CAPITAL INVESTMENT MANUAL

Post Project Evaluation

1995

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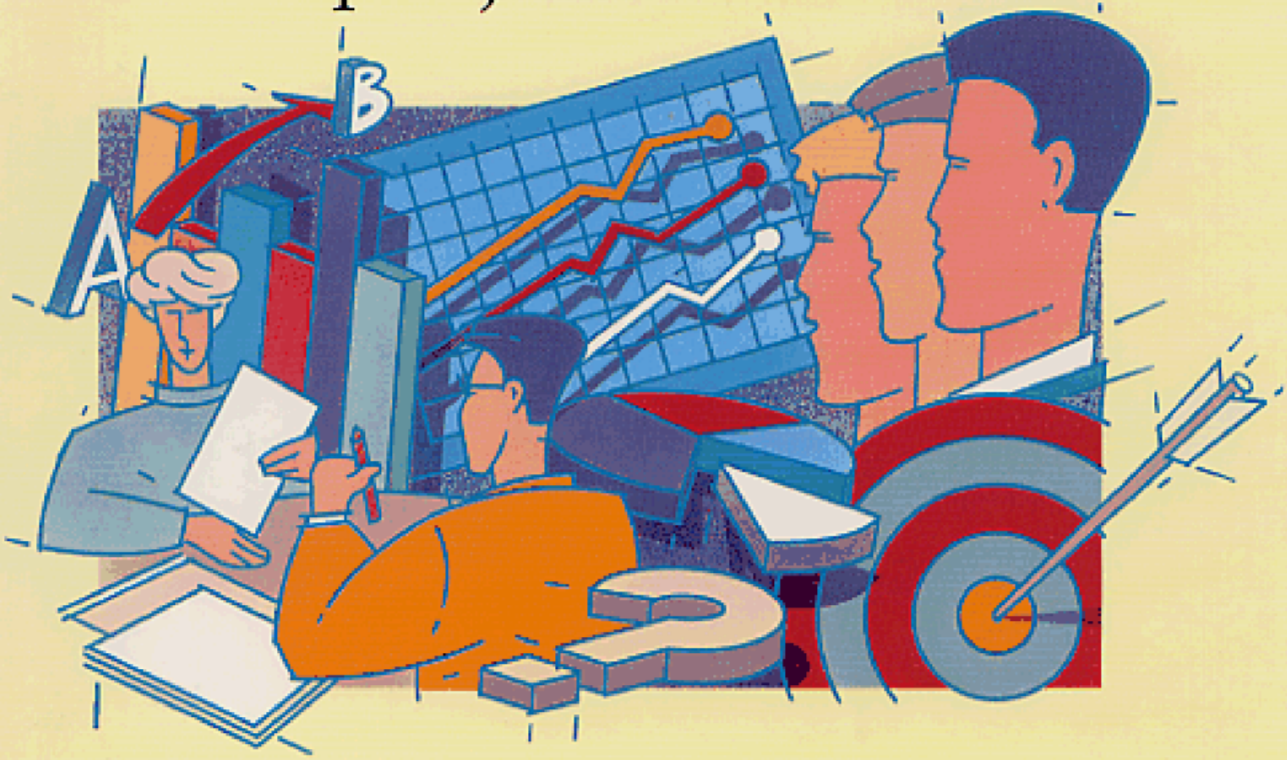
Capital Investment Manual

Post-project Evaluation



NHS
Executive

This booklet is part of the *Capital Investment Manual.* It sets out the basic principles and good practice that should be followed when undertaking a post-project evaluation.

The *Capital Investment Manual* comprises the following booklets:

Overview

Project Organisation

Private Finance Guide

Business Case Guide

Management of Construction Projects

Commissioning a Health Care Facility

IM&T Guidance

Post-project Evaluation

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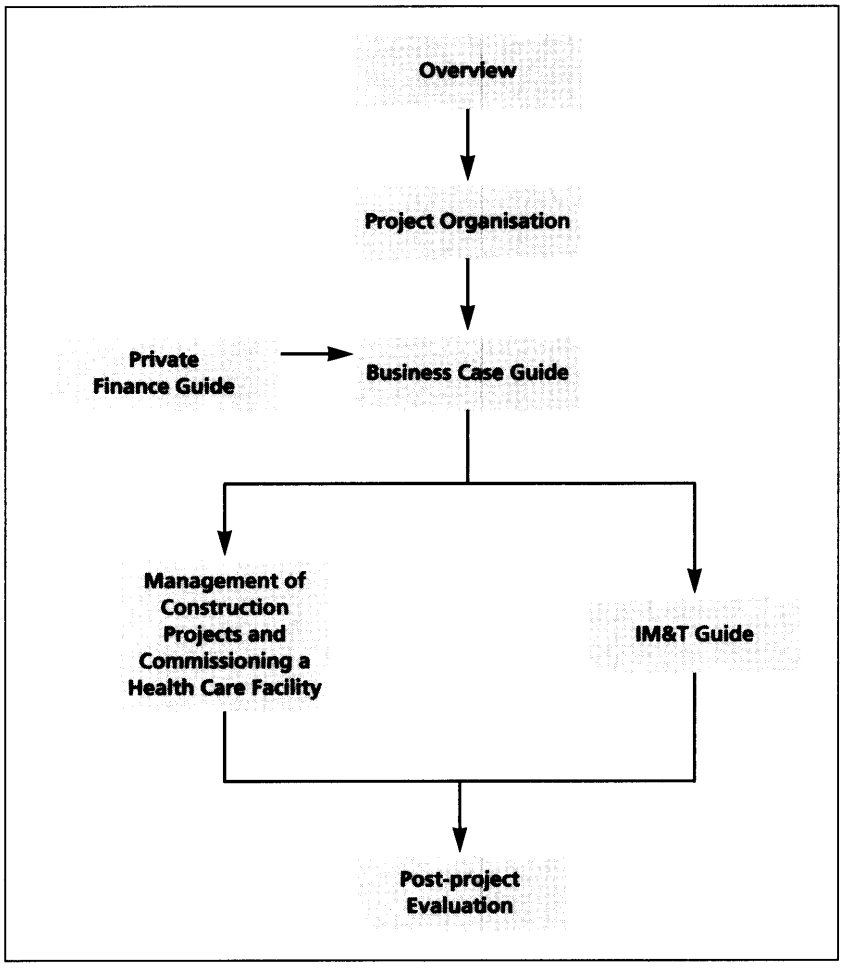

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Executive Summary

Post-project evaluation (also known as post-implementation review) was previously identified as stage 7 of 'Capricode'. However, it has not so far been widely practised in the NHS. The purpose of post-project evaluation (PPE) is to improve project appraisal, design, management and implementation. It is a learning process and should not be seen as a means of allocating blame. This guidance demonstrates the steps that need to be taken to monitor and evaluate the performance of NHS capital projects.

It is not proposed that evaluations should be unduly time-consuming or expensive. Performance indicators that can be utilised may already exist; if not, simple indicators may be developed for the specific project.

Evaluations need to be put in the hands of chief executives and other key decision-makers without delay. Chief executives will be expected to take full responsibility for the management of all stages of capital projects. This is particularly important where management action can be taken to remedy shortcomings, such as releasing latent project benefits.

It is hoped that this guidance will be a useful document for project managers.

Conditions

While all projects would benefit from evaluation, **it is mandatory that projects with a cost in excess of £1 million should be evaluated.**

The National Health Service Executive and HM Treasury will require copies of evaluation documents (referring principally to stage 3, the service objectives of the project – see below) above delegated limits for review. Copies will also be lodged in the Capital Investment Unit of the NHS Executive for use by other NHS project managers.

Method

The PPE process may be divided into three main stages:

Stage 1: plan and cost the scope of the PPE exercise at the project appraisal stage.

Stage 2: monitor progress and evaluate the project outputs on completion of implementation, including phased work.

Stage 3: review the outcomes (service aspects) of the project once it is operational. Central to this stage will be an analysis of any changes that might have arisen to the inputs relative to the original assumptions made in the business case.

The evaluation of the project should be expressed in terms of its objectives, which should relate directly to the business objectives of the unit.

The evaluation should also attempt to show what would have happened if the project had not been undertaken. In other words, what is the counterfactual? This enquiry may seem somewhat speculative, but it is important to recall the unchanged original situation (the 'do nothing' option), and to consider how it would have been likely to develop over the period in which the project was undertaken. This counterfactual will act as a benchmark against which the performance of the project may be measured.

In this guidance it is recommended that the project framework approach should be adopted for evaluations of NHS capital projects. The project framework is a simple matrix listing project objectives against indicators that are capable of measuring change. Risks to the project are also evaluated and discussed.

Stage 1: Project Appraisal

1.1.1 Full Business Cases should include a plan of action concerning aspects of the project that are to be evaluated and the stages at which evaluation is to take place. Approval will not be given unless post-project evaluation has been planned in advance.

1.1.2 It follows that the objectives of the project must be clearly understood, outcome measurements for these objectives can then be constructed.

1.1.3 In order to measure change over time objectives should be expressed as quantifiable measures of change. For example, a fall in infection and readmission rates would be a measure of improvement in the quality of surgery; reduction in the average time or cost of travel for patients would be a benefit in terms of access for patients.

1.1.4 Outcome measurements relating to objectives should be established before the project commences. Project evaluators will need to know what the indicators were before the project began in order to measure change over time.

1.1.5 Outcome measurements need not be complex. They should as far as possible be based on performance indicators already available, or else derived from relatively low cost and rapid sample surveys.

The Project Framework

1.2.1 A straightforward method of planning a project evaluation is to use the project framework approach, also known as the logical framework. This has been used for over two decades in many countries and industries. It is essentially a means of structuring in a clear and precise manner, during a project's inception, the link between intended inputs, expected outputs and the objectives to be achieved. The project framework should be used from the conception, through to the appraisal/approval stage and subsequent monitoring and evaluation.

1.2.2 The basic framework, in the form of a matrix, is set out as Form 1 in Appendix 1. This gives examples of information relevant to completing the project framework. An example of a project framework is given in Appendix 2. This is for a £10 million building scheme to house maternity services at a hospital. The scheme is under construction and is due to be fully evaluated on completion and commissioning. Appendix 3 gives a generic example of an IM&T evaluation of a project to improve respiratory services.

Policy Aims

1.3.1 The left-hand column of the project framework matrix should be completed first. This sets out the objectives of the project, the results expected, and the resources to be used. It is useful to begin with the overall policy aims. These are generally high-level policies from the Department of Health, purchasers, and NHS Executive Regional Offices.

1.3.2 Policy aims might include some or all of the following:

- *Health of the Nation* targets;
- integrating primary and secondary care;
- Patient's Charter objectives;
- Care in the Community policy;
- NHS Executive objectives;
- Regional Office service and capital policy; or
- purchasers' stated policy aims.

OVERALL BUSINESS OBJECTIVES

1.3.3 It will also be useful to refer in this section to the overall business objectives of the unit, which are stated in the business plan. The planned outcomes of the project will comprise a sub-set of objectives that will contribute to the general aims of the business unit.

1.3.4 Overall business objectives are likely to include:

- specified increases in activity;
- improvements in quality of care;
- increases in market share for given specialties;
- recruitment and retention of well-qualified staff; and
- improvements in customer satisfaction.

PROJECT OBJECTIVES

1.4.1 It is necessary to list the project objectives. These should be carefully defined, and should have appropriate characteristics.

Objectives should be:

- specific, and directly related to appropriate policies;
- quantifiable and time-bounded;
- verifiable by a third party;
- addressed to ends, not means;
- few in number, as this will make them easier to remember;
- achievable, although stretching the organisation; and
- prioritised, but allowing managers to adapt to change.

Some examples are:

- Increase immunisation coverage rates to 95% of the population of under fives within the next financial year.
- Reduce down-time of major systems.
- All buildings to be in physical condition B or better within five years.
- Reduce energy usage by 15% on project completion.
- Reduce staff time spent collecting data by 20%.
- Reduce perinatal mortality to the national average within two years.
- Reduce facility running costs by 10% within three years.

1.4.2 The project objectives stated within the business plan should provide the basis against which progress can be measured. The absence of clearly set out objectives would impede any meaningful evaluation.

PROJECT OUTPUTS

1.5.1 Project outputs should now be considered. Again, these will need to be clear and measurable.

1.5.2 In terms of the three stages identified for PPE (see page 3), project outputs refer to the second stage: the physical results of the project such as the building or the provision of new equipment, whether in its entirety or in phases.

1.5.4 There should be no confusion between project objectives and project outputs.

- Objectives refer to changes in service or in the impact of health service activity that occur as a result of the project.
- Outputs refer to the specific, measurable physical results of the project, such as phases of a construction scheme.

PROJECT INPUTS

1.6.1 Finally, the inputs to the project should be listed. These include the capital and revenue costs. Staff numbers and skill mix may also be included.

1.6.2 Capital costs for construction schemes can be categorised as follows:
- works costs;
- on costs;
- fees;
- equipment;
- VAT; and
- total.

1.6.3 Capital costs for IM&T schemes can be categorised as follows:
- hardware;
- software;
- wiring and communications equipment;
- VAT; and
- total.

1.6.4 Revenue costs can be categorised in as much detail as necessary. Broadly speaking, they might include:
- management salaries;
- other labour costs (by skill);
- energy costs;
- administration costs;
- maintenance expenditure; and
- training costs.

1.6.5 Staffing requirements can again be categorised in the appropriate degree of detail. Broad groupings are as follows:
- skill;
- grade; and
- number.

1.6.6 A key outcome of the evaluation will be an analysis of changes in inputs compared with the assumptions made at the beginning of the project. From this information a profile of risks to projects can be built up to inform future appraisals, for example, the likelihood of capital cost overruns.

Performance Indicators

1.7.1 The second column in Form 1 refers to the key performance indicators necessary for measurement of objectives. These should be identified for each category of objective.

1.7.2 There may be some apparent overlap between categories. For example, in the case study given in Appendix 2, perinatal mortality rates (PMR) are the performance indicator chosen for both policy aims and project objectives. However, at the policy level PMR is measured against national targets as outlined in *The Health of the Nation*. At the project objective level PMR is measured against local performance.

Measuring Performance

1.8.1 The third column considers how performance indicators are to be measured. A variety of sources may be applicable:

- Korner indicators;
- survey data;
- percentage of targets;
- percentage changes in performance;
- enumeration by project owner;
- construction reports;
- building commissioning documents;
- medical audits;
- personnel records; and
- management accounting systems.

1.8.2 It is important to specify here who is to be responsible for collating the data so that relevant information will be available to evaluators once the project is completed. As far as possible data that are already available should be used. However, it

may be necessary to undertake surveys or other specialised data collection exercises to extract important indicators. The costs and benefits of doing so should be commensurate with the size, complexity and expense of the project.

Assumptions and Risks

1.9.1 The last column of Form 1 lists the assumptions and risks underlying the project. It is very important that these should be made explicit. Sensitivity analysis will have been carried out as part of the business case, exploring potential variation of costs and benefits and outlining risk management strategies for the project.

1.9.2 Risks to policy would include the impact of high-level policy changes. Assumptions that have been made about underlying levels of funding for services could turn out to be erroneous.

1.9.3 Risks to project objectives would include changes in the environment in which the project operates. Examples are a shift in hospitalisation rates, an increase in social deprivation, and cuts in funding to purchasers.

1.9.4 Examples of risks to project outputs are: changing clinical practices and standards, advances in technology, changes in the expectations of patients, and changes in managerial objectives for the project.

1.9.5 Input risks are generally easy to identify but may be less easy to manage. They include the contractor going out of business or slowing down the project, changes in project management, inflation of project costs or staff costs above the level originally expected, staff recruitment problems, and inability to deliver projected revenue cost savings.

The Evaluation Team

1.10.1 The project evaluation manager and the composition of teams carrying out the evaluation will have been identified at the full business case stage.

1.10.2 The evaluation manager should be an individual with a good overall knowledge of the gestation and implementation of the project. The project director might be an appropriate choice.

1.10.3 An evaluation team might comprise an estates professional, a finance specialist, an IM&T specialist or a clinician as appropriate. At the project appraisal stage, the approximate cost will need to be considered, as will the source of funding, and the duration of the study. Including outsiders on the team as well as people involved in the planning and management of the facility should enhance objectivity.

1.10.4 If there is a long time lag between project planning and project commencement, the objectives of the project should be revisited. If there have been substantial changes to the project objectives, the project framework will have to be revised to establish the correct baseline for comparison.

1.10.5 At all stages during the appraisal process, the reasoning behind it should be documented, and working papers, calculations and the like filed for future reference. A thorough investment appraisal will enable future evaluators to understand better the gestation and planning of the project.

Stage 2: Monitoring and Evaluation of Projects

2.1 Construction projects in the £1 million to £10 million range typically last for up to two years, whereas large projects in excess of £10 million can be under construction for three to five years, depending on the size of the scheme. It is important to monitor projects during implementation as well as immediately after completion.

Project Monitoring

2.2.1 The project director will be required to take responsibility for project monitoring. A unit financial manager may also be a signatory to the report. A project summary may be prepared, as shown in Form 2.1 (page 11).

2.2.2 All projects over £1 million will be monitored for time and cost performance. Data are generated by NHS Estates which are the basis of S-curves (learned values) that give a useful visual display of project time and cost performance.

2.2.3 The project management should use such information protocols or in-house documentation to produce S-curves and related information. Progress reports such as the one shown in Form 2.2 (page 12) should be completed at appropriate intervals, usually on a monthly basis.

2.2.4 Once the project is finished and the health care facility has been commissioned, a completion report should be compiled, as indicated in Form 2.3 (page 13). This form includes an opportunity to comment on the post-project evaluation plan.

Evaluation of the Project

2.3.1 When the building has been completed, or IM&T system implemented, its construction record and functional suitability can be reviewed. This stage is frequently, but not exclusively, given over to estates or information professionals to undertake.

2.3.2 The major questions likely to be asked at this stage include:

- Was the project completed on time?
- Was it completed at budget cost?
- What were the reasons for any delay?
- What action would management recommend to prevent future problems?
- Has the estate maintenance backlog been eliminated as planned?
- Functional suitability of the building/system?
- What are the functional relationships of key services?

2.3.3 It is useful for a checklist of key questions relevant to the building work to be prepared in advance. An example is given in Form 2.3. The questionnaire can be completed during the various stages of construction leading to project completion. The reason for any delays can be explained on the relevant form, and any remedial action required may be taken.

2.3.4 The review team is likely to have observations to make concerning construction, materials, layout, etc which would be of immediate value to other projects at the planning stage.

Stage 3: Review of Project Objectives

3.1.1 At this stage a more wide-ranging evaluation of the costs and benefits of the project can be undertaken. This may include elements of stage 2. It will involve reviewing the performance of the project in terms of the project objectives. These will have been defined clearly at stage 1 of the evaluation exercise.

3.1.2 The evaluation is not likely to take place until the project is physically completed and is already being used as a service facility, although some large projects may be evaluated while still part-completed, but being partly operational.

3.1.3 The outcomes (activity and its consequences) of the project will not be amenable to evaluation until the facility has been in use for some time. A minimum would be around six months, and most projects would be evaluated within 12 months of commissioning of the building to allow a reasonable settling-in period. On completion copies of the report should be forwarded on to the Capital Investment Unit of the NHS Executive.

3.1.4 Further post-project evaluation could be undertaken at a later stage still, such as reviews of running costs and building effectiveness requiring a time series of several years' data. For example, it would be useful to review maintenance expenditure and energy usage data over a period of five years, or so.

Using the Project Framework

3.2.1 Evaluators will wish to begin their task by reviewing the original objectives and performance measures outlined at the beginning of the project and listed in the project framework.

3.2.2 It is important that the project is evaluated in terms of its original objectives. Nevertheless, if the objectives have changed, or if new objectives have been added, then the project should be evaluated against the adjusted baseline for comparison. In such cases clear justification for changing the baseline must be made. Ultimately the project may be judged in terms of its ability to adapt to change.

3.2.3 Evaluators may wish to add performance indicators if these can be measured retrospectively, for example, from data monitored for financial or performance management purposes. Additional indicators should relate to the list of objectives used to inform the original business plan. They are likely to include the following major features:

- quality of care;
- patient access;
- staff recruitment and retention;
- running costs; and
- competitive position;

3.2.4 In the original investment appraisal document a multi-attribute utility analysis (weighting and scoring) would have been applied to objectives that could not otherwise be quantified. It may be useful to repeat this exercise. A comparison could then be made of the two sets of scores.

3.2.5 Weighting and scoring should be carried out from both a purchaser and provider perspective. Patients or their representatives should be included in the groups carrying out the analysis.

3.2.6 Other measurable objectives should be easily accessible, provided that monitoring has continued over the life of the project. Performance indicators already used within the NHS are a rich source of data, for example:

- bed turnover;
- readmission rates;
- incidence of day surgery;
- activity data;
- infection rates;
- gross cost per case;
- overhead costs;
- staff costs;
- patient satisfaction surveys; and
- market share.

3.2.7 It is also useful to measure changes in the health status of the population served by the project. Measures of health gain can be related to policy objectives as defined in *The Health of the Nation* and other relevant documentation.

Specifying the Counterfactual

3.3.1 The counterfactual refers to the situation that would have existed had the project not been undertaken. It is not the same as the original situation that existed before the project began construction. It is necessary to consider how the enterprise would have been operating at the time of the evaluation if the project did not exist.

3.3.2 Specifying the counterfactual might be done by extrapolating trends that were already in place. For example, the costs of running a given facility will be known, and can be uprated by inflation to show how they would compare with current costs.

3.3.3 Although the practice of simply extrapolating trends in a linear fashion is not very useful for

long-range forecasting, it can be appropriate for the relatively short period spanning construction, completion and commissioning of a project.

3.3.4 When the evaluation is undertaken it is important that costs should be expressed in constant prices. Usually the most recent level of prices is used for comparison, and past prices adjusted to reflect price changes since then.

3.3.5 Sometimes management changes are undertaken in tandem with the physical and organisational changes brought about by the project. It then becomes difficult to distinguish these from planned changes. The evaluators will need to exercise judgement in ascribing the degree of change brought about by the project itself and that produced by changes in the managerial and organisational environment.

3.3.6 Despite the difficulty of defining the counterfactual, an evaluation carried out using the project framework will clearly demonstrate the degree of change in performance indicators. These are in turn related to specific project objectives. If the indicators are in line with, or exceed the outcomes predicted at the project appraisal stage, the project may be judged a success, regardless of the precise anatomy of the change.

Stage 3 Evaluation Teams

3.4.1 The composition of teams undertaking post-project evaluation at stage 3 is likely to be multi-disciplinary, and drawn both from within the unit and from outside sources such as other units, health authorities, the NHS Executive, consulting firms, and academic departments.

3.4.2 Appropriate team members would include:

- clinicians;
- nursing staff;
- HA purchasers;
- GP fundholders;
- patients;
- NHS Executive administrators;
- estates professionals (architects, surveyors, engineers, quantity surveyors);
- economists;
- IM&T professionals; and
- accountants and other finance specialists.

3.4.3 A large evaluation may require a number of sub-groups to report on various aspects of the project. In this case, a team leader will need to be appointed to ensure that the elements are compiled in a final report.

Timetable for the Study

3.5.1 A stage 3 evaluation need not take very long to complete. An indication of likely time allowed is given below:

- minor projects (up to £1 million) 1 month
- small-scale projects (£1 million – £10 million) 1–3 months
- medium-scale projects (£10 million – £20 million) 2–4 months
- large scale projects (over £20 million) 3–6 months

3.5.2 Once completed, two copies of the report should be forwarded to the Capital Investment Unit of the NHS Executive. The address is given in the introduction to this report. A copy should also be sent to HM Treasury if the investment was above delegated limits. Further copies may be made available, at the management's discretion, to other interested parties, including the general public.

3.5.3 It is expected that senior management will pay close attention to the results of the evaluation, and take action to ensure that the potential benefits of the project are realised as far as possible.

3.5.4 The longer-term value of PPE is twofold. Firstly, it contributes to the corporate memory of the NHS, being of value to planners of other projects. Secondly it adds to the experience and abilities of the individuals involved, which they may to take with them to other posts.

Appendix 1: Forms

FORM 1: PROJECT FRAMEWORK MATRIX

OBJECTIVES	PERFORMANCE INDICATORS	METHOD OF MEASUREMENT	ASSUMPTION AND RISKS
Policy/Business Aims			
Health of the Nation Patient's Charter Care in community National IM&T strategy Purchaser's needs	*HON* Targets Charter targets Targets for strategy Increase activity	National data and norms	Purchasers' revenue Policies change Targets change
Project Objectives			
Reduce mortality Increase activity Increase effectiveness Reduce output costs	Mortality by specialty Activity by specialty Outcome indicators Output prices	Local data and norms Clinical data Patient survey Finance database	Management objectives change Savings not achieved
Outputs			
Building Equipment IM&T system	Building phases Implementation progress reports	Time and cost monitoring Benefits realisation	Time overruns Delayed/reduced benefits
Inputs			
Capital Revenue Personnel	Target capital cost Target running cost Planned staffing mix	Time and cost Finance database Personnel database	Cost overruns Savings not achieved Staff recruitment

FORM 2.1: CAPITAL PROJECT MONITORING

PROJECT SUMMARY

1. PROJECT	2. PROJECT REFERENCE NO.

3. PROJECT ELEMENTS		Expected Date of		Cost	
No	Description	Start	Completion	Original Estimated	Final Actual
			Total		

4. PROJECT OFFICERS

Project Manager Name ..... Location .....

Financial Coordinator Name ..... Location .....

Monitoring Officer Name ..... Location .....

Signed ..... Date .....

PROGRESS/ANNUAL REPORT

Project ..... Period Ending ..... FY .....

Project Element No	Description	Approved Original Estimate (As per Investment Appraisal)	Contract Price/ Estimated Cost of Work	Expenditure c/f from Previous Years	For Current Year				For Total Project			Remarks
					Budget (including Approved Variances)	Expenditure To Date	% of Work Completed In Year	Expected Out-Turn in current Year	Total Budget (including Approved Variances)	Total Expenditure To Date (cols 5+7)	Expected Out-Turn On Completion	
1	2	3	4	5	6	7	8	9	10	11	12	13

Signed ..... Date .....

COMPLETION REPORT

A. To be completed by Project Manager in conjunction with Financial Coordinator

1. Project –

2. Project Ref No –

3. Date of Completion –

4. Reasons for vacancies between approved and final costs (use additional sheet if required) –

5. Would you please make any comments on the completion of this project that could be useful to others considering similar projects (use additional sheet if required) –

6. In the light of experience gained are there any changes you wish to suggest for the Post Implementation Review (use additional sheet if required) –

Signed.....(Project Manager) Date.....

B. To be completed by the Monitoring Officer

Comments

Signed.....(Monitoring Officer) Date.....

Appendix 2: Post-project Evaluation Plan for a Maternity Unit

Introduction

A Trust has decided to carry out a full evaluation following the construction of a new maternity unit, which will cost £10 million and is scheduled to be completed in 1994/95. Therefore, a project framework has been established which is based on NHS Executive guidance and is shown on page 16.

The new maternity unit will replace existing accommodation, which does not meet the requirements of current RHA guidance on maternity services. The improved accommodation will enable significant improvements in the quality of service to be achieved. One major outcome of the project should be a significant reduction in the district perinatal mortality rate, which is currently above national and regional norms.

The unit will provide a comprehensive obstetric service for residents of the locality and for those mothers in surrounding districts who would currently be referred to the general hospital.

The project has a number of specific objectives which are detailed in on page 16. The objectives fall into three broad categories: improved environment, improved efficiency and improved usage of the unit by mothers in the area.

Improved Environment

Currently the maternity service is delivered in an environment not suited to modern midwifery and obstetric care. Women need less clinical and more relaxed surroundings in which to have their babies. They require privacy at all times, whether in labour or caring for their babies afterwards. They need to have space to see their families, to keep mobile, and to have facilities for eating, socialising and relaxing, as well as sufficient bed space.

The existing building is not conducive to the delivery of such a service, and is out of step with the philosophy of care espoused by the staff of the unit; with the mission statement of the trust; and with the overall objectives of the NHS to provide an efficient, timely and quality service acceptable and responsive to the needs of mothers, babies and families.

Improved Efficiency

The existing building has had additional rooms constructed in an *ad-hoc* way, expansion taking place wherever space has been made available. This means that there is no planned sequence of care or logical progression from one clinical area to another. For example, the operating theatre is on a different floor from the delivery suite, and this could compromise safety, especially as there is no integrated recovery area or piped services. The Trust and the district and regional health authorities are anxious to reduce the perinatal mortality rate. It is considered essential, therefore, to have emergency services located within the delivery suite.

The current layout of the delivery suite is such that the first stage rooms are used until the mother is transferred, in a state of advanced labour, to the delivery rooms. It would be more efficient and safer to have women admitted and delivered in the same room, as well as being more cost-effective in terms of linen, porterage and domestic services.

Improved Usage of the Maternity Unit by Walsall Residents

Currently women choose where they wish to have their babies delivered. As all the surrounding districts have purpose-built maternity units constructed within the last 20 years, there is a small but significant number (approximately 750 p.a.) of residents who opt for the more modern facilities offered by these units.

This means that care is fragmented between the unit admitting for delivery, and the antenatal and postnatal care given by local midwives and general practitioners. This fragmentation would be reduced if women were delivered locally as well as receiving the bulk of their care locally. It would also minimise travelling times and costs incurred by mothers.

Overall Benefits of the New Unit

Improved facilities in terms of space, environment and 'high tech' facilities will be the obvious benefits stemming from the building of the maternity unit. Less obviously, the attitudes of staff are affected by their environment, as are the attitudes and responses of mothers and their families.

A quality environment helps to foster quality services. The effects of a good environment are visible in improved relationships at all levels, and a willingness and determination to produce good results. This means contented parents with a live, healthy baby, satisfied with the care which has been given and appropriately prepared for parenting responsibilities. It also means satisfied professionals secure in the knowledge that they have given the best possible care in the best possible environment.

PROJECT FRAMEWORK FOR THE MATERNITY HOSPITAL

OBJECTIVES	PERFORMANCE INDICATORS	METHOD OF MEASUREMENT	ASSUMPTIONS AND RISKS
Business Objectives			
To improve the health of pregnant women and their babies in the local area	Reductions in number of stillbirths and early neonatal deaths	Korner indicators Perinatal mortality returns Maternal mortality returns	Financial constraints on both providers and purchasers
To fully meet any relevant statutory policy requirements, e.g. accommodation categories, energy efficiency	*Health of the Nation*/Patient's Charter indicators: Backlock maintenance, Energy efficiency	Percentage of target PMR % in Categories C & D % reduction in energy volume	No fundamental change in NHS policy
To cope with any contingencies that may arise	Improvement in consultant cover	Consultants/children; Consultants/caseload	
Project Objectives			
Increase the efficiency and effectiveness of the unit	Bed to knife in 19 mins Ability to provide increase in service (births per annum)	NHS PI record Count by sponsor Reduction in outflow/ Increase in inflow of residents from other districts	No unexpected change in birth rate Continuation of 'deprivation' trend
Enhance the unit's competitive position	Increased market share Contracts placed by purchasers including surrounding DHAs		Continuation in patterns of referral
Ease the recruitment and retention of staff Improve staff morale	(FHSA, CHC) retention, turnover, sickness	Raised staff morale indicated by retention levels and reductions in sickness/ absence levels	No major change in social/ economic conditions in local area
Reduce running and maintenance costs	Costs/1000; Costs/case	Cost per case comparison	Improved facilities successful in attracting clinical staff
Improved customer satisfaction	Satisfaction surveys		No major change in customer expectations
Improved security	Reduction in no. of incidents	Security incidents log	
Outputs			
Provision of an up-to-date service within a modern maternity unit	Increase in throughput Annual satisfaction survey Improved functionality of building	Comparison to previous figures Comparisons (longitudinal/ cross sectional) Transfer and transmission of information times	No increase in home delivery trend Patients may prefer more privacy and less clinical surroundings Purchasers prepared to pay for quality care in an improved environment
Inputs			
Capital	Project sponsor's report on costs Commissioning costs	Percentage overrun on cost and time (slippage) Commissioning document (stage 6) signed off	Commercial viability of contractor Price stability – effects of housing market recovery
Running • maintenance • energy • labour	£ per m²/birth/case Heating/maintenance costs	A management information system plus Korner	Purchaser able to meet revenue consequences of project, (capital charges)
Staffing • numbers • skill mix	Count Percentage in grade	Personnel records	Required additional consultant recruited

Appendix 3: Generic Example of an IM&T Evaluation Report for Respiratory Diseases

PROJECT FRAMEWORK MATRIX FOR IM&T

OBJECTIVES	PERFORMANCE INDICATORS	METHOD OF MEASUREMENT	ASSUMPTION AND RISKS
Business objectives			
Improve care of patients with respiratory diseases	Number of complaints Number of readmissions Number of out-patient follow-ups	Log all letters/calls of complaint (passive) Survey GPs and out-patients Compare to national average	Number of complaints not increased because complaints procedure now more publicised Reason for readmission due to medical reasons not lack of community support
Project objectives and sub-objectives:			
Improve care of asthma patients	Number of deaths from asthma in population	Compare with national figures, previous hospital figures	No other environmental factors, e.g. major works
Reduce number of inappropriate breathing aids used	Number and type of breathing aid prescribed in hospital	Compare with national figures, previous hospital figures	Know local historical variation from average
Outputs:			
Fewer aids prescribed Correct aids prescribed Fewer asthma deaths Better-informed patients	Prescription budget Deaths of hospital asthma patients Number of patient enquiries	Change in prescribing habits	
Inputs:			
Online asthma care database Terminals for access Training for use User and maintenance support staff	Usage time and number of users Number of help requests Number of call outs	System audit, cost of access System audit Help desk log Help desk log, problem sheets	Downtime Acceptance by clinical Containment within budget Containment within budget

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