# GUIDANCE ON PREPARING EVALUATION PLANS

PREPARED BY ES CENTRAL EVALUATION TEAM

dti

Department of Trade and Industry

# CONTENTS

*# INTRODUCTION*

**Purpose**:

This guidance has been prepared to assist evaluators and programme managers in the development of plans for evaluation and monitoring of DTI policies and programmes. It sets out the core elements which should be covered in **evaluation planning papers**. A task of the ES Central Evaluation Team is to provide guidance on preparation of an evaluation strategy or planning paper. The planning paper should be agreed with them before proceeding with the evaluation or inviting external consultants to tender.

**Background**:

Evaluation is needed to improve the success of policies in achieving Departmental objectives, assist resource allocation, and provide accountability. The importance of evaluation has been enhanced by the introduction of PSA targets and the Modernising Government agenda, with its emphasis on evidence based policy. The scope of evaluation in DTI encompasses the full range of policy instruments, including regulation and staff based activities as well as expenditure based programmes. Monitoring and Evaluation are covered in the "M" and "E" sections of the Department's **ROAMEF guidance**. A summary outline of the main elements of the evaluation process in DTI is included in this guidance. Separate guidance is available on "Preparation of Evaluation Summaries" (on MANDRIN or from ES Central Evaluation Team).

**The Role of Evaluation Planning Papers:**

Evaluation planning papers have a key role in ensuring the quality, transparency and policy relevance of the Department's evaluation processes. They should set out the detailed research requirements for the evaluation, drawing on the evaluation and monitoring elements of the programme **ROAMEF statement**. The aim is to present clearly the objectives and expected outputs of the evaluation, the reasons why it is needed, how the evaluation timing fits into the policy process, what fundamental questions it seeks to address, what methodology will be used, and the expected costs. Discussion of the papers at the Evaluation Methodology Group provides an opportunity for peer review among evaluators, and ensures that the proposed approach to the evaluation meets the Department's criteria for quality, content and consistency. It also provides an opportunity for the programme managers to ensure that their information needs, and their knowledge of the policy area, are reflected appropriately in the research design.

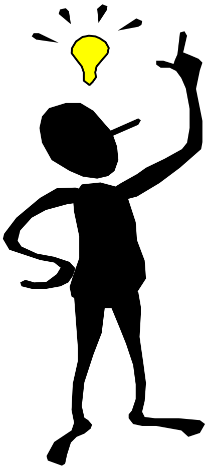
Once agreed, evaluation planning papers serve as the specification for the evaluation research, and – excluding information on evaluation costs – should be attached to the **Invitations to Tender** for external evaluation contractors.

## *Chart A: STEPS IN THE DTI EVALUATION PROCESS*

***Step 1:*** Decision to undertake the evaluation and appointment of DTI evaluator or evaluation manager

***Step 2:*** Background research in preparation for writing the evaluation planning paper

***Steps 3-6: Covered by this guidance***

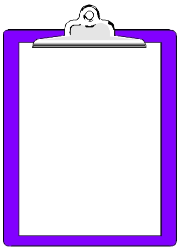


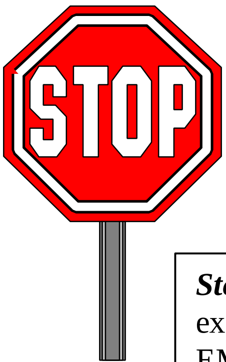
***Step 3:*** Draft the evaluation planning paper, consulting as appropriate

***Step 4:*** Clear evaluation planning paper through EMG/ES CET (see "Checklist" ***Box 2*** below)

***Step 5:*** Obtain Ministerial approval for consultancy and/or surveys and obtain clearance in principle from Survey Control (if applicable)

***Step 6:*** Prepare the Research Specification and invite expressions of interest from consultants; clear survey instruments with survey control (if applicable)






***Step 7:*** Carry out the evaluation research as set out in the evaluation planning paper. ***NB!!!*** Contact ES CET as soon as possible if the methodology described in the planning paper seems to be encountering problems. If significant changes are needed, there may be a need to return to EMG.

***Step 8:*** Prepare draft final report, with executive summary, for discussion at EMG. Contact EMG Secretariat to request a date for EMG to discuss the draft, and to establish who should attend.

***Step 9:*** Attend EMG and take note of changes requested to the final report. Revise final report and clear through ES CET.

***Step 10:*** Prepare a draft letter to budget holder, for ES CET, setting out the main evaluation conclusions and recommendations agreed by EMG.

Step 11: Prepare submission to Ministers reporting on the evaluation findings and recommendations, and requesting clearance for publication; clear submission with ES CET, FRM, and others as appropriate.

*Step 12:* Oversee publication of final report. Prepare and deliver presentations and/or other mechanisms for dissemination of key findings as appropriate.

# *I: OVERVIEW OF THE EVALUATION PLANNING PROCESS*

1. **The main elements in the evaluation process** are summarised in **Chart A** below. The role of the "evaluation planning paper" for a particular evaluation, which is the subject of this guidance note, can be distinguished from that of an "evaluation strategy paper", for a programme or policy area as a whole. An "evaluation strategy paper" is sometimes used to set individual evaluations, monitoring systems, and other relevant sources of evidence, into the wider picture of a whole system for meeting the information needs for evidence based policy making across a policy area. The ROAMEF[1] statement will normally fulfil this role, in summary form, at programme level.

2. **Evaluation planning papers** are substantial documents, which have a key role in ensuring the quality, transparency and policy relevance of the Department's evaluation processes. They serve as the specification for the evaluation research, ensuring that all interested parties have a clear understanding of what the evaluation will cover and what the evaluation outputs will be. Accordingly, it is essential that evaluation planning papers should be written in plain English, and that any technical terms should be defined in an accompanying annex.

? ? **Evaluation planning papers should address *all* of the topics set out in Sections II-IV below, together with any additional issues which may be relevant to the specific evaluation. Checklists of topics to cover are provided in Boxes 2-5.**

3. **Evaluation planning papers are normally written by** the DTI evaluator who will be responsible for designing and managing the evaluation. Papers should normally be discussed with programme managers and with FRM prior to presentation to the **Evaluation Methodology Group (EMG),** to ensure that background information is accurate and that policy issues and the timing of key landmarks in policy and programme management processes are properly reflected. In cases where no DTI evaluator is available to manage the evaluation, the planning paper will need to be written by someone in the policy area who will take responsibility for managing the evaluation. This should be done in consultation with the appropriate economic advisers, as well as with FRM and ES Central Evaluation Team.

4. **The role of the Evaluation Methodology Group is** to ensure that evaluations meet the Department's criteria for quality, content, consistency and policy relevance. For some evaluations, ES Central Evaluation Team may advise that a meeting of EMG is not needed. Discussion of the papers at EMG provides an opportunity for peer review among experienced evaluators, and also an opportunity for programme managers to ensure that their information needs, timing, and knowledge of the policy area are reflected appropriately in the research design. A final version of the planning paper, incorporating EMG recommendations, should be cleared with ES Central Evaluation Team.

[1] ROAMEF stands for Rationale, Objectives, Appraisal, Monitoring, Evaluation, and Feedback. "ROAMEF" statements are internal DTI documents which are prepared at the time new programmes are developed. The Department's guidance on preparation of ROAMEF statements is available from Financial Resources Management (FRM). Central guidance is available in "The Green Book" (see references Annex E).

5. **Submitting the Planning Paper to EMG**: The EMG Secretariat (ES Central Evaluation Team) should be informed in good time when an evaluation planning paper is likely to go to EMG. The completed planning paper will be required at least a full week before the timing of the EMG meeting, to allow circulation to all those attending and to give recipients of the paper time to consider it properly before the EMG discussion. EMG members who are unable to attend the meeting are normally also invited to provide written comments on the paper for consideration at the meeting.

6**.** **Participation in EMG**: It is customary for programme managers, as well as the evaluator responsible for the evaluation, to be present at the meeting.

7. **Ministerial Approval**: The Secretary of State's approval is required for external consultancy spend over £40,000. For external consultancy costing between £10,000 - £39,999 approval must be sought from the relevant junior Minister. Ministerial approval will normally be sought after the evaluation planning paper has been cleared through EMG, and **approval must be obtained before Invitations to Tender can be sent out.** Further information on the use of external consultants is given in Section 3.9 of the **DTI's Finance Handbook**.

8. **Survey Control**: Evaluations involving surveys or substantial numbers of interviews with members of the public are subject to **Survey Control Unit** rules. A copy of the "Guide to Best Practice" for surveys, which sets out the rules in detail, can be obtained from the DTI Survey Control Unit (Adam Gigante, in ES Statistics Directorate). Surveys which require approval include postal questionnaires, telephone interviews, face to face interviews and group discussions involving businesses and/or local authorities (almost any organisation can be classed as a 'business' – including schools and hospitals – for purposes of survey control rules). Survey control procedures include a requirement for Ministerial approval as well as clearance of the proposed survey design through SCU, and generally take some time.

9. **Invitations to Tender**: Once the evaluation planning paper has been cleared by ES Central Evaluation Team, a **research specification** can be drawn up as preparation to **going out to tender**. The research specification will be a modified version of the evaluation planning paper, omitting information (e.g. expected costs of external consultancy) which has been included for internal purposes, and providing any additional information which may be required by contractors. Guidance on procurement matters can be obtained from Martin Bennett in FRM (Ext. 5742) and the **DTI Procurement Manual** can be obtained from your division's Procurement Officer.

## *Box 1: Checklist for the Evaluation Planning Process*

? ? **Draft Evaluation Planning Paper, consulting as appropriate**

? ? **Contact EMG Secretariat to request a date for EMG, and to establish who needs to attend the EMG meeting**

? ? **Submit the finished draft Evaluation Planning Paper to the EMG Secretariat at least 1 week before the scheduled meeting**

? ? **Attend EMG and take note of changes requested to the Planning Paper**

? ? **Revise the Planning Paper and clear through EMG/ES Central Evaluation Team**

? ? **Seek Ministerial Approval for consultancy and/or surveys (if applicable)**

? ? **Contact Survey Control Unit (if applicable)**

? ? **Prepare the Research Specification (if applicable)**

# *II: BACKGROUND INFORMATION*

## Introduction

10. This Section covers the key elements of background information which should be included in the Evaluation Planning Paper. **Box 2** provides a summary checklist.

## *Box 2: Checklist of Key Background Information*

- **What are the *aims* and *objectives* of the evaluation? When are the results needed?**
- **What are the main *information outputs* expected?**
  - **What is the policy or programme being evaluated?**
  - **What are the policy/programme *inputs*?**
  - **What *activities* does the policy/programme support?**
  - **What are the appraisal criteria and mechanisms (if applicable)?**
  - **What is the duration of the policy/programme (with dates of key changes)?**
  - **Who are the recipients of funds disbursed (if any)?**
  - **Who are the participants in and/or users of supported activities? Who are the expected direct and indirect beneficiaries?**
- **What is the *Rationale* for the policy/programme?**
- **What research is available to support the Rationale?**
- **What are the expected *outcomes* and effects on competitiveness?**
- **What are the relevant *PSA objectives, targets and performance measures*?**
- **What are the policy and/or programme *objectives*?**
- **What are the monitoring arrangements and information outputs?**
- **What previous evaluations and/or reviews have been undertaken?**
- **What are the most important gaps in existing sources of evidence?**

***What are the aims and objectives of the evaluation?***

11. There are a number of reasons stated for carrying out evaluation, but in essence they all boil down to ensuring that the activities[2] remain relevant, and that they provide a cost effective way of meeting their prescribed objectives. Equally important is to ensure that the timing of evaluations will address DTI's strategic information needs and enable results to feed into the Resources and Allocations Management framework and spending reviews. While evaluation is essentially a backward looking process, its purpose is to inform future decisions and hence to help policy makers achieve their aims.

12. At the design stage of policy or programme development it is necessary to consider how the proposed activities would be evaluated, what monitoring information would be required, and how the information would be collected and verified. These

[2] the principles of evaluation apply to all DTI projects, programmes and policies. These terms are defined at Annex A.

elements are covered in the M ("Monitoring") and E ("Evaluation") sections of the ROAMEF statement for the programme(s) in question.

13. In considering the reasons why a programme should be evaluated at the time proposed, evaluators should draw upon the guidance provided by FRM on "Criteria for Selecting Programmes for Evaluation", reflected in the list below:

- To produce information to feed into evaluation against Public Service Agreement, Competitiveness White Paper, Modernising Government, and other key objectives and **targets**;
- To evaluate programmes, and areas of 'running cost' expenditure, with over £10m spend, where there are **significant gaps** in our knowledge of the programmes impact and effectiveness[1].
- To provide information specifically required for an **identified future need**, for example, programme extension or revision, or possible **replication of a programme in other areas or sectors or on a larger scale**. The specific need should be identified.
- To provide information on the **relative effectiveness** of different programmes, and/or areas of running cost expenditure, in meeting common objectives or on how programmes are complementary.
- To assess the effectiveness of **a new or modified programme or policy.**
- To provide more in-depth assessment of programmes which are **not meeting their objectives and targets.**

***What are the main information outputs expected?***

14. The planning paper should provide a clear summary of the main information outputs expected from the evaluation, which would normally need to include all of the "**Key Evaluation Information**" elements at **Annex B**. The discussion should include an explanation of which of the categories of "**competitiveness outcomes**" (see **Annex B**), if any, are considered relevant to the policy/programme, and the extent to which new evidence about the effects of the supported activities, on the aspects of competitiveness identified, will be generated by the evaluation.

***When are the results needed and why?***

15. What are the key timing landmarks which the evaluation must meet in order to fulfil its aims? How will the results feed into the Department's Resource and Allocations Management Framework and/or forthcoming spending review, and when is the information needed for these purposes? Are there any other key dates affecting the policy context which should be taken into account?

***What is being Evaluated?***

16. The evaluation plan needs to include a clear description of what the policy or programme comprises, covering the following key elements:

- **What are the policy/programme *inputs*?** (including details of the expenditure both running and programme costs that have been incurred over the life of the scheme, and any known inputs contributed by business or other partners. Where costs are shared with other departments an indication of the DTI's share of spending should be given);

- **What *activities* does the policy/programme support?** (e.g. collaborative R&D; provision of technical services or business advisory services; participation in exhibitions or missions, etc.)
- **Who are the recipients of funds disbursed (if any)?** (recipients of DTI offer letters)
- **Who are the participants in and/or users of supported activities? Who are the expected direct and indirect beneficiaries?**
- **What are the appraisal criteria and mechanisms?** (e.g. against what criteria is eligibility for support assessed? through what mechanisms are eligible projects or participants identified and brought into the programme? etc.)
- **What is the duration of the policy/programme ?** (include dates of any significant past or expected changes in design, scope or scale)

***What is the rationale for the policy/programme?***

17. The **rationale** for the policy or programme provides the justification for its existence. This often is couched in terms of addressing some perceived market failure, or institutional failure, which hinders the achievement of potential economic benefits (see **Annex C** for further details). There may also be social or regulatory reasons why the activity is undertaken, which should be explained. Links to the relevant DTI Public Service Agreement (PSA) objectives, targets and performance measures should also be identified. The rationale for DTI programmes is usually set out in the ROAMEF statement. For programmes or policies that have been in existence for a long period the rationale for the activities may have altered; in some cases the formulation of the rationale may also be insufficiently complete for evaluation purposes. The evaluation must consider the validity of the current rationale, and whether there is a valid economic rationale for the activities which could be formulated more appropriately.

18. The planning paper should describe and explain the channels through which supported activities are expected to lead to the intended **outcomes**, specifying any expected effects on **aspects of UK competitiveness** with reference to elements of the **Framework for comparability** at **Annex B,** and the discussion of rationales at **Annex C.** It should describe the activities supported, explain how they are expected to address the problems identified by the rationale, and why the particular types of activities were chosen as the means to achieve the desired aims. There may be a need to seek clarification of some of these points in consultation with policy staff, to supplement information available from the ROAMEF.

19. Consideration should be given to whether there may be a need to undertake a **review of literature** to ensure that the evaluation is appropriately informed by relevant external research. The evaluation planning paper should provide a summary outline of what evidence is already available to support the rationale and to help assess the likely channels of impact on competitiveness. This should include a bibliography, with details of any previous evaluations, reviews, or other relevant research commissioned by the Department, and any other key sources of evidence relating to the rationale.

## *Box 3: Checklist of key topics relating to the rationale*

- ? ? ***What is the rationale? What alternative rationale(s) might be appropriate?***
- ? ? ***How do the supported activities address the problems identified by the rationale?***
- ? ? ***What are the expected outcomes of the policy/programme? Through what channels are the outcomes expected to affect UK competitiveness (if applicable)?***
- ? ? ***What are the relevant PSA objectives, targets and performance measures?***
- ? ? ***What evidence is available to support the Rationale and the links to the relevant PSA objectives?***
- ? ? ***What previous evaluations and/or reviews have been undertaken?***
- ? ? ***What are the most important gaps in existing sources of evidence?***
- ? ? ***Has a review of literature been undertaken?***

***What are the Policy and Programme objectives?***

20. The **objectives** identify what the policy or programme should achieve to meet the needs identified under the rationale. They are not forecasts, or descriptions of the activity, but criteria that the evaluation should use for judging its success. These are usually set out in the programme ROAMEF statement and/or in management information underlying the programme‘s operation. Some consideration should be given to how these link in to the overall DTI Objectives.

21. Evaluations should consider whether the objectives are specific, measurable, agreed, realistic and time-dependent (SMART). A distinction should be drawn between ultimate/final objectives and more detailed intermediate and immediate objectives (see Glossary for definitions). The achievement of ultimate/final objectives should be measured in terms of outputs and outcomes. Outputs are the immediate result of the activities for the business supported e.g. an Iip recognition, a grant secured, an NVQ obtained. Outcomes may include the business benefits of the outputs achieved, for example, improved profitability or productivity. Annex B (the "Framework for Comparability of Evaluation Results") provides a summary list of the kinds of outcomes which may need to be considered in evaluating policies/programmes with "competitiveness"[3] aims. Assessment of these impacts will be crucial for the evaluation in order to determine the value for money of the policy or programmes.

***What are the monitoring arrangements and information outputs?***

22. The scope of new research which may be required for the evaluation will be significantly influenced by the availability of monitoring data and other relevant management information. Mechanisms for gathering robust monitoring data should be built into programme design at the outset, to ensure that policy development and refinement can be informed by timely evidence on progress, performance measures can be properly validated, and that robust evaluation of outcomes can be carried out at the appropriate time. The evaluation planning paper should describe:

[3] The term "competitiveness" is defined here as follows: "the degree to which a country can, under free and fair market conditions, produce goods and services which meet the test of international markets, while simultaneously maintaining and expanding the real incomes of its people over the long term". This is consistent with the OECD definition, and the definition used in the 1998 Competitiveness White Paper "Building the Knowledge Driven Economy".

? ? ***What is the nature of monitoring arrangements?*** (who does what; what information is collected; where, and in what form is monitoring data held)

? ? ***What is the availability of contact data for programme participants/target direct beneficiaries?*** (nature of available contact data; what proportion of the participants/beneficiaries/other relevant bodies does it cover)

# *III: UNDERLYING AIMS OF THE RESEARCH*

23. The planning paper should set out the aims of the research, and specify clearly the issues which will be addressed. A checklist of topics to consider is provided in **Box 4.** The issues to be covered by an evaluation will vary according to the policy or programme and reason for evaluation, however there are some issues which are common to most DTI evaluations. For example:

? ? Does the rationale for the intervention remain valid today?

? ? What benefits, and/or costs resulted from existence of the policy/policy or programme that would not have occurred otherwise?

? ? To what extent were the policy/policy or programme objectives and targets met, and why?

? ? Was the policy/policy or programme delivered in a cost effective manner?

? ? What other concerns are there about the effectiveness of the policy/policy or programme?

? ? Are the institutional arrangements for the delivery of the policy or programme effective and appropriate?

Each issue is discussed in greater detail below.

***Testing the Validity of the Rationale***

24. One of the key research questions for most DTI evaluations is whether there is a valid economic rationale for the activities being evaluated. The evaluation plan should set out the main rationale issues to be addressed by the research, in the form of a set of hypotheses and counter hypotheses about the expected outcomes of the activities and the most likely counterfactual (the most likely outcome without the policy/programme), taking account of guidance on rationales at **Annex C,** and **Box 3** above. The planning paper should specify the methodology which will be used for testing these hypotheses. The evaluation will need to:

? ? assess what evidence exists to support the view that there is a market or institutional failure requiring intervention (if applicable);

? ? consider the extent to which the reason for intervention is pervasive or limited to certain sectors/firms in the economy;

? ? assess the extent that existence of the scheme has impacted on the behavior of those sectors/firms/market it aims to influence;

? ? consider how the relevant market(s) is (are) developing, and possible implications for the continuing validity of the rationale. Account must be taken of the types of activity/projects that the scheme supports. Comparisons must be made with other schemes that support similar activities;

? ? identify any links with parallel activities supported by the DTI or by other public and/or private sector bodies, and consider the extent to which the related activities may be complements or substitutes for those being evaluated;

? ? consider whether the policy or programme is the right way of tackling any perceived market failure i.e. the rationale may remain valid but there may be more effective mechanisms by which the underlying problems can be tackled.

***Measurement of Outcomes: Expected and unexpected Costs and Benefits***

25. The second key research question is what costs and benefits arise from the existence of the scheme and how do these compare with what might have occurred anyway without the policy or programme? The evaluation planning paper should specify the main types of expected and unexpected costs and benefits to be assessed, the main types of evidence which will be collected, and the methodology which will be used for measuring the level of benefits.

26. In measuring costs and benefits it will be necessary to distinguish between transitory and permanent effects. Key **performance indicators** must be identified and clearly defined. The evaluation will also need to assess unexpected costs and benefits; it should also consider the extent that the costs and benefits identified may be sensitive to different economic conditions. In the measurement of benefits additionality, displacement , substitution and deadweight should be considered; these are defined in the attached glossary of terms (**Annex A)**, and are also the subject of separate DTI guidance (see references at **Annex E**).

27. Supply side effects should be considered where policies are expected to improve competitiveness. These may include effects on any of the factors which affect UK productivity and GDP; the **"Framework for Comparability of Evaluation Results" at Annex B** provides a summary of the kinds of effects which are most likely to be relevant to DTI evaluations. The assessment of outcomes relating to impact on competitiveness should use headings provided in the "Framework" to the extent possible, taking account of **guidance on economic rationales at Annex C.**

***Assessing outcomes against targets and objectives***

28. Assessing outcomes against targets and objectives is a key issue for most DTI evaluations. The evaluation planning paper needs to be clear about which targets and objectives will be considered, including relevant DTI objectives and PSA targets, and what kinds of evidence will be used to assess outcomes against them. Where policy and/or programme objectives have changed over time, it will be necessary to assess outcomes against current objectives as well as in the light of relevant historical objectives. If there have been significant changes in objectives and targets over the life of the policy/programme, the evaluation may need to consider the extent to which these changes themselves may have affected outcomes. There is also likely to be a need for the evaluation to consider the appropriateness of the objectives and targets in the light of findings relating to the rationale, and whether alternative formulations can be recommended which would be more appropriate.

***Cost Effectiveness***

29. The evaluation planning paper will also need to consider the methodology to be used for assessing the extent that the programme/policy is providing value for money. The benefits outlined above must be weighed against the running costs and policy or programme costs. Where possible these net benefits should be compared against those of similar programmes/policies. Some consideration should be given to whether the focus of the activities could be altered to provide the same benefits but at lower cost.

The nature of the evidence which will be used to address these issues should be clearly set out.[4]

***Appropriateness of Institutional Arrangements***

30. Policies and programmes are delivered through a number of different institutional arrangements. They may involve private-public partnerships and co-ordination of programme delivery with other agencies, at national, regional, sectoral or local level. The evaluation must consider the extent to which the institutional arrangements enhance the effectiveness of delivery of the policy or programme. To what extent are additional resources leveraged into the policy or programme as a result of these arrangements?

***Policy Specific Issues***

31. In the operation of any policy or programme there are always policy specific issues that need to be considered in the evaluation. These may be areas where the impact of the programme on beneficiaries may be uncertain or the impact on those outside the policy or programme are unclear. They may relate to the way the policy or programme has been designed and delivered and whether changes in these areas could improve the policy or programmes effectiveness. It may relate to how the scheme fits together with other intervention to the same sector. It may relate to examination of why particular objectives have not been met. It is important that the evaluation plan identifies these qualitative issues and ensures that the research considers how to cover them.

[4] References providing discussion of alternative methodologies for assessing cost effectiveness and other evaluation issues are provided at Annex E. See also Section IV below.

## *Box 4: Checklist of Topics relating to Research Aims*

? ? **What key issues must be addressed to meet the aims of the evaluation? Will these include:**

- ?? **testing the validity of the rationale?**
- ?? **identifying and measuring anticipated and unanticipated outcomes?**
- ?? **assessing outcomes against targets and objectives?**
- ?? **measuring cost effectiveness?**
- ?? **assessing the appropriateness of institutional arrangements?**
- ?? **any policy or programme specific issues?**

? ? **What evidence will be gathered to address the key evaluation issues?**

? ? **What performance indicators will be used to assess outcomes? How are they to be defined and measured?**

? ? **How will cost effectiveness and value for money be assessed?**

? ? **What comparisons will be made with other policies/programmes?**

# *IV: CHOOSING THE APPROPRIATE METHODOLOGY*

***How will research tackle the evaluation issues?***

32. Consideration must be given to selecting the most appropriate research methodologies for achieving the aims of the evaluation. The evaluation planning paper should indicate how effective use of existing internal and external resources can be made. The ways in which research evidence can be collected must be considered, together with the balance between in house and external consultancy resources, and the scope for taking account of relevant experience in other countries. In this context, it will be important to identify who would be best placed to provide the information required to address the evaluation issues. Some of the commonly used research methodologies are discussed briefly below. These and other methodologies, including use of a structured "control group", experimental and modeling techniques, are discussed in depth in the literature cited at **Annex E**. Advice on methodologies is also available from ES Central Evaluation Team.

33. **Literature search**: This surveys current academic and empirical literature and provides an insight into the way that the market/sector works. These are useful in confirming whether the literature supports a continuing justification for the rationale.

34. **Survey of beneficiaries**: Detailed questionnaires can be drawn up and face to face, telephone or postal surveys conducted to explore the research questions. Where appropriate and feasible, the performance and views of beneficiaries should be set aside those of a comparison group or "control group" of otherwise similar businesses/individuals who have not benefited from help to establish the counterfactual. General advice on appropriate survey design can be obtained from ES Central Evaluation Team.

35. Where evaluations involve **surveys**, the evaluation plan should include a description of the proposed survey sample structure, size and survey method, and a description of the available sources of contact details for use in constructing the sampling frame, including the overall number of contacts for each of the relevant survey populations. Sources of potential sample bias should be identified, and the description of survey methodology should explain how risks of bias will be addressed. The plan must give details as to the appropriate sample size to be used in the survey to ensure a representative sample. This will require advice from statisticians, from DTI's Operational Research Unit, or from survey specialists. A useful guide is 'Survey Methods in Social Investigation' see **Annex E** for reference.

36. Whilst the questionnaires may be constructed in house, for large surveys the work is usually contracted out to professional survey companies. Consideration must be given to the type of survey i.e. postal versus telephone as this can affect response rates and costs - the decision of which to choose often depends on the type of population being surveyed.

37. **Interviews with participants in supported activities**: This may include not only the expected beneficiaries but also those that deliver the supported activities and other experts in the area which may have a view of the effectiveness of the policy/programme

and/or the mechanisms through which it is delivered. Interviews for the purpose of obtaining qualitative, in depth information and understanding are usually face to face; generally the interviews should be based on some semi-structured form so that key topics are covered consistently, and results can be gathered together and compared.

38. **Case studies:** Evaluations may include the use of case studies to look in depth at a small sample of activities. These may involve a combination of face to face interviews and desk research; references at **Annex E** provide discussion of relevant research techniques for use in case studies.

***Estimated Costs***

39. The evaluation plan should set out who will conduct each element of the evaluation and provide a costing based on the likely expenditures. **Annex D** indicates some of the costs that need to be considered. ES and your evaluation colleagues should be able to assist in providing information regarding the current level of consultancy and survey costs. The total costing will determine the procurement route that will have to be followed. **Projects over £108,000 (net) must be advertised in the EC journal.**

***Outputs and Timing***

40. The evaluation plan must clearly state what the deliverables are. At present these usually consist of an evaluation report including an executive summary, the latter is mandatory when the report is considered by EMG. As the Department is moving towards ‘payment by outputs’ a payment schedule should be drawn up which states exactly what the contractor will get for each output.

41. A detailed project timetable is also required showing the procurement, research and final report stages. Where **EC procurement procedures** are followed sufficient time must be allowed for notifying expressions of interest and the tendering process which usually takes a minimum of three months. Allowance must also be taken of time required to obtain ministerial approval for any external consultancy in excess of £10,000. The evaluation report is likely to go through several drafts before it reaches EMG and time must be allowed for further modifications before a final version is cleared with the Chairman of EMG and sent to the budget holder. The time from first draft to final draft of the report can take between 3-4 months and further work is required to prepare it for publication.

## *Box 5: Checklist of Key Methodology Topics*

? ? ***What fieldwork is planned?*** *(Include details of proposed survey design, sample sizes and number of face to face interviews, etc. )*

? ? ***What contact data is available for use in the proposed fieldwork?***

? ? ***What desk research is planned?***

? ? ***Who will carry out the research?*** *(Breakdown of who will do what)*

? ? ***What will the research cost?*** *(Breakdown of expected costs, distinguishing: in-house man hours and T&S, external consultancy, fieldwork, etc.)*

? ? ***When will the research be completed?*** *(Breakdown of expected timetable)*

**ES Central Evaluation Team**
**March 2000**

# *ANNEX A: Glossary of Terms*

**Additionality**

Additionality measures the amount of output from a policy compared with what would have occurred without government intervention. Three different types of additionality can be defined.

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|---|---|
| **Activity additionality:** | This is the proportion of supported activity which is additional (e.g. what % of supported events would not have been held without DTI support) |
| **Outcome additionality:** | Proportion on intermediate outcomes (e.g. change in business practices, improved product quality, new technology patented which would not have happened without DTI support. |
| **Outcomes additionality:** | Additionality of business performance outcomes. Proportion of observed changes in key business performance indicators which is attributable to DTI support. |

For each of these types of additionality the extent of additionality can be measured in terms of the following parameters.

| | |
|---|---|
| **Whole project additionality:** | A project that would not have gone ahead in any form over any timescale without government support. |
| **Scale additionality:** | This arises when a project is larger than it would otherwise have been as a result of government support - perhaps enabling it to reap economies of scale or to increase the level of employment. |
| **Scope additionality:** | This derives from the expansion of coverage of a project, say to a wider range of applications or markets, than would have been possible without the government assistance. A special form of scope additionality would be collaborative additionality where partners would have done the work but not together. |
| **Acceleration additionality:** | A project may exhibit acceleration additionality if it is significantly brought forward in time so that for example a market opportunity may be met more quickly. |

**Competitiveness**

Competitiveness is defined, in the context of DTI activities with "competitiveness" aims and/or impacts, as: "the degree to which a country can, under free and fair market conditions, produce goods and services which meet the test of international markets, while simultaneously maintaining and expanding the real incomes of its people over the long term." This is consistent with the OECD definition, and with the definition used in the 1998 Competitiveness White Paper "Building the Knowledge Driven Economy". See also the glossary entry for "supply side effects", below.

**Counterfactual**

The most likely situation, development and outcomes in the absence of the intervention. An element of judgement is inevitably involved, and there may be competing hypotheses, reflecting differences in perspective and underlying assumptions about the nature of the phenomena under scrutiny. Alternative hypotheses relating to the counterfactual should be set out clearly in the context of assessing rationales for intervention.

**Crowding out**

The term is used in macroeconomics in two distinct contexts:

?? relating to the behaviour of the overall level of macroeconomic **demand**: In this context "crowding out" refers to "a fall in either private consumption or investment as a result of a rise in government expenditure[5]". In general, individual DTI programmes should not be expected to generate any net effects on the overall level of demand in the economy (but see **Annex B, Box 2**, for notes on possible effects on the structure and nature of demand at micro-economic level);

?? relating to the behaviour of the overall level of national **income**: In this context, "crowding out" refers to the fact that, unless there are also positive effects on the overall level of **supply** of goods and services in the economy, government action to stimulate increased income in one area will simply be offset by reductions elsewhere. For example, increased investment and job creation in one part of the UK, as the result of incentives to attract new businesses to the area, may be offset by reductions in job creation and investment in another part of the country; movement of key skilled workers from one part of the country to another may also contribute to "crowding out".

It is necessary to assume that "crowding out" of additional income at national level will be complete (100%), unless there is evidence of significant positive "**supply side effects**"[6] (see separate entry below). There may nevertheless be additional income generated at the **local** level, especially for programmes and policies designed to reduce regional income disparities. Much of the activity of the DTI has the specific aim of generating positive "supply side effects" by influencing one or more of the factors which determine UK competitiveness (see **Annex B**). Where evaluations can demonstrate evidence that supply side effects are being achieved, the assumption of 100% crowding out is not appropriate.

**Deadweight**[7]

5 Macmillan Dictionary of Modern Economics, Fourth Edition, p.92.

6 Central guidance on appraisal and evaluation of policies and programmes which aim to generate supply side effects is provided in Annex E of "The Green Book" (see references at Annex E below).

7 See separate DTI guidance on "Additionality, Dead-weight and Displacement", reference at Annex E

Expenditure to promote a desired activity which would in fact have occurred without the expenditure. There is activity deadweight and outcome deadweight i.e. the activity may be additional but still not change the outcome.

**<u>Displacement</u>**[8]

The degree to which an activity promoted by government policy is offset by reductions in activity elsewhere. A policy or programme might promote investment in certain areas but this might draw resources from other areas of activity accompanied by less investment - this reduces the benefits of the intervention.

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**<u>Evaluation</u>**

An independent, constructive analysis of the impact, efficiency and appropriateness of a policy or programme or activity.

**<u>Macroeconomics</u>**

The study of the behaviour of the economy as a whole. It includes analysis of the behaviour of the overall level and growth of national income and production, the behaviour of broad categories of expenditure such as private sector consumption, investment, imports and exports, and the behaviour of the main categories of resources used in production, such as labour, land, capital and entrepreneurship. Macroeconomics also encompasses study of the exchange rate and overall balance of payments for the economy. The terms “supply” and “demand” are used in macroeconomics in the context of describing the behaviour of these broad categories.

**<u>Microeconomics</u>**

The study of the behaviour of individual units, in particular firms and consumers and their interaction in markets for individual products or services. The terms “supply” and “demand” are used in microeconomics in the context of describing the behaviour of these individual units or markets. Similarly, microeconomic analysis of exports or imports would refer to the behaviour of individual firms, or of particular sectors. Changes in behaviour – such as increased exports – which may be observed at the level of individual firms or sectors can not be assumed to result in changes at the level of the

8 See separate DTI guidance op cit.

whole economy, because there may be offsetting changes elsewhere. For example, DTI activities which generate additional exports may not have any net impact on the overall UK balance of payments, because of offsetting effects on imports or exports elsewhere in the economy.

## Objectives

Objectives indicate what a policy or programme is intended to achieve. One useful way of classifying objectives is in terms of ultimate, intermediate and immediate.

**Ultimate objectives:** Usually expressed as broad benefits sought by Government. They include for example:

a. economic benefits;
b. international security
c. health, safety and welfare objectives.

**Intermediate objectives:** A step down from the ultimate objectives. They will need to be met if the ultimate objectives are to be achieved.

**Immediate objectives:** Usually directly concerned with the outputs of projects. They will normally be measurable, and to a great extent, within the control of those responsible for delivery. The immediate objectives will need to be met if the intermediate objectives are to be achieved.

For example, for the Biotechnology Means Business programme the ultimate Departmental objective is ‘to make the most of the UK’s Science, Engineering and Technology’. The intermediate objectives are to raise awareness of the commercial potential of biotechnology for UK users industries and stimulate its take up by them, in order to improve industrial competitiveness and help develop the home market for UK biotechnology companies. The immediate objective might be to broaden awareness of market opportunities through holding a seminar or issuing a DTI publication.

## Policy[*]

A policy is a set of activities, which may differ in type and may have different direct beneficiaries, which are directed towards a common general objective or goal. Unlike a programme, a policy is not delimited in terms of time schedule or budget.

## Programme*

A programme is a set of organised but often varied activities (projects, measures or processes), directed towards the achievement of specific operational objectives. A programme has a fixed timescale and a dedicated budget.

## Project*

A project is a single non-divisible intervention with fixed timescale and dedicated budget.

[*] The definitions used here for policy, programme, and project follow usage in the European Commission. See reference to EC internal document “Concrete Steps Towards Best Practice Across the EC Commission” at Annex E.

## SMART

Objectives are SMART when they are specific, measurable, agreed realistic and time-dependent.

## Substitution

The situation in which a firm substitutes one activity for a similar activity (such as recruiting a different job applicant to take advantage of government assistance).

## Supply side effects

The term “supply side effects” is used in the context of guidance in “The Green Book” (see reference at **Annex E**), and related DTI guidance, to refer to effects on the supply side of the macroeconomy, as distinct from effects on the overall level or composition of demand in the economy[9]. Much of the activity of the DTI has the specific aim of generating positive supply side effects by influencing one or more of the factors which determine UK competitiveness and GDP growth rates. The main kinds of “supply side effects” which are likely to be relevant to evaluations of DTI activities are summarised in the “Framework for Comparability of Evaluation Results” at **Annex B**.

There is sometimes confusion about the distinction between the concepts of “supply side effects” and “demand” at the macroeconomic level, and the concepts of “supply” and “demand” at the microeconomic level. The terms are used in the microeconomic sense when describing the behaviour of particular markets for products or resources or services, or the performance of individual businesses. In general, particular DTI policies and programmes should **not** be expected to have significant impact on the overall level of demand in the economy at **macroeconomic** level. The overall level of macroeconomic demand in the UK is primarily influenced by other policy instruments, notably interest rates, rather than through the range of policies and programmes for which DTI has responsibility. DTI policies and programmes may, however, have significant effects on the structure and nature of demand in particular markets at the **microeconomic** level (e.g. facilitating access to discerning customers, including those in export markets).

## Sustainability/Durability

This refers to the production of continuous desired effects by an intervention after public funding has ceased.

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[9] In other words, “supply side effects” relate to effects on factors which determine the level or growth of real GDP at a given stable price level. These concepts are explained more fully in textbooks or dictionaries of economics.

# *ANNEX B: Framework for Evaluation Comparability*

***This Annex provides a framework for evaluation comparability, which is summarised in Box 1 "Key Evaluation Information" and Box 2 "Framework for Comparability of Evaluation Results" below. A brief discussion of the purpose of the framework is provided below.***

1. A first step towards increased ***comparability of results*** across different areas of evaluation is to clarify how we might ***define the results*** which we might wish to compare. For instance, we might wish to be able to compare results of various types of DTI activities in terms of their ultimate impact on the growth of real sustainable GDP in the UK per £k expenditure. Or, more modestly, to compare results of business advisory services in terms of their impact on the performance of the businesses being advised. We first need to establish what kinds of results we are interested in, and for what purpose, and then to establish definitions of these for consistent use in evaluations covering the range of services for which we wish to be able to compare results.

2. Comparability of results across different areas of activity presupposes that activities at some level have ***common objectives,*** to which we can relate common definitions of results. Results of activities can be evaluated in terms of a diverse range of economic and social benefits and costs. These may relate to overall economic performance and/or to other goals, in diverse ways, and at different levels. We need to decide which overarching objectives we wish to evaluate results against, and to be clear about how the activities in question are expected to further those objectives. This means ***establishing a model* -** a set of hypotheses **-** about how the activities relate to the overarching objective(s), generally through a ***hierarchy of intermediate objectives***.

3. For example, if we wish to compare evaluation results of DTI activities with respect to the over-arching objective of ***"increasing sustainable GDP and GDP growth",*** we need to establish a set of hypotheses about how we expect the various activities to contribute to this objective. This is not a simple task. Nor is it achievable with any great measure of certainty, because the factors which contribute to determination of GDP and GDP growth are the subject of much uncertainty, debate and continuing academic and policy research. There is much uncertainty and debate also about whether findings relating to economic performance in any given time and place may or may not be generalisable to other geographic, social or historical circumstances. Therefore, comparability of evaluation results is constrained by ***limitations of knowledge about determinants of economic performance***.

4. A practical approach to progress on comparability despite these knowledge limitations is to build a ***framework for comparability of evaluation results*** which can help to clarify common elements in results, and also help to clarify the links between evaluation research and findings from research from other sources. Evaluations can make use of existing sources of research **-** e.g. academic research on factors in comparative economic performance **-** both to help ***define the range of research questions*** to be addressed by the evaluation, and to provide a source of evidence about wider effects, and about ***links between intermediate and higher level objectives***, which may be beyond the scope of the evaluation research.

5. Use of a common framework can also make it easier to identify areas where different opinions about the role of different factors in economic performance would affect interpretation of evaluation results, e.g. relating to links between intermediate outcomes and economic impact. Differences of opinion about these links can lead to different conclusions about the overall value for money of particular activities by different evaluators. If these are not made explicit, comparability can be thwarted by difficulty in distinguishing between differences in results which derive from different judgements about links between intermediate and ultimate economic effects, on the one hand, and those which arise from real differences in performance with respect to intermediate outcomes.

6. A framework for comparability in the DTI context is summarised in Boxes 1 and 2 below. **Box 1** sets out the main elements of key evaluation information, and is designed to help clarify links between inputs, activities, outcomes, aims and objectives. **Box 2** provides a framework for comparability in evaluating ***outcomes*** relating to ***effects on competitiveness***.

## *ANNEX B/Box 1:*

## *Key Evaluation Information**

| | |
|---|---|
| *a.* | **Competitiveness Outcomes and links with DTI Objectives and PSA Targets:**<br><br>***Aims of the activities;***<br>***PSA targets;***<br>***PSA Performance measures;***<br>***Competitiveness Outcomes***<br>*(See below, "Framework for Comparability of Evaluation Results")* |
| *b.* | **Inputs** *(DTI spend; known inputs from business or other partners)* |
| *c.* | **Activities supported** *(Summary description of activities and activity outputs; available evidence on additionality of activities supported and of the outputs)* |
| *d.* | **Participants and beneficiaries** *(Participants/users of supported activities / services; direct beneficiaries and expected indirect beneficiaries; available evidence on additionality of business participation/service use)* |
| *e.* | **Value for money and 'client' satisfaction** *(Available evidence on participant/user perceptions)* |
| *f.* | **Outcomes** *(covering effects on all relevant aspects of competitiveness listed in the "Framework for Comparability of Evaluation Results" below, e.g. "effects on firms", "effects on institutions", etc.)* |
| *g.* | **Additionality of outcomes** *( See Annex A for definitions)* |
| *h.* | **Estimated proportion of economic benefits accounted for by benefits to identifiable direct business beneficiaries** *(e.g. as compared with the wider benefits or 'spillover effects' expected in the context of the policy rationale***)** |
| *i.* | **Rationale** *(main elements identified; alternatives and counter hypotheses) See guidance on rationales at Annex C.* |
| *j.* | **Objectives** |
| *k.* | **Appraisal and Monitoring mechanisms** |
| *l.* | **Evaluation history (dates of previous evaluations, reviews and other studies)** |
| *m.* | **Bibliography of research available to support the Rationale** |

***** The key evaluation information elements in **Box 1** build on the "Framework for Local Impact Assessment" which was developed in 1996-97 by an inter-departmental working group, led by DTI and DfEE, for use in the context of assessing the impact of Business Links. The working group established a framework which distinguishes among inputs, activities, activity outputs, business support outcomes and economic impact. It also established a set of 5 key indicators for use in measuring changes in business performance of assisted companies. The key indicators are: sales/turnover; assets; employment; profits; exports. Business "performance" is assessed in terms of "productivity" – defined as "the ratio of output (measured by sales turnover) to the number of employees **or** to the value of assets" – and "profitability", defined as "the ratio of profits to sales turnover or the ratio of profits to assets". For further detail on the Framework for Local Impact Assessment see reference at **Annex F** below.

# *ANNEX B/Box 2:*

# *Framework For Comparability Of Evaluation Results*

*(Outline categories of possible effects of DTI supported activities on aspects of UK competitiveness, for use in reporting evaluation results relating to "outcomes")*

### *i. "the ability to generate income from given available resource inputs":*

**Effects on Firms:** Includes: "firm competencies" (including entrepreneurial competencies) e.g. effects on knowledge/skills"; effects on business assets (tangible and intangible capital assets); effects on business processes / practices / methods; effects on intermediate business outcomes (e.g. improved product quality, reduced down time, new customers won, etc.); effects on hard business performance outcomes (e.g. sales, employment, productivity)

**Effects on Market Processes and Networks:** Includes: indicators of effects on networks and market processes, e.g. transactions processes and supply chain relationships, best practice and innovation diffusion mechanisms, vertical and horizontal networking and co-operation mechanisms, supplier/purchaser search processes;

**Effects on Enterprise**: e.g. indicators of effects on number and nature of start-ups.

### *ii. "availability, cost and quality of resource and technology inputs":*

**Effects on Resources** (Including physical infrastructure external to the firm, but excluding resources which a firm creates internally.): Includes: indicators of effects on availability, cost and quality of resource and technology inputs, including business services – e.g. services provided by intermediaries such as RTOs **-** as well as skills (both labour and management), materials and finance, and the quality of the science base available to business; relevant business services include training and technology services, intermediation services (e.g. brokering contacts, match-making, network brokering, etc.);

**Institutional Framework Effects**: (Includes "Institutions" and effects on "the effectiveness of institutions"; indicators of effects on the quality and effectiveness of the institutional framework for business, e.g. capacity building in business organisations, including Research and Technology Organisations, Industry Training Organisations, etc.)

**SET linkages:** Indicators of effects on links between industry and the science base**;**

**Enterprise:** Includes effects on the supply of entrepreneurs (e.g. the number of individuals considering setting up a new business)

### *iii. "the wider framework for business":*

**Policy Framework Effects:** indicators of effects on the efficiency and effectiveness of policy making; e.g. evidence of effects on legal and regulatory framework, standards and measurement system, trade and investment policy framework;

**Business Climate Effects:** indicators of impact on business perceptions of business climate, e.g. perceptions of policy related investment risk and business confidence in the policy making process, etc. (Additional indicators reflecting other aspects of "business climate effects" could be added should they arise in the context of any future evaluation; to date, there do not appear to be any examples of other indicators relating to this heading in the existing body of DTI evaluations.)

**Demand:** Indicators of effects at ***micro-economic*** level on the structure and nature of demand, both domestic and international. Includes indicators of effects on overseas policies and practices affecting UK business opportunities (including effects on overseas purchasing practices and propensity to source from the UK). (***NB***: ***DTI programmes should not be expected to generate any net effects on the level of demand at macro-economic level***).

# *ANNEX C: Rationales for Intervention*

**Introduction:**
***This Annex provides guidance on issues to be considered in evaluating economic rationales for DTI policies and programmes. Part I provides some preliminary economic argument, and a summary discussion of key issues relating to identification of appropriate rationales, targets and classification of outcomes. Part II provides an application of "Green Book" guidance on the main types of market failure rationales which have been identified in DTI evaluations, with references to selected examples of evaluations in which they were considered.***

## *Part 1: Some preliminary economic argument*

***(by John Barber)***

DTI has defined **competitiveness** as "the degree to which a country can, under free and fair markets, produce goods and services which meet the test of international markets, while simultaneously maintaining and expanding the real incomes of its people over the long term." More generally it is the ability to sustain the level and growth of consumption per head over the long term while satisfying all economic constraints(in formal terms maximise the integral of consumption over time while bequeathing an appropriate end period capital stock).

The types of economic efficiency are involved:

**X-efficiency** is the efficiency with which a given amount of resources are used. It depends on the efficiency which with firms and non profit organisations(NPOs including Government) use resources.

**Allocative efficiency** is the efficiency with which resources are allocate to particular uses. It depends on:

?? The effectiveness of market processes i.e. the completeness of markets and the efficiency with which they operate;

?? The effectiveness of the internal resource allocation processes of firms and NPOs;

?? The performance of institutions(both NPOs and intangible institutions(laws, regulations, customs, practices, attitudes and culture).

**Dynamic efficiency** reflects the effectiveness with which the economy can grow. Unlike X-efficiency and Allocative Efficiency it cannot be formally defined except using very abstract models which fail to capture many of the key elements of economic growth in the real World. It is however the main driver of long term competitiveness.

Dynamic efficiency will depend on the strategies of firms and the effectiveness with which these strategies are implemented, the performance of NPOs, the conduciveness of intangible institutions to economic growth as well as on the extent of allocative and X-efficiency. The performance of these elements should be seen from a systems point of view. According to the OECD this means that they may be more than one successful configuration or in other words what may work in one country may not be appropriate in another.

Innovation is the main determinant of the rate of growth of output per head. Innovation is a process involving discovery under conditions of uncertainty, is path dependent in the sense that today's innovations condition what may be possible tomorrow and in the short run at least is an inherently wasteful process involving failed experiments. For this reason there is a short term trade-off between X-efficiency and dynamic efficiency.

A key determinant of innovation is the willingness of customers - consumers, other businesses, government and other NPOs to buy novel products and services and when necessary to collaborate with producers in their development. Thus nature as well as the growth of demand play a key role in dynamic efficiency, growth and long term competitiveness. Ability to enter foreign markets and exploit foreign demand is a key element of this.

Productivity depends in the short term on X-efficiency and allocative efficiency but in the long term on dynamic efficiency.

**A framework for Business Support Strategy and Comparison of Evaluations**

Against this background we need to decide how to target and classify our business support policies. This in turn will lead on to a common framework for comparing the results of evaluations. The strategic framework which we use to allocate resources to business support programmes and the framework which we use to compare evaluations need to be consistent since the main purpose of the latter is to support the former.

Although at the margin all business support programmes are competing for scarce funds the systems approach makes clear that the performance of a firm, sector or economy while depend on combinations of factors each of which needs to be present to some degree. Thus different business support programmes are frequently complementary in their effects. For example the pay-off from helping firms sell abroad may depend on how far we help them develop high quality innovative products which foreigners will buy.

The framework sketched out below is an amalgam of neo-classical and evolutionary economics, competencies and transactions costs theories of the firm, institutional economics, game theory, recent research into the economics of science technology and innovation as well as the management literature. Relevant authors include Porter, Teece, Kay, Nelson, Metcalfe, Pavitt, Martin, North, Arrow, Hahn, Debreu, Williamson, Coase, Von Neumann, Sutton, Solow, Chandler and Schumpeter amongst others. A suitable macro-economic framework is taken for granted although there are sometimes clashes between support for business and industry on the one hand and monetary and fiscal policy on the other. There are also issues ignored here concerning the influence of the long term propensity to save and the economic growth rate.

**A framework for Business Support and Comparing Evaluation Results**

The main elements which a business support strategy should address are as follows:

**1. Competencies of Firms**

**a) Capital/Stocks**

Quality and quantity of fixed capital stock.
Knowledge base including knowledge of S&T(which may be generic or firm- specific, codified or tacit) and effective use of business processes.
Organisation.
Human Capital particular that part which is firm specific and cannot be easily be acquired via the labour market.
Market position and reputation(which may be different in the different markets in which the firm operates).
External linkages to customers, suppliers, HEIs, RTOs, etc.
Strategy and business culture.

**b) Processes**

Internal networking and incentives(together with organisation this is what Kay calls ‘architecture’).
Management processes
Procedures for allocating resources to fixed investment, R&D, training etc.
Marketing.
Production.

Undertaking Innovation(including R&D, software development and similar development of new technology) & Design.
Logistics.
Purchasing.

**2. Availability of Resources** (which firms can use or acquire from elsewhere**)**

Land
Labour particularly skilled labour
Capital
The stock of codified non firm specific scientific, technological and business knowledge including the Science and Engineering Base(SEB).
Physical Infrastructure.
Entrepreneurs

**3. Operation of Markets and Networks**

Markets facilitate transactions between firms and between firms and their customers, suppliers, potential employees and investors. They be inefficient(market failure) or simply non-existent(missing markets). They may be competitive i.e. conducive to efficiency or innovation by firms or not. **Measurement, Product Specification, Health and Safety and Employment standards** together with **Consumer Protection** and improve the workings of markets and reduce transactions costs. The **IPR system** allows innovators to capture more of the benefits of their efforts. Environmental Standards similarly internalise externalities and correct for missing markets. All make markets work better as can encourage innovation.

Networks may operate in parallel with markets(e.g. supply chains, Kanban) to exchange information to mutual benefit or may operate where markets are absent altogether(informal exchange of information, networks of Business Angels). In the knowledge driven economy networking between firms and external sources of S&T knowledge play an important role.

A particular form of networking is collaboration between firms and between firms and HEIs/RTOs to undertake activities such as R&D.

**4. Enterprise**

A key factor which arises at the interface between Resources and Markets/Networks is the ease or difficult with which new firms can be created and their nurturing during the initial period of their existence.

**5. The effectiveness of Institutions (including Government)**

Institutions take a variety of forms:

?? NPOs such as Universities, Schools, Health Authorities(important purchasers of drugs and equipment, Chambers of Commerce, Trade Associations, RTOs(some of which of course are profit seeking businesses), Local Authorities, Government Departments etc.

?? A whole raft of Laws, Regulations, Corporate taxation, Business Practices(e.g. accounting practices) and Standards(also mentioned under Markets/Networks above) and public policy. Confidence in the process by which these are determined may have a significant effect;

?? Attitudes, customs, habits, tastes and business and national culture.

Institutions are often created in response to market failure either by Government, by co-operation between private organisations and individuals or evolved through experience and long usage(von Hayek).

A particular issue which arises at the conjunction between those firms which make a business out of providing business and S&T advice, the operation of markets and networks in making such advice available and the operation of various NPOs is the effectiveness of the **Business** and **S&T Support Infrastructures.**

## 6. The role of Demand in encouraging Innovation, Enterprise and Growth

Domestically this is determined by the innovation strategy and performance of firms - innovating firms act as customers for the innovative products of their suppliers and attitudes of consumers and NPOs including the organs of government. Both Laws, regulations standards etc. and Attitudes customs etc. have a significant effect on the demand for innovative products.

Access to foreign markets plus their growth and willingness to accept new products plays a vital role in growth and innovation and is an important determinant of consumption and living standards via the terms of trade. Overseas business practices and public policies will determine whether UK firms can export abroad and invest freely in other countries.

**TESE**
**February 2000**

# *Part 2: Application of Green Book Guidance*

*Note: This section is based on guidance in the HMT "Green Book" - "Appraisal and Evaluation in Central Government", The Stationary Office, 1997. See References in Annex E below.*

Rationales for government intervention will typically involve justifying an activity in terms of its expected impact on economic performance, or in terms of some other stated objective of government policy, or some combination of the two. A distinction is usually made between the two types of objectives when formulating a rationale for an activity, and account has to be taken of uncertainties about linkages between non-economic and economic objectives.

Establishing an economic rationale involves identifying good grounds for believing that an activity is likely to generate supply side benefits which will enhance the sustainable level of real national income over time. For example, an activity might increase the efficiency of resource allocation in factor or product markets, ease a supply constraint, or promote a new technology with general applications.

The specific source(s) of market failure, which prevent the private sector from achieving the benefits without government involvement, have to be explained. This generally involves presenting some supporting analysis of the workings of the particular market in question, including specifying the available source of relevant empirical evidence. There are occasions where we can observe market failure directly e.g. survey can reveal inadequate information or lack of a variety of products on offer. However often we can observe only the symptoms e.g. polluted rivers (indicating externalities) or high prices and poor standards of service (indicating barriers to entry and exit).

Some of the sources of market failure are set out below. These have been classified so as to conform with the categories used in the Key evaluation Information forms that evaluators must complete(see Annex E for Evaluation
Proforma).

**1. Externalities/Spillovers**

Externalities occur where the actions of an individual or firm confer benefits or costs on others without being able to reap corresponding rewards or compensation. Almost all economic activities generate externalities, so it is necessary to restrict the case for intervention to where specific, substantial externalities can be identified. Where there are benefits to the nation but not to the firm, firms may not undertake the activity or at least not in the appropriate form.

Examples of externalities include training and technology spillovers, and environmental improvement programmes. Consideration should be given to the available scope for working with the grain of market incentives by possible measures to enable the externalities to be "internalised"; for example, in many circumstances the most appropriate solution may be to change relevant property rights to internalise the externality.

**2. Collaboration/Co-ordination failure**

In some circumstances markets may fail to realise potential benefits because of difficulties in reaching agreement about how potential benefits of the collaborative effort will be shared, or about how transactions costs or other costs of collaboration will be allocated. For example see;

***Evaluation of DTI Funded Research Projects at Research and Technology Organisations* (May 1997)**: This report examines market failures relating to barriers to collaborative research, wider benefits (externalities) and inability to spread risk appropriately.

**3.Public goods/Free rider problems**

These are goods and services whose consumption by one firm or individual does not preclude their use by others. Thus public goods are those which are non-rival in consumption and imperfectly excludable. These conditions give rise to "free rider" problems, and the market will produce an inefficiently low level of output. Education and training programmes have public good aspects. One response may be to attempt to make the good excludable but exclusion may not be efficient if the marginal cost to additional users is negligible. A more effective solution is to facilitate collaboration - or providing an institutional mechanism for such collaboration. For instance consider the role of Government in developing the aligned series of international trade documentation: the standard specifications involved are a "public good", from which exclusion would be highly undesirable.

**4. Lack of awareness/underestimated benefits**

***a)*** **Imperfect Market for Information**: In some markets information has the character of a public good, both in that giving information to additional users does not reduce the amount that others have, and in that the marginal cost of producing that information may be negligible. Technology Diffusion Programmes are an example of policy responses to this market failure. Market place efficiency requires, inter alia, that the cost of access to market related information and market transparency mechanisms should not exceed the marginal cost of provision, and that access to market places and information sources is not hindered by institutional, legal, or other barriers.

Markets only work efficiently if potential buyers and sellers of goods and services have enough of the right kinds of information to make sound decisions about doing business with each other. Uncertainty can often be reduced by acquiring further information, but the optimal level of information acquisition must take full account of the search costs involved. In addition the provision of information on a commercial basis faces the difficulty that firms, particularly small ones, are reluctant to purchase information unless they know what it is worth to them by which stage the supplier will have in effect given it away. Problems may also arise because of the limitations on capacity to identify which information is relevant to particular business decisions, or how or where to access it, or poor information search skills.

***Evaluation of the Export Marketing Research Scheme*** **(1996)**: Examines market failures relating to under-estimated benefits of export marketing research and low levels of associated research skills, and risk and free rider problems affecting Trade Association willingness to undertake export marketing research.

**Business Links - Value for Money Evaluation (October 1998)**: The evaluation confirms the view that in the absence of Business Links small firms do not make best use of support services because there is a market failure in the demand and supply side of the market and because there is an institutional failure in supply of publicly supported services. The market failure arises because the returns to potential users are uncertain and difficult to quantify, and because the quality of support is uncertain. In addition, even when the returns and quality of support are more certain, some small firms are genuinely unable to meet the cost of private provision.

***b)*** **Information asymmetries and capital market inefficiencies**. A potential borrower of funds knows more about the nature of the venture that they are seeking funds for, than the potential lenders, or a supplier knows more about the quality of his product than does the potential buyer. The difficulties of assigning risks due to information asymmetries may hamper the efficient working of the market place(see SFLGS evaluation below) and lead to credit rationing. There may be a case for intervention if there is insufficient competition among finance providers so that they are able to earn excess returns on lower risk investments and so avoid higher risk projects. Insufficient competition among finance providers also reduces the incentives to acquire the information and expertise needed to appraise more unusual investment projects, such as those which use novel technologies. This may result in financiers avoiding such investments, or requiring inefficiently short pay-back periods. This provides a case for some R & D support programmes.

***Evaluation of the Small Firms Loan Guarantee System*** (**March 1999**): The evaluation shows that it is difficult for small firms without collateral or a track record to obtain finance (capital market failure) as the costs of appraising and monitoring an investment will be high in proportion to the size of the loan. Financial institutions are reluctant to raise interest rates sufficiently to clear the market and hence demand exceeds supply and credit rationing occurs.

**5. Inefficient Market Structures and Barriers to Entry**

The level of competition in a market may be too low to lead to an efficient use of resources. The following factors can give rise to entry barriers: absolute cost advantages; economies of scale; and product differentiation. Absolute cost advantages can be permanent e.g. where a firm or group of firms control access to a key input, or temporary e.g. possession of a key patent or knowledge assets which can only be created through learning by doing). In addition sunk costs, by acting as a barrier to exit can deter entry. This situation may well be exacerbated through strategic behavior on the part of incumbent firms e.g. by investing in excess capacity or through predatory pricing policy. In general situations where competition is inadequate are matters for the competition policy authorities though they may sometimes be implications for other areas of policy towards industry.

Where market processes adjust too slowly then intervention may be justified, e.g. where there is evidence that markets are stuck in inefficient paths or procedures, e.g. a 'low skills equilibrium trap', or deficient channels for dissemination of ideas, information and best practice, etc. Appropriate types of solution can include reducing search costs by addressing information problems, and/or activities designed to increase the supply of relevant entrepreneurial competencies in the economy, sector or region.

***Evaluation of the Carrier Technology Programme*** **(March 1998):** Examines market failure resulting from blocked channels of communication between sources of technology and applications outside established routes.

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## *ANNEX D: Costing the Evaluation*

1. For internal members of staff the resource cost is usually calculated using £55,000 as the average annual cost irrespective of seniority of staff employed. For evaluations conducted solely using internal resources 0.5 man years is the usual assumption for completion of the evaluation. In reality evaluators are engaged on a number of tasks so that the elapsed time may be greater than this. Similarly it must be remembered that even managing an external project requires considerable resources especially at the procurement stage. Care must be taken to comply with procurement standards as failure to do so can result in lengthy disputes with contractors.

2. Where external consultants are being used they usually cost on the basis of daily rates. These rates differ according to whether they are academic, management consultancy firms or small consultancy firms. They also vary according to the mix of experience of the consultants employed on the study. This variations make it extremely difficult to be precise about the cost of the study but you should be able to get an idea of the range of likely costs and have some idea of the likely resources in terms of days you expect to be spent on the project. The Box below shows the cost elements which would normally be expected in a tender document submitted by consultants.

| ***Elements*** | **Days** | **Cost** |
|---|---|---|
| Start-Up | | |
| Literature Review | | |
| Survey Design | | |
| Survey | | |
| Interviews | | |
| Analysis of Survey Results | | |
| Administrative Costs | | |
| Travel Expenses | | |
| Report Writing | | |
| Presentations/Proofing | | |

# *ANNEX E: References*


## ***Research Methodology***

Handbook of Applied Social Research Methods; Leonard Bickman and Debra Rog, editors; 1998; Sage Publications

## ***Evaluation***

Appraisal and Evaluation in Central Government, "The Green Book"- HM Treasury , The Stationary Office, 1997

Policy Evaluation: A Guide to Managers, HMSO, 1988

The Evaluation of Support Programmes: The Example of the United Kingdom, M Bradbury & M Davies, OECD STI Review No.21 1998

Evaluation - Concrete Steps Towards Best Practice Across the EC Commission- Internal Document, copies available from ES Central Evaluation Team.

Microeconomics, Chapter 18, H Gravelle & R Rees, Longman, 2nd Edition 1997.

The Economic Impact of the North of England Open Air Museum at Beamish, P Johnson & B Thomas, Edward Elgar Publishing Limited, 1992.

Assessment of SME Policies: An Analytical Framework, January 1999 available on OLIS; DSTI/IND/PME(98)2/REV1

"Evaluation Strategies for Communicating and Reporting: Enhancing Learning in Organisations"; Rosalie T. Torres, Hallie S. Preskill, and Mary E. Piontek; 1996; Sage Publications

"Evaluation for the 21st Century: A Handbook"; Eleanor Chelimsky and William R. Shadish, editors; 1997; Sage Publications

"Impact Analysis for Program Evaluation"; Lawrence B. Mohr; 1995; Sage Publications

"Evaluating Technology Programs: Tools and Methods"; Luke Georghiou and David Roessner; June 1999. Unpublished paper.

"Six Steps to Heaven: Evaluating the Impact of Public Policies to Support Small Businesses in Developed Economies"; David Storey; September 1998; Centre for Small and Medium Sized Enterpriese, Warwick Business School; Working Paper No. 59.

" An Evaluation of Sector Sponsorship Activities of the Engineering Industries Directorates in the Department of Trade and Industry: Final Report"; Heather Booth di Giovanni; August 1999. Available from the Central Evaluation Team.

## ***Surveys***

Guide to Best Practice, available from Survey Control Unit, DTI

Survey Methods in Social Investigation, C.A. Moser and G. Kalton, 2nd edition, Dartmouth Publishing Company Limited, 1996

## ***Departmental Guidance***

DTI Finance Handbook - currently being updated, new version to be
placed on Madarin when completed.

Guidance on the Preparation of Evaluation Summaries (Prepared by ES Central Evaluation Team) is also available on Mandrin.

Innovation Budget Guidelines - available from TS Assessment Unit.

Guidance Note on Additionality, Deadweight and Displacement. Available from ES Central Evaluation Team

DTI & DfEE: “Impact Assessment: Guidance Notes for TECs and Business Links; Part 1: What to Collect”; by QED for DTI and DfEE; First Edition March 1998. Available from ES Central Evaluation Team.