to a particular research result. Despite this, it is important that those responsible for research in departments can justify the need for research and ensure its quality and relevance. In recognition of this, the Office of Science and Technology is developing a new programme of external scrutiny of departments' research programmes. This should include: the development of a common evaluation framework; the use of standardised research performance indicators; consultation with research users and providers; peer review to assess department research programmes; and the dissemination of best practice amongst departments.

Key conclusions

14 Our findings show that departments, with the support of the Office of Science and Technology, have been modernising the way they procure research. This is to be welcomed and encouraged, and the following conclusions support a continuation and consolidation of that process.

15 **More strategic focus on the use and management of research.** Given the different objectives of departments, diversity in the way they obtain and manage research should be expected. Even so, the types of strategic research aims identified by government departments have an effect on the most appropriate way to commission research and to assure its quality. Therefore, it is important that departments, with the support of the Office of Science and Technology, are clear about their strategic research aims and have coherent systems for procuring research - including its commissioning, quality assurance and use.

16 **More proactive and innovative dissemination of research findings.** The early involvement of potential users of the research will increase the likelihood that research results will be utilised. There is evidence from the literature and from this study that passive dissemination of research findings is not sufficient to ensure that research findings are used to improve service delivery and to inform policy. Departments, with the support of the Office of Science and Technology, need to develop targeted and innovative ways to ensure that the potential impact of research is fully realised. Fuller and earlier dissemination should result in clearer and more efficient demands for research from users and therefore more value for money in research procurement and production.

17 **More interdepartmental learning.** Departments and the Office of Science and Technology could do more to identify and share best practice and thus improve the effectiveness of commissioning, managing and using research. By implementing a programme of external reviews and interdepartmental benchmarking, the Office of Science and Technology should be able to identify best practice and consider how this will be shared with departments. The involvement of research providers and research users in this process will ensure that this learning is informed by and transferred between the different stakeholder groups.

Key recommendations

18 On the basis of these conclusions we make seven recommendations intended to help departments improve the way they procure, manage, use and disseminate research. These are outlined below, along with the aim and context of the recommendation and those we see as being ultimately responsible for their implementation.

	Recommendation	Aim	Context	Responsibility
A	**For departments, with the support of the Office of Science and Technology**			
A1	Departments should clearly state their strategic research aims for procuring and using research. (Paragraphs 6 - 7 of the Executive Summary & 2.4 - 2.8 of the Main Report).	To encourage clarity of thinking in developing science and innovation strategies.	We found that the strategic research aims of a department affect the way research is commissioned and its quality assured.	Department Chief Scientific Adviser or other equivalent heads of profession.
A2	Departments should review the ways they commission different types of research. (Paragraphs 9 - 10 of the Executive Summary & 2.11- 2.16 of the Main report).	To ensure that commissioning processes are 'fit-for-the-research-purpose' and cost effective.	We found that it is good practice that commissioning processes for research differ by research aim.	Department Chief Scientific Adviser or other equivalent heads of profession with advice from department procurement officers.
A3	Departments should use quality assurance systems of the research process, but ensure they are appropriate and cost-beneficial. (Paragraphs 11 of the Executive Summary & 3.8 - 3.11 of the Main report).	To ensure that research is conducted to the highest standards, without sacrificing cutting-edge innovative research.	We found that the Department for the Environment, Food and Rural Affairs is implementing a system to assure the quality of the research process.	Department Chief Scientific Adviser or other equivalent heads of profession.
A4	Departments should identify their primary research users and maximise the potential for involving them at all stages of the research process. (Paragraphs 12 of the Executive Summary & 4.1 - 4.12 of the Main Report).	To encourage the procurement of user-relevant research and therefore its utilisation in improving service delivery and informing policy.	We found that the early involvement of potential users of research will increase the likelihood that results will be utilised.	Department research programme managers or other equivalent heads of profession, and policymakers.

	Recommendation	Aim	Context	Responsibility
B	**For the Office of Science and Technology, with the support of departments**			
B1	The Office of Science and Technology should establish an interdepartmental network of research managers. (Paragraph 2.19).	To facilitate the sharing of best practice between departments.	During our study, we found ourselves sharing experiences and best practices amongst departments.	Chief Scientific Adviser and the Office of Science and Technology.
B2	The Office of Science and Technology should review the incentives and barriers to the translation of non-commercial research findings. (Paragraphs 12 of the Executive Summary & 4.13 - 4.16 of the Main Report).	To help ensure that research improves service delivery and informs policy by identifying innovative ways for disseminating research findings.	We found that users felt that research was not adequately disseminated and translated into policy relevant findings in order to review and inform policymaking.	Chief Scientific Adviser and the Office of Science and Technology.
C	**For the Office for National Statistics, with support from the Office of Science and Technology and departments**			
C1	The Office for National Statistics, with support from the Office of Science and Technology and departments, should take into account the findings of this report as part of the Office for National Statistics' planned review of the collection of R&D data from departments. Specifically this review should assess how the Office for National Statistics obligations to collect data to an internationally agreed definition can be aligned with the business need of departments. (Paragraphs 8 of the Executive Summary & 2.9 -2.10 of the Main Report).	To collect and publish usable, reliable and comparable research and development expenditure statistics by department.	We found that departments queried the accuracy and utility of official research and development statistics, and found them difficult to work with.	Office for National Statistics.