

**Department of Finance**

**Guidelines for the Appraisal and  
Management of Capital  
Expenditure Proposals in the  
Public Sector**

**January 2005**



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## Preface

### **Role of Government and Ministers in relation to the appraisal and management of public investment.**

The Government have collective responsibility for formulating overall budgetary policy. Within this overall framework, Government agrees the annual aggregate and Departmental Vote levels of expenditure, including capital expenditure, which should be submitted for Dáil approval. The Government also approves the 5year rolling multi-annual capital investment envelopes. Ministers and their Departments have extensive delegated sanction from the Minister for Finance in relation to capital allocations, although the specific approval of the Minister for Finance or Government may be required in some instances.

These guidelines are intended to assist Ministers and their officials in carrying out their responsibilities and functions in regard to the evaluation, approval and management of capital expenditure, particularly within the context of the new multi-annual investment framework announced in Budget 2004. Programme evaluation and project appraisal are aids to inform decision making. They do not constitute final decisions in themselves.

In arriving at policy decisions on either investment programmes or individual projects, Ministers have to take all relevant factors into account – the economic costs and benefits associated with programmes or projects are not the only relevant factors. For example, some social or public good expenditure may have little or no economic impact e.g. the purchase of a national heritage site.

Nothing in these guidelines should therefore be taken as precluding Government or Ministers under the delegated sanction arrangements set down by the Minister for Finance from deciding to approve projects independent of the detailed application of these guidelines. Such decisions still require Departments to ensure that best practice as regards public financial procedures generally in terms of ensuring that necessary terms and conditions are applied to secure full accountability and transparency for the funds concerned.



# Introduction

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1. These guidelines update and replace the Department of Finance “Guidelines for the Appraisal and Management of Capital Expenditure Proposals in the Public Sector” – published in July, 1994. These guidelines have been revised to:

- (i) reflect changes in evaluation, project appraisal and management best practice,
- (ii) introduce more proportionality and greater consistency in project appraisal and management while maintaining a rigorous approach,
- (iii) provide for more clarity and greater understanding in relation to the roles of all those involved in approving capital expenditure, including Government and Ministers.

2. Proposals for public sector investment invariably exceed the resources available. Choice and priority setting are inescapable. The systematic appraisal and professional management of all capital projects helps to ensure that the best choices are made and that the best value for money is obtained.

The appraisal of projects generally occurs in the context of a multi-annual investment programme. Project appraisal, for example, in the transport sector must take account of their route and network effects and this should be reflected by Departments and agencies in their arrangements for the implementation of these guidelines. These guidelines contain new provisions in regard to programme/project evaluation and management which are designed to strengthen arrangements in this regard.

It is not enough to be satisfied that investment is justified; it is also necessary to ensure that it produces its planned benefits at minimum costs. This cost includes the ongoing current costs generated by the use of capital asset, as well as the initial capital cost.

3. This guide aims to assist public sector managers dealing with capital projects. In the case of Public Private Partnership (PPP) projects, these guidelines complement the separate interim guidelines on PPPs issued by the Department of Finance. It is not a detailed planning and cost control hand book. It sets out the main steps which should be followed in evaluating and managing capital expenditure projects, considers the major issues of principle involved, and describes the principal methods of appraisal. The type and depth of appraisal depend on the size and nature of the project and should be proportionate to its anticipated scale. The resources to be spent on appraisal should be commensurate with the likely range of cost of the project, the nature of the project and with the degree of complexity of the issues involved.

4. The four stages of project appraisal and management (set out in Figure 1) are:

**1. Appraisal**

*(i) Preliminary Appraisal*

This aims to assess if the project has sufficient merit to justify a full, detailed appraisal.

(ii) *Detailed Appraisal*

This aims to provide a basis for a decision on whether to drop a project or to approve it in principle.

**2. Planning/Approval**

This involves detailed planning and costing of the project; no commitment to finance a project should be made until this stage is completed and a decision taken on whether to proceed is taken.

**3. Implementation**

This requires clear arrangements for monitoring progress and cost control, securing project standards and timely delivery.

**4. Post-Project Review**

A review to confirm whether project objectives have been met, the project has been delivered to required standard, on time and within budget and to ensure that experience gained can be used on other projects and possibly in the continued use of the new asset.

The successive stages should follow a realistic time schedule and have clear starting and finishing points. The appraisal and planning stages may overlap. Good detailed appraisal will require some design and planning work. Decision-making takes time and allowance should be made for this in time schedules.

**Responsibility for Systems**

5. It is the responsibility of each Sanctioning Authority to draw up its own procedures, applicable to its area of control. These procedures should comply with the principles set out in this document. Each Sanctioning Authority should also ensure that bodies under its aegis follow the procedures laid down by it. If there is an intermediary body between the Sanctioning Authority and the Sponsoring Agency it is the responsibility of the Sanctioning Authority to define clearly the roles and responsibilities of any such intermediary bodies in regard to programme/ project appraisal and management consistent with these guidelines.

All Government Departments and public bodies (semi State bodies, local authorities and health agencies, etc.) and all bodies in receipt of public funding for capital purposes must comply, as appropriate, with the relevant requirements of these guidelines. In the case of State Companies the Board of each company must satisfy itself annually that the Company is in full compliance with these guidelines. Each Sanctioning Authority is responsible for ensuring that the arrangements and procedures for the management and appraisal of capital programmes and projects in their area are consistent with these guidelines. **The general conditions of sanction applying to capital expenditure funded under the multi-annual capital envelopes are set out in Appendix 3.**



## **Scope of Guidelines**

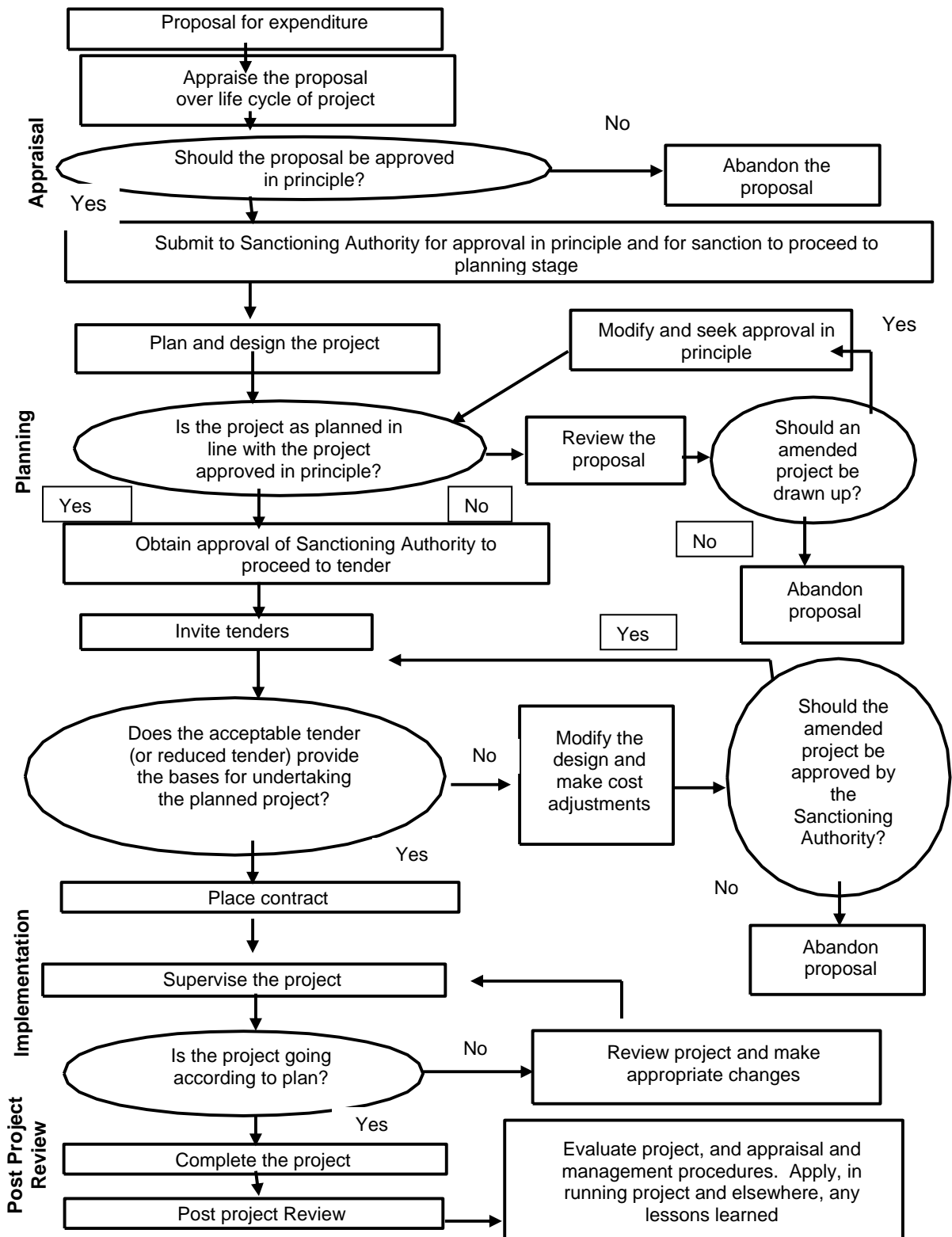
6. The project appraisal and sanctioning requirements referred to in these Guidelines should be applied to all forms of capital expenditure, including direct purchase of assets, purchase or acquisition of shareholdings. They should be applied irrespective of how asset acquisition is financed e.g. through sale and leaseback. The requirements also apply where the use of major capital assets is obtained through current payments e.g. rental or charter. The Department of Finance's guidelines for Public Private Partnerships (PPP) provide more detail on how some aspects of these guidelines should be applied to PPP projects.

## **Capital Grants to non-Governmental bodies**

7. Separate guidelines will issue at a later date in relation to capital grants to non-Governmental bodies.

In the interim, Departments should ensure that the award of such grants fully accords with best practice as regards public financial procedures generally in terms of ensuring that necessary terms and conditions are applied to secure full accountability and transparency for the funds concerned. As required under the conditions of sanction to expenditure under the multi-annual capital envelopes Departments and agencies must have appropriate contractual arrangements in place to protect the State's interest in such projects, including in the event of a change in ownership or sale of such assets.

**Figure 1: OVERVIEW OF THE PROJECT APPRAISAL AND MANAGEMENT PROCESS<sup>1</sup>**



<sup>1</sup> Note: This diagram applies to traditional works contracts. Following approval of the project responsibility for the implementation stage will normally rest with the contractor for Design and Build and PPP type contracts.

# 1 Appraisal Stage

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## Evaluation of Programmes

1.1 Programmes with an annual value in excess of €50 million and of 5 years or more duration to be subject to prior and mid-term evaluation at the beginning and mid point of each 5 year cycle or as may be agreed with the Department of Finance.

Programme Evaluation should consider five key questions:

1. **Rationale** -What is the justification or rationale for the policies underpinning the programme? What is the underlying market failure justification for Government intervention?
2. **Relevance** – What are the implications for the programme of changes in the wider socio-economic environment and in the context of overall Government policy?
3. **Effectiveness** – Is the programme meeting its financial and physical objectives?
4. **Efficiency** – Could more be achieved for the resources invested?
5. **Impact** – What socio-economic changes can be attributed to the programme

Most projects will be considered in the context of a sponsoring agency's business plan or a multi-annual investment programme. The Sanctioning Authority should ensure that there is adequate consultation between sponsoring agencies, relevant Departments and public bodies having functional responsibilities in the sector or cross-sectoral responsibilities.

## Appraisal of Capital Projects

1.2 Projects, whether they are part of a programme or not should be appraised. The appraisal stage normally involves two separate tasks, preliminary and detailed appraisal. However, for (i) minor projects with an estimated cost below €0.5 million, such as projects involving minor refurbishment works, fit outs etc. and (ii) projects between €0.5 million and €5 million a simple assessment and a single appraisal incorporating elements of a preliminary and detailed appraisal respectively will suffice.

The preliminary appraisal aims to establish whether a sufficiently good prima facie case exists for considering a project in depth. It leads to a recommendation on whether to proceed to the detailed appraisal stage (often a costly exercise).

The option of procuring the project by PPP for projects costing over €20 million should be considered by the sponsoring agency as a part of the project appraisal. The Department of Finance's separate Guidelines on Public Private Partnerships should be followed in considering the PPP option.

A detailed appraisal should only be carried out if justified by the outcome of the preliminary appraisal. Detailed appraisal leads to a recommendation on whether to approve a project in principle.

All public capital projects should be appraised carefully for:

- consistency with programme/policy objectives;

- value for money (<sup>2</sup>taking account of deadweight and <sup>3</sup>displacement).

The sponsoring agency is required to seek the advice of the National Development Finance Agency (NDFA) on all projects above €20 million and should do so at appraisal stage and in any event no later than before tender documents are finalised. The Agency's statutory functions include advising public bodies on the optimum means of financing the cost of public investment projects to achieve value for money and providing advice in relation to all aspects of financing, refinancing and insurance including risk analysis of public investment projects.

### **Avoiding Premature Commitments**

1.3 All involved in the appraisal and management of expenditure proposals should guard against the danger that when a project is mooted, it is given a premature commitment. This must be avoided. A sequence of considered decisions generally will lead to progressively greater commitment of resources, but an irrevocable commitment to a proposal should only be made after all appraisal stages have been satisfactorily passed, and final approval obtained. **Where necessary, Departments and public bodies should be prepared at any stage, despite costs having been incurred in appraising, planning and developing a project, to abandon it if, on balance, continuation would not represent value for money.**

### **Responsibilities**

1.4 Appraisal involves both the Sponsoring Agency and the Sanctioning Authority (see Figure 2) being clear about the objectives a project aims to meet and consideration of all the options open to the Sponsoring Agency in meeting these objectives. See examples at Figure 2. The Sponsoring Agency should, in making a proposal to the Sanctioning Authority for decision, cover all realistic options, with a statement of their costs and benefits, and make a recommendation on the most cost effective solution(s). Where possible, objectives should be quantified so as to facilitate comparison with outturns later.

### **Sponsoring Agency**

1.5 The Sponsoring Agency has the overall responsibility for proper planning and management of projects. The Sponsoring Agency must obtain the necessary approvals of the Sanctioning Authority and ensure that the project proceeds along the lines approved by the Sanctioning Authority. Where the Office of Public Works (OPW) is undertaking a project in response to a request from a Government Department/Office it is the responsibility of the relevant Government Department/Office to complete the project appraisal and to secure the approval of the Sanctioning Authority before involving the OPW in the planning and implementation stages.

The Sponsoring Agency may be a Government Department, local authority, health agency or other State body or agency. All capital projects being sponsored by a State company must be

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<sup>2</sup> Deadweight: might the facility proceed anyway in the absence of public funding?

<sup>3</sup> Displacement: To what extent might the project simply displace similar facilities or activities?

specifically approved by the Board of the company or, by management in accordance with any delegated authority from the Board, before its submission to the sanctioning authority.

If a subsidiary company or agency is set up specially to undertake a project, it is important that the responsibilities of the parent body are not diluted.

In the case of a PPP project, the Sponsoring Agency is the public body or agency sponsoring the project, subject to subsequent assignment of responsibilities under PPP contractual arrangements.

## **Sanctioning Authority**

1.6 The **Sanctioning Authority** is normally the Government Minister or Department or public body with sectoral responsibility for implementing Government policy and for providing public financial assistance for capital programmes and projects in the relevant sector. In the case of major projects the sanctioning authority may be the Government. The sanctioning authority is responsible for approving in principle the capital projects (public or private) to be funded with public assistance and the conditions under which a project may proceed through the stages of development to ultimately becoming fully operational. It is also responsible for paying the public assistance to the Sponsoring Agency and for ensuring the project's delivery as approved.

In some instances the sponsoring and the sanctioning authority in relation to individual projects may be the same body e.g. the National Roads Authority, non-Exchequer funded commercial State Companies. All such projects will, however, be part of a multi-annual programme or business plan which will have been appraised by a parent Department and/or Board of the company.

## **Scale of Appraisal**

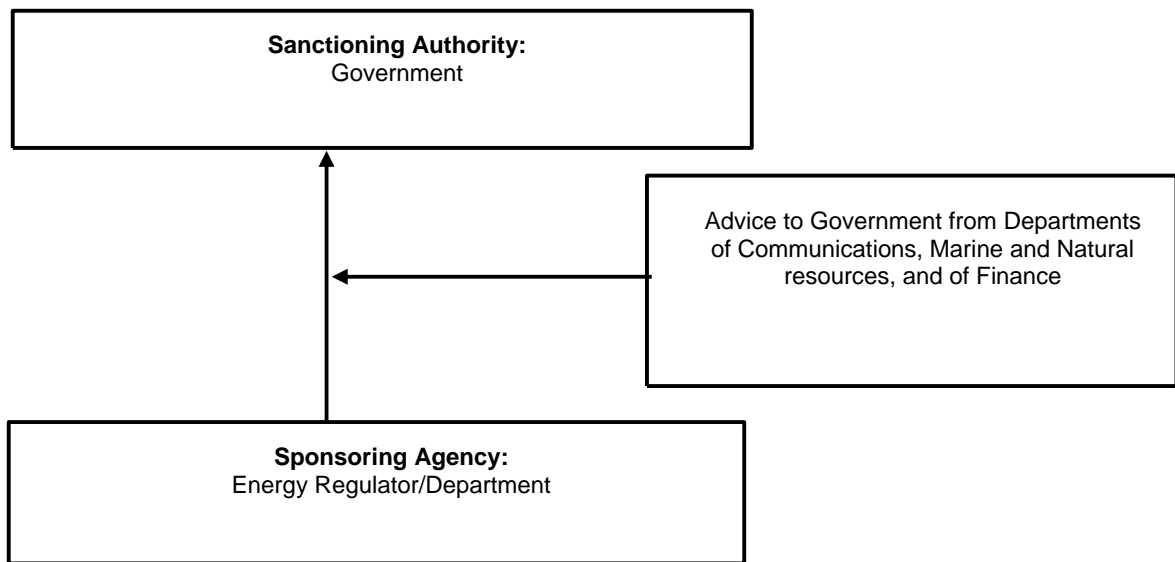
1.7 Every capital spending proposal should be appraised carefully. However, the resources spent on appraisal should be commensurate with the cost of projects, and with the degree of complexity of the issues involved. Small and routine projects should be appraised with a readily applicable methodology which is used consistently and which reflects the principles set out in this document.

- (i) A simple assessment will be carried out for minor projects with an estimated cost below €0.5 million, such as projects involving minor refurbishment works, fit outs etc.
- (ii) Projects costing between €0.5 million and €5 million should be subject to a single appraisal incorporating elements of a preliminary and detailed appraisal.
- (iii) A Multi Criteria Analysis (MCA) should be carried out (See Appendix 1 for details) at minimum for projects between €5 million and €50 million.
- (iv) Projects over €50 million should have a Cost Benefit Analysis (CBA) carried out (See Appendix 1 for details).
- (v) A CBA would also be appropriate for innovative projects costing above €5 million which
  - involve complex or specialised issues or untried technology; **or**

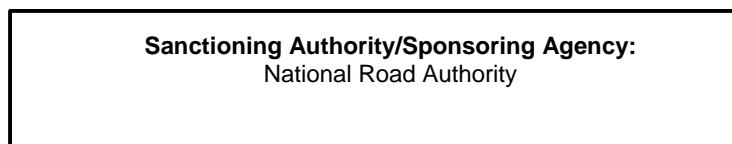
- involve issues which have not been previously investigated in-depth; **or**
- are regarded as pilot projects on which larger programmes may be modeled; **or**
- would generate additional substantial ongoing operating or maintenance costs.

**Figure 2: SANCTIONING AUTHORITY AND SPONSORING AGENCY EXAMPLES**

**Example 1: Electricity Interconnector**



**Example 2: National Roads Developments**



## **Proposals made by bodies other than those responsible for their implementation.**

1.8 Proposals may be initiated by bodies other than those which will be responsible for them. Submissions and research documentation coming from such sources may provide some of the information required for a preliminary appraisal. However, the Sponsoring Agency must satisfy itself that such information is accurate and objective.

### **Preliminary Appraisal**

1.9 A preliminary appraisal should be undertaken by the Sponsoring Agency. It involves an initial specification of the nature and objectives of the project and of relevant background circumstances (economic, social, legal, etc.). The reasons why it is thought that public resources should be committed should be set out, having regard to what the private sector is doing or might be willing to do, independently or with State participation or encouragement.

### **Format of Preliminary Appraisal**

A preliminary appraisal should include a clear statement of the needs which a project is designed to meet and the degree to which it would aim to meet them. It should identify all realistic options, including the option of doing nothing and, where possible, quantify the key elements of all options. It should contain a preliminary (a comprehensive analysis of costs and benefits would be undertaken at detailed appraisal stage if it is decided to proceed) assessment of the costs (particularly financial costs) and benefits of all options, choose the preferred one, and make a judgement on whether its benefits are sufficient to warrant incurring its costs.

### **Decision on foot of Preliminary Appraisal**

On the basis of the preliminary appraisal, the Sponsoring Agency should decide whether formulating and assessing a detailed appraisal would be worthwhile or whether to drop the project. A recommendation to undertake a detailed appraisal should state the terms of reference of that appraisal. If significant staff resources or other costs would be involved in detailed appraisal, the prior approval of the Sanctioning Authority thereto should be sought.

### **Detailed Appraisal**

1.10 Detailed appraisal serves four very important functions:

- it provides the Sponsoring Agency with a basis for deciding whether it wishes to proceed further with the project;
- it provides the Sanctioning Authority with a basis for deciding whether to approve the proposal in principle, or to reject it;

- it serves as the basic reference document against which to assess the effects of changes that may occur during the development of the project (see Section 2.7 to 2.9 and 3.4); and
- Similarly, it ensures an evaluation of the project after completion (see Section 4).

### **Detailed Appraisal: A Summary Checklist**

The appraisal and planning stage will overlap considerably. In reality, it is very difficult to carry out a detailed appraisal unless some planning and/or initial design work has been done.

Detailed appraisal by the Sponsoring Agency should follow the general approach in the checklist below (This is described in greater detail in Appendix 1):

- (i) define clearly the **needs the project should meet, and its objective** i.e. what the needs to be met are; and what is the planned scale on which those needs will be met, measured as precisely as possible;
- (ii) list the **options** i.e. realistic alternative ways in which the objective can be achieved; include the option of doing nothing, or consider whether an objective could be met by ways other than capital spending;
- (iii) list the **constraints**;
- (iv) The Sponsoring Agency is required to seek the advice of the NDFA on all projects above €20 million and should do so at preliminary appraisal stage and in any event no later than before tender documents are finalised. The Agency's statutory functions include advising public bodies on the optimum means of financing the cost of public investment projects to achieve value for money and providing advice in relation to all aspects of financing, refinancing and insurance including risk analysis of public investment projects.
- (v) quantify financial **costs**, and specify sources of funding. Cost quantification should cover ongoing capital and life cycle costs relating to the operation and maintenance of the project, and receipts generated by the use of capital assets, as well as the costs involved in their creation. The cost of the project should be the expected outturn cost, including construction costs, property acquisition, risk and contingency. The cost of possible future price increases and variations in project outputs should be factored into the calculation of project costs.
- (vi) **analyse the main options** i.e. value and quantify the costs, and benefits of each option. Types of analysis are:
  - multi-criteria analysis (MCA)
  - financial analysis
  - cost benefit analysis
  - cost effectiveness analysis



➤ Exchequer cash flow analysis

Different forms of analysis provide different kinds of information about investment proposals, and it is important to identify clearly, and to agree with the Sanctioning Authority, which forms of analysis are appropriate.

(vii) identify the **risks** associated with each option, the potential impact on the options of adverse circumstances and draw up, if possible, a strategy for dealing with risks.

(viii) decide on the preferred option, specify it, and a clear and detailed **time profile** for actions, (including time for planning and decision making) and for expenditure. Excessively high quality and cost specifications should be avoided. A balance must be struck between specifications which are excessive relative to needs and low quality specifications which may generate short-term economies but which lead to greater costs in the long-run;

(ix) the Sponsoring Agency should recommend the preferred option - with reasons for its choice and an indication of its sensitivity to changes in key assumptions - for consideration and approval by the Sanctioning Authority.

## **Uncertainty and Risk**

Important aspects of an appraisal will necessarily be based on assumed future outcomes and events. **Realistic** assumptions must be made about future prices, costs, market growth, and other relevant factors. Appraisal reports should always clearly state their assumptions. Over-optimism should be avoided. Assumptions should be based on analysis of past performance, bad years as well as good and careful study of possible future developments.

Realistic assumptions reduce, but cannot eliminate, the element of uncertainty in the decision-making process, and the risk that decisions made on the basis of the analyses may turn out to be wrong. Good project appraisal highlights the elements which are uncertain, so that the Sponsoring Agency and the Sanctioning Authority are aware of the risks involved in proceeding, or not proceeding, with any proposal.

Suitable strategies to minimise risk, and its consequences, should be put in place e.g. in project management organisation, review procedures, information flows, etc. An appropriate level of contingency should be built into the costings.

## **Sensitivity Analysis**

Sensitivity analysis should always form a part of the appraisal of major projects. This involves evaluating proposals over a range of assumptions about key factors (e.g. prices, costs, interest rates on any borrowed funds, growth rates, demographic changes). If an option yields acceptable results only with particular combinations of circumstances, and the results are very sensitive to variations in these circumstances, then it should probably not be

undertaken. If the relative merits of options change with variations in the assumed values of variables, those values should be examined to see whether they can be made more reliable. It may be possible to attach probabilities to ranges of values, to help pick the best option.

## **EU Funding**

1.11 The consideration that the EU may aid a project must not lead to less rigorous appraisal and decision making than if that aid was not forthcoming. Aid from the EU is a national resource and must be used as effectively, and economically, as any other national resource. The EU expects us to ensure this. The availability of EU aid for a project is not a justification for investment in that project; if the project does not go ahead the EU aid can be applied to better effect elsewhere. In addition to the national project appraisal procedures outlined in these guidelines, projects aided by the EU Structural and Cohesion Funds must meet specific Community appraisal requirements.

## **Structural and Cohesion Fund Requirements**

For the period 2000-2006, the current detailed eligibility rules and conditions for Structural and Cohesion Fund assisted programmes and projects are set out in Structural Actions 2000-2006 Commentary and Regulations, as amended by Commission Regulation (EC) No 1685/2000 and 448/2004 of 10 March, 2004.

Copies of the regulations and additional information may be obtained from the Office for Official Publications of the European Communities and by internet at [http://europa.eu.int/comm/regional\\_policy/sources/docoffic/official/regulation/reglem\\_dep\\_e n.htm](http://europa.eu.int/comm/regional_policy/sources/docoffic/official/regulation/reglem_dep_e n.htm) and <http://inforegio.cec.eu.int>.

Under current EU rules, major projects costing in excess of €50 million which are EU co-financed must be notified in advance to the EU Commission providing the following specific information:

- (a) The body to be responsible for implementation.
- (b) The nature of the investment and a description of it, its financial volume and location.
- (c) The timetable for implementing the project.
- (d) A cost-benefit analysis, including financial costs and benefits, a risk assessment and information on the economic viability of the project
- (e) Plus information on the use of EU funds and impact of the project on EU Objectives

(See Article 26 of Council Regulation (EC) No 1260/1999 of 21 June, 1999)

Programmes co financed by Structural Funds must be subject to ex-ante, interim, including mid-term and ex-post evaluation designed to appraise their impact on EU Structural Fund Objectives. Implementation of these requirements is a matter for the programme managing authorities in conjunction with the implementing bodies and subject to consideration by each

programme monitoring committee.

### **Who does the Detailed Appraisal?**

1.12 The Sponsoring Agency should assess its in-house capacity to make the detailed appraisal. Where in-house capacity is inadequate, trained analysts and other personnel within the public sector with proven expertise in dealing with major projects/programmes should be involved (if necessary, on a cost recoupment basis). If the necessary resources are not available within the public sector, the employment of outside consultants may be considered.

The Sponsoring Agency is responsible for ensuring that the appraisal is done on an objective basis and not as a 'case-making' exercise. Good quality appraisal at this stage will make it easier to complete the planning and implementation stages and minimize the potential for difficulties and risks to arise in the later stages.

Separate agreements should be made for consultancy tasks at the feasibility stages and the planning and implementation stages. Contracts under which consultants are engaged for particular tasks should make it clear that, if the project proceeds, they may not necessarily be engaged on later tasks. Fees should be sought on a competitive tendering basis.

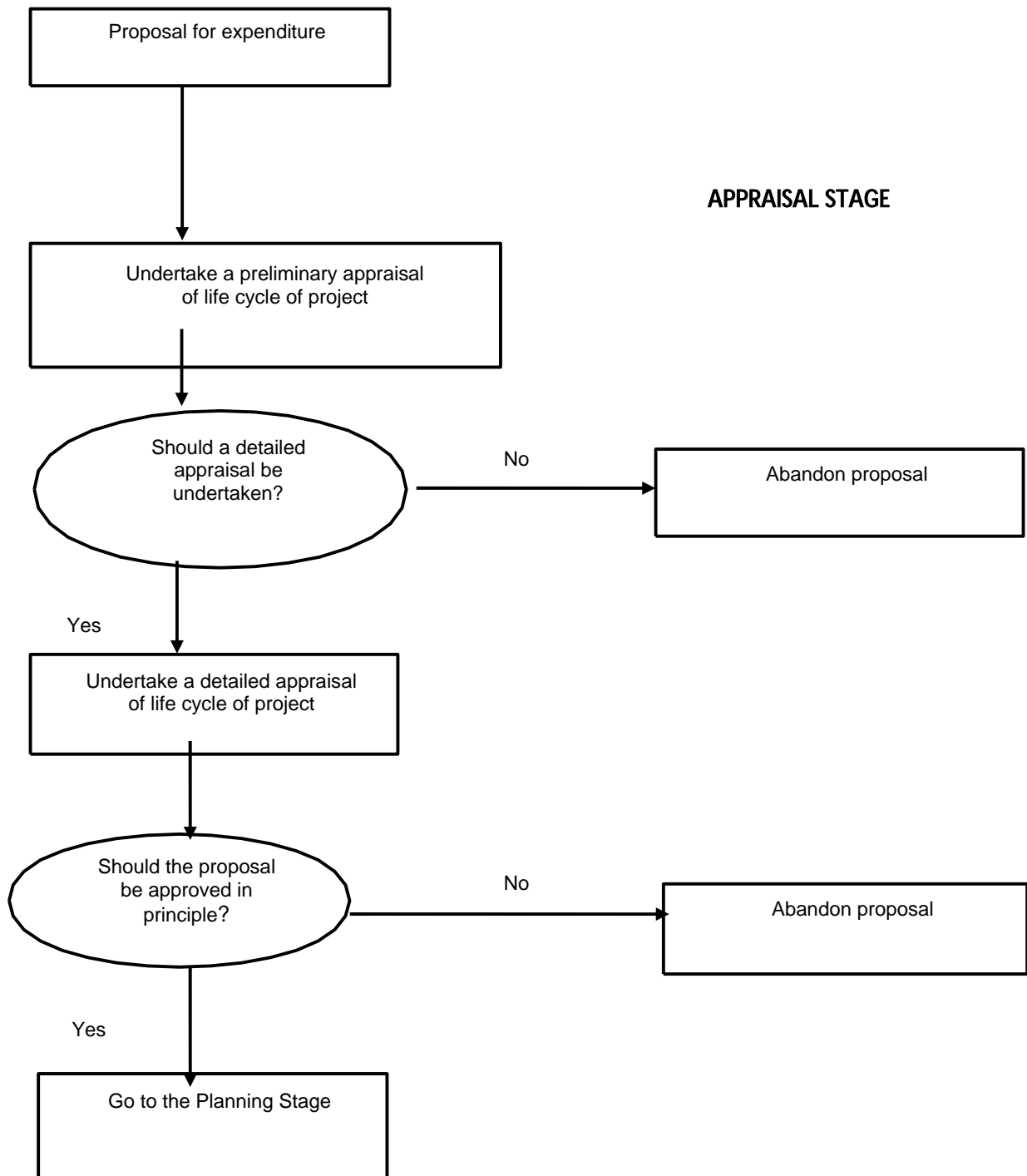
The matter of employing consultants is dealt with in more detail at Appendix 2.

### **Outcome of Detailed Appraisal - Approval in Principle**

1.13 The Sanctioning Authority should also take the necessary steps to ensure that it has the requisite expertise to assess project appraisal proposals from Sponsoring Agencies. 'Approval in principle' is a decision given by a Sanctioning Authority to a Sponsoring Agency at the end of the appraisal stage. It permits the successive steps in planning a project or scheme to proceed, stopping short of the placement of major contracts or the making of any irrevocable commitments to undertake the project/scheme. It commits relatively limited resources to planning the project. Those resources are expended progressively. If circumstances warrant, it should be possible to revise or drop the proposal during the planning process without incurring all of the planning costs or any of the more substantial liabilities associated with the project itself.

Figure 3 (see overleaf) summarises the various steps in the Appraisal Stage.

**Figure 3: THE APRAISAL STAGE**



## 2. Planning Stage

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2.1 At detailed appraisal stage, a decision will have been taken on the appropriate procurement method to be used, i.e. traditional design build (DB), DB Finance (DBF), DBF Operate (DBFO), DBFO and Maintain (DBFOM) etc. The planning stage involves seven steps. These are

- establishment of project management structure;
- preparation of a project brief;
- detailed planning and design<sup>4</sup>;
- review of proposal, using information provided by the planning process;
- obtaining approval of the Sanctioning Authority;
- obtaining tenders for projects;
- review of proposal, using tender prices.

### Management of Projects

2.2 The scale and complexity of the project should be reflected in its management structure and information system. Three issues should be carefully considered. These are:

- what kind of management structure would be suitable for the project?
- who is to be accountable for what aspects of the project?
- what kind of reporting systems should be installed?

### Management Structure

Unless it already exists (e.g. for ongoing capital programmes) the management structure should always be identified and established once approval in principle has been obtained. In some cases, it may be possible to outline the proposed structure, filling some of the roles immediately and leaving others to be filled later on, as appropriate. However, the senior decision-makers for the project, and the senior managers should all be identified clearly at the outset, and their involvement and relative role clearly agreed.

The management of the project should usually be organized along the following lines:

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<sup>4</sup> In design and build contracts, this step may be undertaken by the contractor.

### *Sanctioning Authority*

The Sanctioning Authority (Government, Department, Local Authority, etc.) is responsible for conveying approval to a project, within specified cost, to specified standards and time limits, etc.

### *Sponsoring Agency*

The Sponsoring agency has overall responsibility for the proper management of the project, including its detailed planning; for obtaining necessary approvals from the Sanctioning Authority and for ensuring that the project proceeds along the lines approved by the Sanctioning Authority.

Usually, the Sponsoring Agency is the body with whom the contractor(s)/supplier(s) will have a legal commitment.

### *Steering Group*

A Steering Group has the responsibility for overseeing the execution of the project. A Steering Group will usually be required on a complex and large scale project and particularly where a number of bodies are interested or involved in the project. It should usually be chaired by a representative of the Sponsoring Agency.

The group should include appropriate professional staff e.g. architect/engineer/quantity surveyor. The Group may include a representative from the Sanctioning Authority and/or the Department of Finance.

### *Project Co-ordinator*

The Project Co-ordinator is the person who is responsible for the execution, on time to the requisite quality and within budget, of the decisions taken by the Steering Group, or by the Sponsoring Agency in the absence of a Steering Group (where the project is small).

For very large projects it may be necessary to appoint a professional firm to take on the task of actually managing the project. It would report to the Project Co-ordinator (who in turn would report to the Steering Group, and/or Sponsoring Agency, as appropriate) and it would be responsible for ensuring that the project came in on time and within cost.

### *Design Team Leader*

A Design Team Leader should normally be appointed for every project with more than one technical consultant. The Design Team Leader would report to the Project Co-Ordinator or, where a project management firm had been appointed, to that firm.

## Information Flows

2.3 The following should be established as early as possible:

- The information needs at various levels of the management structure.
- The format that should be used for presenting this information. In this connection the standard forms in *National Standard Building Elements and Design Cost Control Procedures* should be used wherever these are appropriate. However, particular projects may require special forms which vary from those standard forms
- The frequency of the submission of reports.
- Who is responsible for supplying and for compiling information?

The information system should reflect the nature of the project but should deal with all of these points.

## Project Brief

2.4 The project brief is essentially a description of the project option which has been approved in principle, detailing the objectives and parameters to be taken into account by the planning professionals. All the client's requirements should be set out in appropriate detail (e.g. for buildings, specify schedule of accommodation and room sizes etc.).

The project brief should not call for over-elaborate designs and/or the specification of standards which exceed the minimum necessary to achieve a satisfactory **and cost-effective** end product. The programme for the completion of the work specified in the detailed appraisal should also be given. The services to be provided by consultants, architects, engineers, etc., should be clearly identified.

Cost limits/targets for the project should be included in the project brief. Estimated costs for the project itself and for project planning will have been included in the detailed appraisal. These should be used as the permitted expenditure limits.

Once design has commenced on the basis of the project brief, changes in the scope or objectives of the project should not be made unless absolutely necessary, or unless the proposed changes could reduce the overall cost of the project. If changes are to be made, the cost implications (including the effects on design costs) and the effects on the timing of the project should be fully appraised, and the express approval of the Sanctioning Authority sought, before an amended design brief is given to consultants.

## Employing Consultants

2.5 Depending on the type of project and the availability of skills within the Sponsoring Agency, it may be necessary to engage the services of consulting architects, engineers,

quantity surveyors, etc. Procedures to be followed in selecting consultants and agreeing fees are referred to at Section 1.12 above and at Appendix 2

## **Costs**

2.6 In managing the design process, it is important to consider regularly how the information being produced is likely to affect the estimated cost of the proposed project.

Departments and public bodies will be in a position to develop and update standard costs of providing typical projects or elements of projects. These will be used as a benchmark for appraising project costs. Regard should be had to national and international benchmarks for larger and more complex projects.

If the designs furnished by consultants to the Sponsoring Agency exceed the cost limit(s) set in the project brief, they should be referred back to the consultants by the Sponsoring agency to ensure that costs are reduced to stay within the said overall cost limit(s). Significant changes in specification to achieve cost reduction should be notified to the Sanctioning Authority for approval, with information on any change in the quality of the works being undertaken.

## **Changes in Circumstances/Time Scale**

2.7 Changes which are relevant to a project, and which may make it more or less beneficial for the economy, may occur at any time (e.g. developments in technology, fluctuations in the availability or cost of raw materials or other inputs, changes in the domestic and international economies, legal changes). Such changes may alter radically the needs to be met, the priority which they are to be given, the scale on which they should be met, and the feasibility of possible alternative solutions. Under or over-estimation of relevant factors, notably cost, may be discovered during detailed planning following approval in principle, or when tenders are received.

Once the design has commenced on the basis of the project brief, changes in the scope or objectives of the project should not be made unless absolutely necessary, or unless the proposed changes could reduce the overall cost of the project. If changes are to be made, the cost implications and the effects on the timing and delivery of the project should be fully appraised.

Changes in the time scale of a project can also have very significant effects. Unscheduled delays (due, for example, to time overruns on particular stages or to delays in reaching decisions) may result in circumstances changing so as to alter radically the case for a proposal. Similarly, decisions to delay a project (i.e. to change the time profile) may result in significant changes in factors affecting decisions made. When significant alteration of the planned time scale occurs, it is particularly important to reassess fully the basis on which earlier decisions were made.

The detailed appraisal is the framework against which the impact of changes can be assessed. In setting it up, it is important to identify clearly factors which are so significant to the



appraisal that unexpected changes in them would warrant speedy reappraisal, and corrective action, if necessary.

### **Indefinite Postponement of Project**

2.8 If a decision is taken to defer a project indefinitely, then it should be fully reappraised before being started again. For instance, a project deferred indefinitely after architectural or engineering plans have been drawn up should not subsequently be proceeded with, without returning to the detailed appraisal stage.

### **Pre-Tender Review**

2.9 When plans and designs have been finalised, the project proposal should be reviewed, taking into account any major changes in relevant circumstances and the more precise information generated by the design process. In particular, if the expected total cost of the project has increased, then the project should be re-examined and reductions achieved without lowering the quality standard of the project below acceptable levels, in order to bring the project within the approved limit. Works should not be omitted so as to achieve reductions if they will have to be reintroduced later as being essential for the completion of the project, or for the generation of its full benefits, or if they significantly change the nature of the project. The Sanctioning Authority should be notified of any significant changes.

### **Obtaining Approval of Sanctioning Authority**

2.10 The pre-tender review is necessary to provide the information required by the Sponsoring Agency and the Sanctioning Authority to decide whether or not to approve the project

### **Planning Permission Requirements**

2.11 If a project requires planning permission, a final decision to proceed with it should not be taken until permission is obtained from the appropriate Planning Authority or An Bord Pleanála. The implications of any conditions attaching to the planning permission should be fully assessed, going so far, if warranted, as to consider whether the project should be abandoned. Before these steps are carried out financial exposure in respect of the project arising, for example, out of contracts, should be minimised. Similar considerations should apply to the requirements of various statutory codes operated by local authorities and other bodies, e.g. Building Control (Fire Safety Certificate), Air or Water Pollution Licence, Waste Permit, or Integrated Licence (Environmental Protection Agency). **Under Design and Build Contracts responsibility for obtaining planning permission may be assigned to the successful contractor.**

### **Tendering**

2.12 Tendering should, as appropriate, be invited in accordance with national procurement guidelines or where the costs exceed EU thresholds on the basis of the procedures set out in Directives 2004/17/EC and 2004/18/EC.

## **Review using Tender Prices**

2.13 When a tender price and other relevant information become available, the case for proceeding with the proposal should again be reviewed. The analysis contained in the detailed appraisal once again provides the framework for undertaking this review, and also for determining which of the available tenders is likely to be most cost effective.

If tenders exceed the approved budget, the project should be re-examined and reductions achieved without lowering the quality standard of the project below acceptable levels, in order to bring the project within the approved limit. Works should not be omitted so as to achieve reductions if they will have to be reintroduced later as being essential for the completion of the project, or for the generation of its full benefits, or if they significantly change the nature of the project. The Sanctioning Authority must be informed of all significant works omissions.

If serious additional costs have arisen, the sanctioning authority should require the Sponsoring Agency to undertake, as appropriate, a revised cost-effectiveness analysis or cost benefit analysis having regard to the increased costs. Where a revised cost-effectiveness analysis or cost benefit analysis has been carried out and the project is either no longer affordable or the best value option, the procurement should be terminated and the resources diverted to more worthwhile projects.

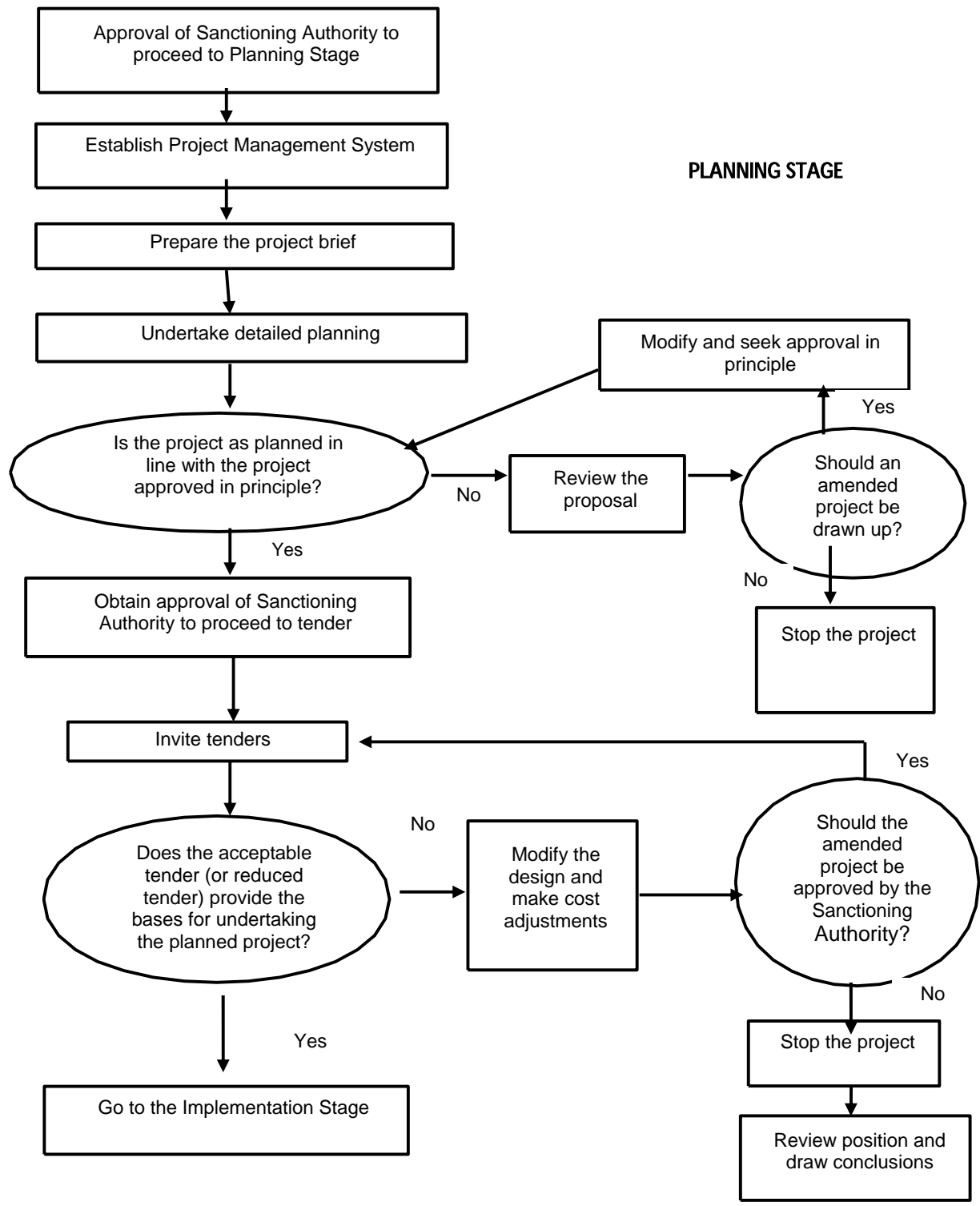
If tenders are over the approved limit re-appraisal may be required to determine whether the project should be abandoned or proceeded with. If this re-appraisal suggests proceeding at higher cost the approval of the Sanctioning Authority to a raised financial limit must be sought before contracts are placed. If it is decided that the project should be abandoned at this post-tender stage, and if substantial amounts have already been spent on planning etc. at this stage, the position should be reviewed to determine why the project came to proceed to this stage and was then abandoned.

## **Proceed to Implementation**

2.14 It is at this point that the bulk of the spending on the project itself (spending will have been incurred at the appraisal and planning stages in relation to design fees, planning fees environmental assessments, site investigations etc.) can be sanctioned. (Once this point has been passed, it is often very difficult to withdraw from the project without incurring very large costs.) An explicit amount should be sanctioned.

Figure 4 summarises the various steps that are required during the Planning Stage.

**Figure 4: THE PLANNING STAGE**





## 3. Implementation Stage

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### Management of Programmes

3.1 Proper programme management is necessary to ensure that capital programmes are effectively and efficiently delivered, that programme objectives continue to be relevant in the operational environment and that the programme objectives are being met. Formal structured arrangements should therefore be put in place by the Sanctioning Authority to ensure that there is systematic co-ordinated monitoring and management of programmes.

The Sanctioning Authority should ensure that a programme co-coordinator is appointed to co-ordinate implementation of the programme and a monitoring committee to monitor and review progress. Where the programme is a cross-cutting programme the monitoring committee will be representative of relevant Government Departments, implementing public bodies and sectoral interests.

### Project Implementation

3.2 The implementation stage of a project begins once final approval for the award of a contract has been secured. The critical tasks at this stage are to manage and monitor the project to ensure that it is executed satisfactorily, within budget, to standard and on time. Implementation of the project is the responsibility of the Sponsoring Agency while the sanctioning authority must be satisfied that the Sponsoring Agency delivers the project as approved. Where the Government is the sanctioning authority, the responsibility for ensuring delivery of the management and monitoring functions in the implementation stage will rest with the relevant line Department (the Department which presented the proposal to Government).

### Contract Placement

**3.3 The Sponsoring Agency should arrange to procure the services of a contractor in accordance with EU and national procurement requirements.**

Depending on the kind of project being undertaken, the Sponsoring Agency may have a choice of engaging in a single contract with one contractor, or of co-ordinating a number of minor or sub-contracts. The task of managing a large number of contracts should not be underestimated; any potential cost savings associated with such an approach should be weighed against the inevitable additional management costs. **The use of nominated sub-contractors is not permissible in any public works contract. The contract should make clear the specific responsibilities of the parties.**

### Monitoring the Project

3.4 All projects must be monitored on an on-going basis to ensure that they are being completed to the required cost, quality and time profiles. Progress should be kept under review so that account can be taken of changes in relevant circumstances.

Regular management reports should be prepared by the Sponsoring Agency covering all significant developments relating to the project and its costs. If adverse developments occur, including unforeseen cost increases, which call into question the desirability or viability of the project, the Sponsoring Agency should submit a report at the earliest possible moment to the Sanctioning Authority, detailing the necessary measures proposed to rectify the situation.

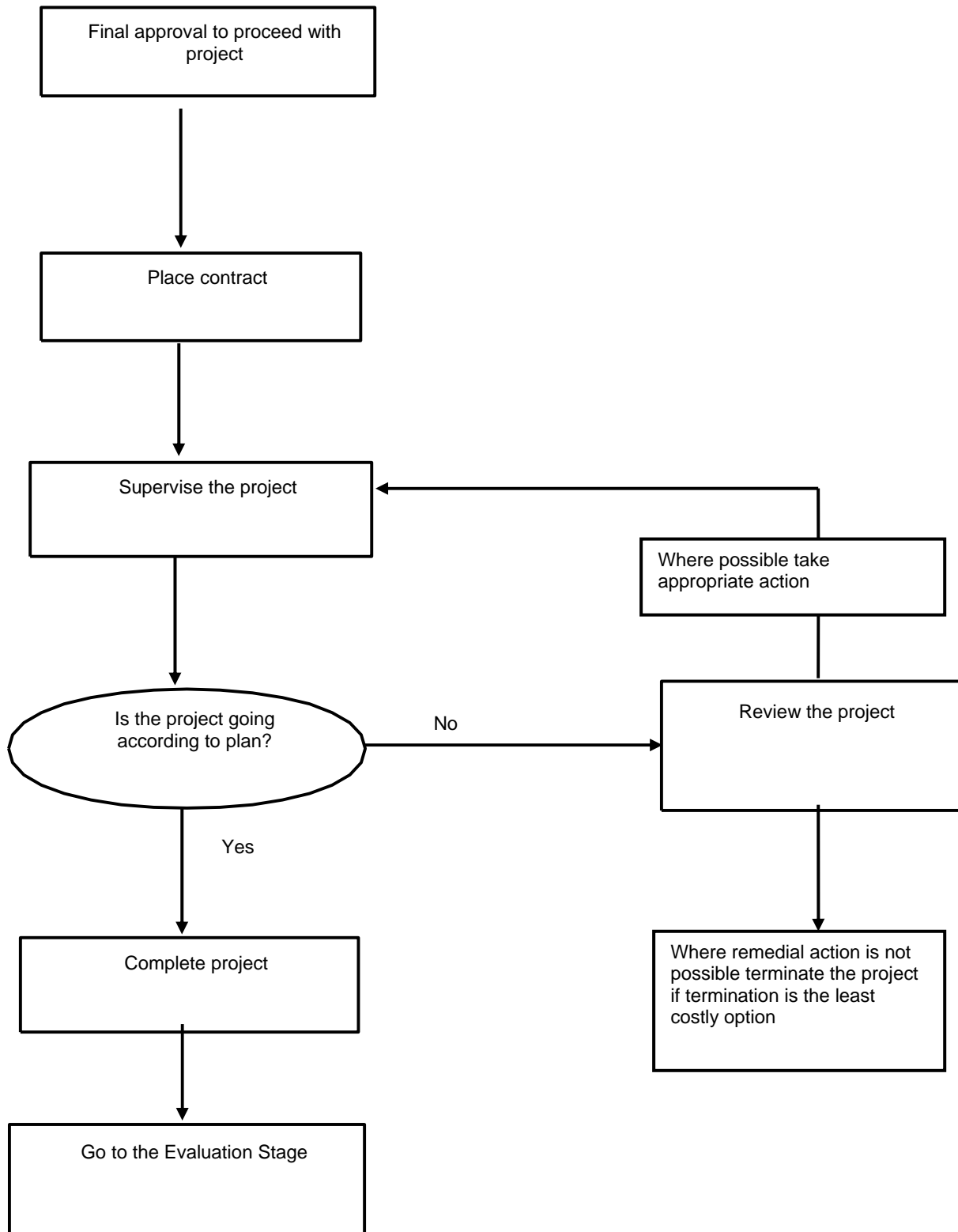
Where, despite these measures, increased costs above those already approved are likely to arise, the approval of the Sanctioning Authority for the extra expenditure should be obtained before any commitment is made to accept cost increases. Any application for such approval should outline the reasons for the excess, along with a detailed explanation of why it was not possible to take appropriate measures to offset the increased cost. The viability of the project, given the changed circumstances, should also be reported on.

If a project is going badly wrong, there should be a willingness to terminate it before completion. Action of this kind can be justified if the cost of the project escalates above earlier estimates or if the benefits expected from it are not likely to be realised. An attitude that, once work on a project commences, it must be completed regardless of changed circumstances, is to be avoided. Before making a final decision to terminate a project that is not going according to plan, the costs of termination (for example, payments that might have to be paid by way of compensation to contractors etc.) should be ascertained and made known to the appropriate authorities.

The sanctioning authority should satisfy itself that the Sponsoring Agency has systems in place and system checks in place to ensure that the project is delivered as per the contract, approved project specification and within the approved budget and in compliance with these guidelines.

Figure 5 (see overleaf) reviews the Implementation Stage.

**Figure 5: THE IMPLEMENTATION STAGE**







## 4. Post Project Review

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4.1 It is the responsibility of the Sponsoring Agency to carry out post project reviews. These should be carried out for all projects costing in excess of €50 million. Post project reviews should be carried out on a representative sample of all projects. The sample should cover at least 5% of completed projects. Any significant lessons learned should be translated into changes in the Sponsoring Agency's project practices and communicated for future reference to the sanctioning authority by way of regular reports on projects so that the sanctioning authority can apply any general lessons to its project approval procedures.

A post-project review aims to draw lessons for the future.

A post-project review should be undertaken once sufficient time has elapsed to allow the project to be properly evaluated with sufficient evidence of the flow of benefits /costs from it.

There are two separate focuses of review namely:

- project outturn and
- appraisal and management procedures.

These reviews may be undertaken at the same time or at different times, but they should be done as soon as is practicable.

### Review of Project Outturn

4.2 The aim here is to determine whether:

- the basis on which a project was undertaken proved correct;
- the expected benefits and outcomes materialised;
- the planned outcomes were the appropriate responses to actual public needs;
- the appraisal and management procedures adopted were satisfactory;
- conclusions can be drawn applicable to other projects; to the ongoing use of the asset; or to associated policies.

The detailed appraisal provides the base against which the outturn review is made.

**The Sponsoring Agency must report to the sanctioning authority in its annual report under the multi-annual investment framework summary findings of its post project reviews and details of actions taken on foot of those reviews to improve its project management arrangements.**

## **Evaluation of Procedures**

4.3 This aims to determine whether experiences shows that any stage of the project could have been done better and any lessons applied elsewhere.

# Appendix 1

## Elements of Appraisal

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These guidelines are intended to serve as a broad review of the main features of project appraisal and not as a detailed technical manual on the techniques involved. Regard should also be had to the separate guidance available from the NDP/CSF Evaluation Unit on cost benefit analysis<sup>5</sup>. It is the responsibility of each Sanctioning Authority to ensure that Departments and agencies draw up their own procedures for management and appraisal of programmes and projects consistent with the principles set out in this document.

### Appraisal

The basic purpose of systematic appraisal is to achieve better investment decisions. The following step-by-step approach to the selection and appraisal of investment projects is intended to provide operational guidance to those considering projects involving the use of public resources. Given the wide variety of projects in the public sector, adaptations to suit particular circumstances may be required.

The diverse nature and impact of the wide range of projects across the public sector means that legitimate comparisons on a cross-sectoral basis may be difficult to make. Comparisons within relatively homogeneous areas of investment, such as between alternative courses of action within a programme, are more easily derived.

### Needs and Objectives

An important task of any public sector organisation is continually to reassess needs and objectives. New projects should only be undertaken where there is a clearly established public need for the projects or service provided; existing services should be reviewed to ensure that the kind of service provided is the kind of service required, and is on the appropriate scale. The aim should be, subject to resource constraints, to avoid 'bottlenecks', and also to avoid costly and wasteful over-supply, and/or under-utilisation of resources.

An objective is the explicit intended result of a particular programme or project, measured as precisely as possible. For example, there may be a need to improve traffic flow on a road. To state the objective of works on that road as being "to reduce average journey times" would be unsatisfactory since it would not provide a basis for judging whether investment proposed to improve the roads would produce sufficient benefit. Something more explicit is needed. "To reduce average journey times between Town A and Town B by X percent by the year 2020" is a precise objective. It assists in addressing such question as what are the various ways in which this objective can be reached; what costs and what results can be expected from each alternative course of action; and are the benefits sufficient to justify the costs.

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<sup>5</sup> Working Rules for Cost Benefit Analysis – NDP/CSF Evaluation Unit. (evaluation@csfunits.gov.ie)

Project and programme objectives should be expressed in terms of the benefits they are expected to provide and those whom they are intended to benefit. For example, road building programmes are not ends in themselves; they must be seen in the light of the needs of the economy as a whole, and of the target groups for which the programmes cater (for example, freight traffic, tourist traffic, commuters. etc.).

There is a need for realism in stating objectives. Where programmes have multiple objectives it is necessary to be clear about the relative importance of each and how this should be reflected in resource allocation and in the appraisal process.

Objectives should be expressed in a way which will facilitate consideration and analysis of alternative ways of achieving them. They should not be so expressed as to point to only one solution. For example, population growth may put pressure on the schools in a particular area and an objective might be expressed as being “to build new schools in the area” to meet this pressure. The objective “to provide school places to meet population growth within the area” would provide a better basis for considering alternative ways of achieving this objective, such as the provision of new schools, the expansion of existing schools, on a permanent or temporary basis, or making better use of the existing stock of schools by provision of special transport (school bussing) arrangements.

## **Constraints**

There will invariably be constraints in reaching objectives. There will normally be resource constraints. There may be technical constraints; for instance, there may be only a limited number of ways in which a product can be made, or a service delivered. Constraints may also arise as a result of previous policy or investment decisions, but these may be amenable to change. Constraints must also be explored and fully taken account of, because they will limit the range of solutions which are feasible or acceptable.

The following is a checklist of the kinds of constraint which typically should be considered in appraising a proposal:

- financial
- technological
- legal/regulatory
- environmental
- physical inputs/raw material
- availability of manpower and skills
- time
- administrative /managerial ability
- distributional (e.g. between regions, income groups, etc.)
- social
- spatial policy
- land use planning
- co-operation required from other interests
- general policy considerations.

## Options

**All realistic ways of achieving stated objectives should be identified and examined critically when considering project options for the first time. This should be done with a completely open mind, and should always include the option of ‘doing nothing’ or ‘doing the minimum’.** Different scales of the same response should be included as separate options, where appropriate. There should be no presumption that public sector responses are the only ones available; options which involve, or rely totally on, the private sector should also be considered. The alternatives should be described in such a way that the essentials of each alternative, and the differences between them, are clear.

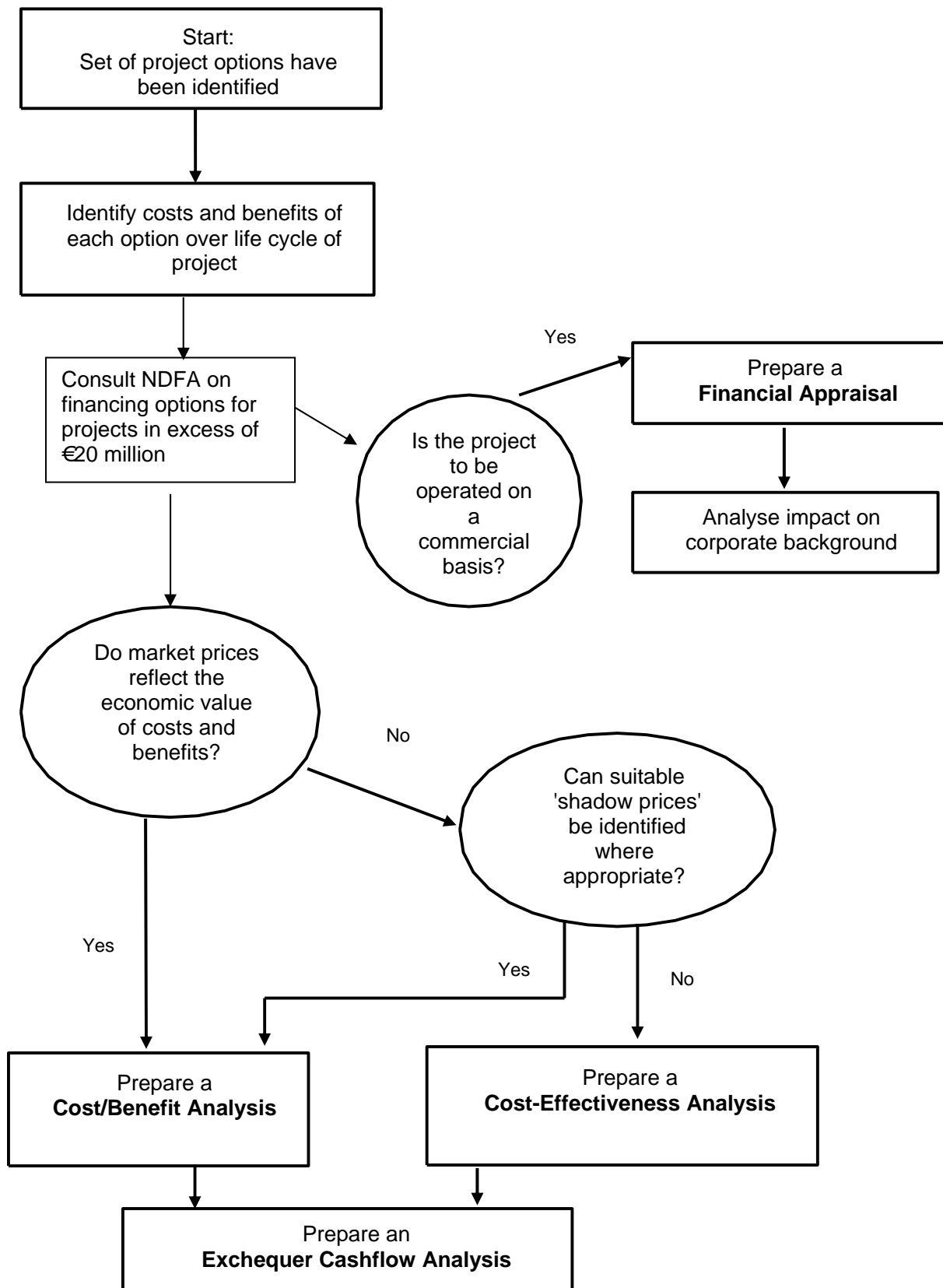
Considering the possible alternatives in the light of the constraints will usually lead to the conclusion that some of the alternatives are not feasible. Others may conflict with existing policies.

Objectivity is important in considering options. There is a danger that the selection of options may be manipulated in order to make a case for a course of action which is already favoured. For example, options for which there is a very weak case may be put forward in order to make a poor option look good. If the poor option is the best available it should be considered alone on its own merits.

## Analysis of Options

Different forms of analysis provide different kinds of information about investment proposals, and it is important to identify clearly, and to agree with the Sanctioning Authority, which forms of analysis are appropriate. The chief criterion used in deciding on the appropriate forms of analysis is whether or not the project is to be operated on a commercial basis. (See Figure 6 overleaf). Before discussing these forms of analysis, it is necessary first to consider a number of methodological issues which are common to some or all of them.

**Figure 6: IDENTIFYING THE APPROPRIATE TYPE OF ANALYSIS OF COSTS**



## Discounting

For most forms of analysis, a critical issue is how to evaluate costs and benefits which occur at different points in time. Resources are said to have a time value i.e. a given sum of money (cost, benefit or imputed value) is normally perceived to be worth more today than the same amount at a later date, even after taking inflation into account. Money values occurring at different points in time are converted to values at a common point in time through the process of discounting.

## Analytic Techniques

A variety of techniques to evaluate options is available. These appraisal techniques can be applied in a variety of forms of analysis. The main techniques used (most of which involve discounting in one form or another) are

### *Net Present Value (NPV) Method*

Revenues of a project are estimated, net of outgoings, and then are discounted and compared with the initial investment. The preferred option is that with the highest positive net present value.

### *Internal Rate of Return (IRR) Method.*

The IRR is the discount rate which, when applied to net revenues of a project sets them equal to the initial investment. The preferred option is that with the IRR greatest in excess of a specified rate of return.

### *Benefit-Cost Ratio*

The benefit-cost ratio is the discounted net revenues divided by the initial investment. The preferred option is that with the ratio greatest in excess of 1. In any event, a project with benefit-cost ratio of less than 1 should normally not proceed.

### *Payback, and Discounted Payback*

These methods identify how long it will take to pay back the amounts invested.

More details about these methodologies may be found in standard textbooks on financial analysis.

**The choice of a discount rate is crucial to the application of most of the techniques listed above. This depends on the form of analysis being undertaken. In discussing each form of analysis below, the appropriate discount rate to apply is indicated.**

## Importance of NPV method

Applying different evaluation techniques to the same basic data may yield contradictory conclusions. In choosing between options A and B, the NPV method may suggest that A is

preferable, while the IRR method may suggest that B is preferable. In such cases, the results indicated by the NPV method are more dependable. For this reason, the NPV method should always be used where money values over time need to be evaluated. However, the other techniques yield useful additional information and may therefore be worth undertaking also.

## **Appraisal of Commercial Projects**

While the main thrust of the evaluation of commercial projects will be the financial appraisal as described below, major investment proposals in commercial State bodies should be considered against their corporate backgrounds. Issues that can usefully be addressed include:

- would the investment involve a change in the overall corporate thrust of the body, and is this advisable? What changes in the body's policies, organisation and personnel resources would be called for by the investment and is it feasible to put them in place sufficiently quickly?
- would the investment be compatible with the body's corporate plan, and if not, should the plan, or the investment be changed?
- can the investment be financed without creating undue financial risk for the body? Could gearing (the ratio between debt and equity) become excessive? Could other necessary investment be crowded out?
- are competitors planning or likely to undertake similar investments and what effect could this have on the profitability of and case for the investment?
- what effect will the investment have on the body's ability to remunerate its shareholders?

Assumptions about market growth, future prices for the firm's products/services and for its inputs, interest rate, and exchange rates (where relevant) should be closely examined. An assessment of the scale and distribution of the costs and benefits of the investment may also be undertaken, if relevant.

The financial restructuring of a commercial State body, involving capital injection or commitments (e.g. loan guarantees) by the State, normally requires a total review of its operations.

Circumstances differ so much that this document could not usefully attempt to give guidance save to say that the assumptions made in any restructuring plan on key variables, on targets, and on actions should be realistic.

## **Financial Appraisal**

The key financial element in appraising commercial projects are:

### *Commercial Cash Flow Analysis*

This identifies the amount and timing of the cash inflows and outflows associated with each project option and discounts them to their net present value.



The discount rate should be appropriate to the organisation's cost of capital, the risk profile of the project and any other relevant factors. The rate used, and the rationale for its use, should be set out clearly in the project documentation.

#### *Profit and Loss Account Projections*

These should show the impact of the project on the main revenues and costs of the organisation and should include a commentary where necessary.

The period of the projections should be appropriate to the life of the project.

#### *Balance Sheet Projections*

These should show the impact of the project on the finances of the organisation, with particular emphasis on its working capital, debt and reserves. Again, a commentary should be included where necessary.

The period of the projections should be the same as for the profit and loss account projections.

These key elements may be supplemented by other forms of analysis (internal rate of return, benefit/cost ratio, payback period etc.) where appropriate.

Sensitivity analysis of the project should also be undertaken, examining the effect on the key financial elements of varying the main assumptions of the project (including the discount rate) across an appropriate range.

### **Appraisal of Non-Commercial Projects**

There are a number of different types of analysis which may be employed. These include multi-criteria analysis, cost benefit analysis, cost effectiveness analysis and Exchequer cash flow analysis.

These forms of analysis assist in:

- establishing if there is a sufficient economic or social case for a proposal;
- identifying whether or not the proposal under consideration can be afforded;
- providing a basis for choosing between differing options, and
- ranking projects in order within programmes.

### **Multi-Criteria Analysis (MCA)**

Multi-criteria analysis (MCA) establishes preferences between project options by reference to an explicit set of criteria and objectives. These would normally reflect policy/programme

objectives and project objectives and other considerations as appropriate, such as value for money, costs, social, environmental, equality, etc. MCAs often include “scoring and weighting” of the relevant criteria reflecting their relative importance to the objectives of the project.

Care should be taken to try and minimise the subjectivity of decision making in an MCA. The relative importance of objectives and criteria to achievement of the project will vary from sector to sector. The Sponsoring Agency should agree these with the Sanctioning Authority. In constructing a multi criteria analysis scorecard and determining the weightings to be given to criteria the aim should be to achieve an objective appraisal of project options and consistency in decision making. In this regard, the system should be capable of producing similar results if the selection criteria were applied by different decision makers.

### **Cost-Benefit or Cost-Effectiveness Analysis?**

There are two basic forms of economic analysis, one of which should be applied in the appraisal of each non-commercial investment proposal:

#### *Cost-Benefit Analysis*

The general principle of cost-benefit analysis (CBA) is to assess whether or not the social and economic benefits associated with a project are greater than its social and economic costs.

#### *Cost-Effectiveness Analysis*

Cost-effectiveness analysis (CEA) compares the costs of different ways of achieving a particular objective. A choice can then be made as to which of these options (which all achieve the same or similar ends) is preferable.

Cost-benefit and Cost-effectiveness analysis are very similar. Ideally, cost-benefit analysis would always be undertaken. However, there are situations where significant costs or benefits associated with a project cannot be quantified or valued, and where this occurs cost-effectiveness analysis may have to be relied on. CEA is employed to determine the least cost way of determining the capital project objective.

Whether undertaking cost-benefit or cost-effectiveness analysis, a number of important considerations arise:

- There may be significant costs or benefits which do not affect the Sponsoring Agency but which are important to other persons or agencies or to society in general. These are usually called ‘externalities’ (i.e. they are external to the sponsor’s direct concerns).
- There may be no market prices available for evaluating some costs or benefits associated with project options as they may not be traded items.
- In some cases, though resources consumed and outputs produced may be traded, the prices may not reflect the real value to society of those resources or outputs.

## Externalities

Externalities arise in a number of ways. For instance, the benefits from a particular investment may make it attractive to the Sponsoring Agency but at a cost to others, due, for example, to the need to provide back-up infrastructure such as roads, water supply or waste treatment facilities.

## Shadow Prices

It is sometimes argued that distortions exist in the market prices for resources used in projects, or for the outputs of projects. The implication is that some other price, usually called a 'shadow' price (i.e. a price attributed to a good or factor on the basis that it is more appropriate than its market price) should be used. For example, when there is high unemployment, it could be argued that people employed in a project would not otherwise be employed in a productive way, and that the market cost of employing them should be replaced by a lower shadow price.

However, market prices are generally reliable, normally and verifiable. They generally provide the appropriate basis for valuing a project's costs and benefits; they should be used, unless there are clear and convincing reasons that they are inappropriate and also that it is possible to derive shadow prices using a sound means of calculation.

If shadow prices are used, market prices, if available, should be applied also. If the analysis on both bases leads to differing conclusion, reliance should be placed on results using shadow prices only where it can be clearly justified.

## Test Discount Rate (TDR)

The same basic discount rate (usually called the test discount rate or TDR should be used in all cost-benefit and cost-effectiveness analyses of public sector projects. **For consistency across appraisals, the official discount rate as stipulated by NDFA which corresponds the cost of Government borrowing should be used in all cases.** However, if a commercial State Sponsored Body is discounting projected cash flows for commercial projects, the cost of capital should be used or even a project-specific rate.

## Cost Benefit Analysis (CBA)

In cost-benefit analysis all of the relevant costs and benefits, including indirect costs and benefits, are taken into account. Cash values, based on market prices (or shadow prices, where no appropriate market price exists) are placed on all costs and benefits and the time at which these costs/benefits occur is identified. The analytic techniques outlined above (i.e. NPV method, IRR method, etc.) are applied using the TDR.

The general principle of cost-benefit analysis is that a project is desirable if the economic and social benefits are greater than economic and social costs. However, meeting this test may not necessarily show that a project should proceed, since other projects competing for the same limited funds may have a higher net present value.

It is vital that cost-benefit analysis is objective. Its conclusions should not be prejudged. It should not be used as a device to buttress a case already favoured for or against a proposal. Factors of questionable or limited relevance to a project should not be brought into an analysis in order to bias the result in a preferred direction.

### **Cost-Effectiveness Analysis (CEA)**

It is difficult to measure the value to society of public investment in social infrastructure (e.g. schools and hospitals) because the outputs may be difficult to specify accurately and to quantify, and are frequently not marketed. In cases like these the cost of the various alternative options should first be determined in monetary terms (although the benefits need not be). A choice can then be made as to which of the options (if they all achieve much the same effects) is preferable. CEA is not a basis for deciding whether or not a project should be undertaken. Rather, it is concerned with the relative costs of the various options available for achieving a particular objective.

Evaluating options in CEA is best done by applying the principles of the NPV method to the stream of cash outflows or costs. The recurring costs of using facilities as well as the capital costs of creating them should be taken into account, particularly if they differ between alternative options. Usually, the aim will be to select the option which minimises the net present cost.

There is a particular need for consistency in the assumptions and parameters adopted for CBA and CEA appraisals.

### **Multi-Criteria Analysis (MCA)**

Multi-criteria analysis (MCA) establishes preferences between project options by reference to an explicit set of objectives and measurable criteria to assess the extent to which the objectives have been achieved. It should provide sufficient information to enable the sanctioning authority to make a decision on whether the project should proceed or not with public funding.

All MCAs should include financial appraisal. For medium to larger projects costing between € million and €50 million the financial appraisal should be more complex to reflect the cost of the projects and consequently the potential size of the public contribution to them. Cost-effectiveness analysis (CEA) is provided for in these cases to determine the least cost way of determining the capital project objective.

### **Appraising investment proposals within a single policy area**

MCA, CBA and CEA can significantly assist the process of establishing investment priorities between projects which are similar in nature provided that:

- consistent parameter values are used;

- there is a consistent practice on the factors properly to be taken into account in analysis. (The remarks made above concerning factors of questionable or limited relevance apply here.)

Establishment or parameter values for non-market items (e.g. time savings in respect of transport developments) should be as rigorous as possible.

### **Comparison of investment proposals across sectors/expenditure programmes**

The comparison across sectors of investment proposals using cost benefits analysis is difficult. However, it is important that the maximum degree of comparability is achieved. It is partly for this reason that the use of market rather than shadow prices is advocated. If shadow prices are used, it is important that the same, or at least not greatly divergent, shadow prices are used in different programme areas. If radically different shadow prices are used, the results of analyses cannot be validly compared, and they provide no guide to investment priorities. Users of shadow prices are encouraged to consult as widely as possible, including consultation with the Department of Finance, in the interests of achieving consistency in the matter.

### **Unquantifiable Benefits**

It is not always possible to quantify and value all benefits or costs of a particular project option. This may result in a situation where one option would be judged preferable if estimated cash values only are taken into account. A different option may have a lower cash value but may bring additional non-cash benefits or have lower non-cash costs. When this occurs, results should be presented in a form which allows the decision-maker to choose whether the additional non-cash benefits (or lower non-cash costs) are worth the loss in cash value which is involved in taking the second option.

An example of this is the treatment of pollution. Pollution involves social costs, which may be impossible to value in monetary terms. Information should be given in analysis to enable decision-makers to judge whether the differences between the costed net social benefits of alternative projects are outweighed by differences in their uncosted pollution effects.

### **Exchequer Cash flow Analysis**

Exchequer cash flow analysis should take into account flows both directly and indirectly associated with proposals, identifying the years in which the flows occur. Direct cash flows include Exchequer expenditure on building works, employment, planning costs, equity participation, grants and so on, and income from such items as user charges and dividends. Additional expenditures for which the Sponsoring Agency is not responsible, but which a project will necessarily involve, should be included. EU finance passing through the Exchequer should be included. EU finance going directly to a body from the EU Commission need not be included in Exchequer cash flow analysis; however, it should be included in a separate cash flow analysis which should also be made available to the Sponsoring Agency.

Indirect Exchequer cash flows (e.g. savings on unemployment payments, additional tax revenues) may be relevant but are not as amenable to reliable costing. For instance, it is normally inappropriate to assume that income tax receipts from the workers employed in a project are attributable to any substantial extent to that project. To do so would overlook the fact that similar Exchequer income would derive from the use of the same resources in alternative ways. Similar considerations apply to savings on unemployment payments.

Any amounts attributed to indirect cash flows should be based on estimates of the extra costs or revenues over and above those that would arise in the absence of the project. The assumptions used in estimating indirect cash flows should be consistent with those used in the economic analysis. Indirect Exchequer income should not be viewed as an important factor in favour of a project given the difficulty in estimating it reliably.

## Appendix 2

### Employing consultants for construction contracts

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#### Introduction

If the necessary resources are not available within the public sector to fully appraise a project the employment of outside consultants may be considered.

- Management consultants may be required to undertake detailed studies/appraisals.
- Technical consultants may be needed to give technical advice at various stages.

The first priority in engaging consultants is to ensure that the best quality of professional service is provided. It is essential that every authority which engages consultants should establish formal systems for monitoring and assessing the effectiveness and efficiency of consultants in the discharge of their contracts.

A comprehensive brief for consultants is of fundamental importance. All the clients' requirements should be set out in proper detail, together with a tentative programme for the completion of the work. The service to be provided by each of the consultants must be clearly identified.

Paragraph 1.12 of the Guidelines highlights the requirement that separate agreements for consultancy tasks at the appraisal stage and at the planning and implementation stages of a project are required, and that the contract under which consultants are engaged for particular tasks must make it clear that, if the project proceeds, they may not necessarily be engaged on later tasks. Fees should be sought on a competitive tendering basis.

The importance of complying with these requirements in employing consultants can be illustrated in a situation where, for instance, a project has proceeded to the planning stage. If, at this stage, circumstances warrant revising or abandoning the project, it is important that provision has been made in consultants' contracts for termination without incurring undue costs/liabilities.

Departments should try to anticipate their likely needs for consultancy services for project appraisal and planning purposes. Allowances for such services should be included in annual Departmental Budgets.

The current EU Directives provide for four procedures for awarding contracts by public bodies.

- Open: all interested parties may submit tenders in response to an Official Journal of EU (OJEU) notice
- Restricted: expressions of interest are invited through an OJEU notice and only parties' pre - qualified by the contracting authority are invited to submit tenders.

- **Competitive Dialogue:** this is a recently introduced procedure designed to provide more flexibility in the tendering process for more complex contracts, for example public private partnerships (PPPs). Under this procedure contracting authorities must advertise their requirements and discuss them with pre - qualified parties. Through a process of dialogue with the pre – qualified candidates, a contracting authority will identify arrangements or solutions (which will include indicative cost estimates) which best meet its requirements, at this stage it will invite final tenders from at least three tenderers involved in the dialogue process.
- **Negotiated:** contracting authorities may consult parties of their choice, with or without advertising, and negotiate the terms of the contract with them. The instances where this is permitted are very restricted and it may be used only in the limited circumstances set out in the Directive.

## **Advertising**

Contracts above the EU thresholds must be advertised in the Official Journal of the European Union (OJEU) and minimum prescribed times allowed for responses. Contracting authorities are encouraged to publish in the OJEU a Prior Information Notice (PIN) for requirements above the relevant thresholds, annually in the case of supplies or services or when outline approval is sought / granted? in the case of works. Publication of a PIN does not commit a contracting authority to proceeding with a project if circumstances change. Its purpose is to give advance notice to the markets and publication allows a contracting authority to reduce the minimum times for responses to tender notices.

Notices should also be published, and tender documentation made available for downloading directly, on the national public procurement website [www.etenders.gov.ie](http://www.etenders.gov.ie). The website has a facility for online publication in the OJEU. Publishing on the website generally meets national advertising requirements for contracts below EU thresholds.

## **Awarding Criteria**

Contracts are awarded on the basis of lowest priced or most economically advantageous tender (MEAT). Where MEAT is the basis for award, the contract must be awarded to the tender which best meets the relevant criteria. In addition to price they will include other criteria relevant to the subject of the contract. For example, they may include performance standards, running costs, servicing costs, lifetime costs, technical merit, technical assistance, and level of after sales service, environmental characteristics. The criteria, with the relevant weighting, must be made known to the tenderers in advance, either published in the contract notice or the request for tender (RFT).

Tenders must be evaluated objectively and transparently against the published weighted criteria. Objectivity and transparency is best achieved by the use of a scoring system or marking sheet based on the weighted criteria, indicating a comparative assessment of tenders under each criterion. The scoring system must include price and not ‘value for money’ or ‘cost effectiveness’ as a specific criterion. Value for money / cost effectiveness / economic advantage is largely the outcome of the completed evaluation.



## Framework Agreements

The Directives also provide for the establishment of “framework agreements” in which contracting authorities enter into arrangements with service providers, suppliers or contractors under agreed conditions for a period of time, normally not more than four years. Under these agreements, some elements of the requirement, for example quantity, price, precise product specification, will generally not be fully established at the start of the agreement. Framework agreements can be with one or more service providers, suppliers or contractors, selected following a competitive process, to fulfil requirements arising over the period of the agreement. If there is more than one party to the framework agreement, a contract may be the subject of a sub - competition between parties to the agreement.

Framework agreements are suitable for the procurement of design professionals on construction projects and for the aggregation of construction maintenance works in the public and utilities sectors.

## Utilities Sector

Separate procurement Directives cover the utilities sector. These apply to entities operating in the water, energy, transport and postal sectors. Private sector entities which operate under special or exclusive rights in the utilities sector are also covered by the utilities Directive. Most features of the Directives are common to both sectors. However, the utilities Directive provides more flexibility in tendering procedures, reflecting the more commercial remit of the entities it covers. For example, higher thresholds apply to supplies and service contracts under the utilities Directive and there is wider scope to negotiate contracts after advertising. Therefore a “competitive dialogue” procedure is not considered necessary. Under the utilities Directive there is a facility to establish lists of qualified candidates under specific conditions relating to openness and regular advertising for admission to the lists. Entities in the utilities covered are not required to advertise individual contracts where a qualification system has been established and is used in accordance with the terms of the utilities Directive.

## Further Information

More detailed guidance and procurement information can be accessed on the e-tenders website.

Main thresholds (exclusive of VAT) above which advertising of contracts in the Official Journal of the EU are obligatory, applicable from 1 January 2004 to 31 December 2005<sup>6</sup>:

1. The Directives and the GPA apply to the vast majority of contracts and the thresholds for advertising are as follows:

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<sup>6</sup> Thresholds are revised every two years. Complete and up to date thresholds can be checked on the EU public procurement website <http://simap.eu.int> which can be accessed via a link on *etenders.gov.ie*

<b>Works</b>		
Contract Notice/ Prior Indicative Notice	€5,923,624	Threshold applies to Government Departments and Offices, local and regional authorities and other public bodies.
<b>Supplies and Services</b>		
Contract Notice	€154,014	Threshold applies to Government Departments and Offices
Contract Notice	€236,945	Threshold applies to local and regional authorities and public bodies outside the utilities sector.
Prior Indicative Notice	€750,000	Threshold applies to Government Departments and Offices, local and regional authorities and other public bodies.
<b>Utilities</b>		
Works / Prior Indicative Notice	€5,923,624	For entities in utilities sectors covered by GPA
Supplies and Services	€473,890	For entities in utilities sectors covered by GPA
Prior Indicative Notice / Supplies and services	€750,000	

2. Advertising thresholds for contracts and entities not covered by GPA

Service Contracts	€200,000	Principally R&D and certain telecommunications services
Utilities Sector Entities	€5,000,000 for works €400,000 for supplies and services	Entities operating in gas, heat, oil and railways sectors

## Appendix 3

### General Conditions of Sanction for Multi Annual Capital Envelopes

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#### General Conditions of Sanction

Sanction to the multi-annual investment framework is subject to the following conditions:

##### (a) Contractual commitments

The level of contractual commitments (meaning formal legal contract or grant approval) made in 2004 in respect of 2005 will not exceed 85% of the 2004 allocation for the Department. The corresponding limits in subsequent years are 75% of the 2004 allocation for 2006, 60% for 2007 and 45% for 2008. These limits will be rolled forward each year.

##### (b) Virement

The Multi-Annual Investment Framework will not affect the normal rules for operation of virement between Vote subheads. A separate subhead will be established in your Vote to meet unitary payments arising under PPP contracts. Unitary payments from this subhead under contracts in respect of projects delivered by Public Private Partnership/National Development Finance Agency (PPP/NDFA) will be “ring fenced” and regarded as non-discretionary current expenditure. Virement will not apply to the carryover sums at (g) below.

##### (c) Programme contingency provision

The Department will make a contingency provision within its overall envelope to meet any unforeseen demands or additional costs which might emerge for the programme as a whole.

##### (d) Project contingency

In making provision for each project, account should be taken not just of the contract price but appropriate and reasonable provision should also be made for likely price increases, variations in specifications and other factors which might arise during project construction. (The extent to which this is necessary will be significantly reduced where design and build fixed price contracts are in operation.)

**(e) Project costings**

Departments must in their evaluation of a project satisfy themselves that any staffing and other current costs arising are consistent with Government policy on staffing and can be met within existing approved resources.

**(f) Grants to private companies, individuals and community groups**

An appropriate contractual arrangement to be put in place by the Department or its agencies, as appropriate, for all significant grants of public funding to private companies and individuals or community groups relating to the State's interest in the asset. In such cases they should, in particular, have in place a written contract to safeguard the Exchequer interest in the event of change of ownership. The contractual provisions should also provide for the repayment of such grants where the terms are not adhered to and in the event of sale of the asset.

**(g) Carryover of unspent annual allocations**

The Department may carryover into the following year unspent capital up to a limit of 10 per cent of the current year's Voted capital allocation. These sums will be lodged to the credit of the Department's PMG Account and may, in accordance with the provisions of Section 91 of the Finance Act, 2004, be spent in the following year upon approval by the Dáil of the Ministerial Order specifying the amounts by subhead. Any sum which is carried over and not spent in the following year will be surrendered to the Central Fund.

The Department will supply to the Department of Finance a statement of the total Voted amount it proposes to carry forward into the following year for inclusion in the Abridged Estimates Volume by 31 October each year. It will provide a definitive statement of proposed carryover amounts by the last Friday before the Budget each year.

**(h) Reporting requirements**

The Department should make arrangements:

- (i) to report regularly (at least every six months) to its MAC on the evaluation of capital projects prior to approval, the management of capital projects and on progress on its capital programmes and,
- (ii) to put a system in place to carry out annual spot checks of projects to ensure compliance with the requirements at (i) below (including the highlighting of variances against the agreed budget) and to report the findings of such spot checks annually to the Department of Finance.

The NDP/CSF Evaluation Unit will carry out periodic reviews of these spot check reports. The Department of Finance will furnish a copy of the NDP/CSF Evaluation Units review on such checks to the Secretary General of the Department for comment before considering what

action, if any, the Sponsoring Department needs to take on foot of any report.

**(i) Adherence to National and EU requirements in relation to capital appraisal, public procurement etc.**

The Department will comply fully with:

- The Department of Finance's Guidelines for Appraisal and Management of Capital Expenditure Proposals in the Public Sector (The 1994 guidelines are currently being revised);
- Where appropriate, requirements for undertaking Public Private Partnerships as set down by the Department of Finance, including the requirement to consult with the National Development Finance Agency on financing options for all projects in excess of [€20 million].
- Public Procurement procedures - both National and EU; and
- Tax clearance requirements as laid down by the Revenue Commissioners.

**(j) Annual Report**

Beginning in 2005, the Department will submit to the Department of Finance before the end of January of each year an annual report on the capital investment programmes covered by this Agreement. It will include:

- An outline of overall priorities for each of the capital programmes under its aegis over the next 5-year period consistent with the envelope set out in the Budget;
- A statement showing how the priorities are consistent with the National Development Plan, the National Spatial Strategy and other relevant Government programmes or strategies;
- For PPP projects costing [€X million, or more], an estimate by project of unitary payments arising on foot of PPP/NDFFA funding and a breakdown of such costs between capital, interest and maintenance payments; and
- Total level of contractual commitments entered into by future year.
- A report on progress on projects and programmes under the multi- annual investment framework.