

Writing a good business case

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Writing a good business case

Radiology is and always will be in a constant state of flux. Technological developments, changes in patient, political and clinician perspectives and advances in knowledge and disease processes ensure that the need for radiology services is always changing. Radiology must respond with robust business cases for projects which appropriately meet the needs while best using the necessarily limited capital and revenue resources. To assist members, The Royal College of Radiologists (RCR) has provided an update to our 1996 document *Clinical Radiology – Writing a good Business Case*, which has now been withdrawn.

Throughout this document, 'trust' will be used to refer to the different types of health organisations delivering healthcare in the UK.

What is a business case?

A business case should be considered as a proposal to a decision-making body to provide a new service or to upgrade or maintain an existing service. In its fullest form, it summarises the detailed research required to allow the organisation to come to an investment decision on a proposed project.

A business case documents the key analytic phase of a business plan, which is itself part of a wider trust strategic plan.

The business plan is a broad entity consisting of three developmental phases:

- Planning – the business case
- Project implementation
- Project evaluation.

The business case evolves through three sequential iterative phases:

- Scoping
- Detailed planning
- Procurement.

As a business case develops, informed decisions are made about the appropriateness of the case, before authority is given to proceed to the next phase. The business case should, therefore, be considered as an evolving proposal to a decision-making body to authorise a new service or to upgrade or maintain an existing service. The business case should demonstrate that the proposed service is in tune with the strategic imperatives of the department, trust and local health economy, that is a good use of capital and revenue; and that is affordable. From its outset, it should express clear aims and objectives designed to respond to a business need. The business case should develop with research, consultation and analysis, through a preferred way forward and a preferred overall solution, to a detailed plan for project management, procurement, delivery and implementation.

What makes a successful business case?

A business case can reasonably be regarded as successful if:

- It meets the above strategic, economic, business, financial and feasibility criteria
- It is authorised by the appropriate body at each phase of its development
- It results in a project judged retrospectively as successful by the parameters for success agreed during its development.

It is much likelier to be successful if:

- The documentation is designed to be read by the key decision makers
- Key players in the decision-making, consultation processes, development and product supply have been fully involved
- Staff with specialist skills essential to the project are involved in its planning
- Personnel using the new service and staff likely to undergo changes in role buy into the service
- The documentation meets the parameters for assessment of business cases laid out in the Treasury Green Book and the Capital Investment Manual or Scottish Capital Investment Manual (see Appendix 1).

- The documentation must be well structured and readable. This particularly applies to any summary information provided. The physical layout of the documents must identify clearly:
 - The aims and objectives
 - The preferred overall way forward as well as alternatives to the preferred way forward
 - The preferred solution and alternatives to the preferred solution
 - The benefits and risks of these preferred and alternative ways forward and solutions
 - The benefits and risks of the status quo
 - The indicative costs in early phases of the business case, proceeding to detailed costs in later phases.
 - A clearly defined intended project methodology and plan, with clear project phases, dependencies and interdependencies, milestones and completion dates, and control mechanisms
- The project sponsor must be identified early and must take full ownership of the project
- Lines of responsibility for the project must be explicitly stated and relevant responsible personnel identified.

What makes projects unsuccessful?

Projects fail. Failure can become apparent at any point during scoping, planning, procurement, implementation and post-implementation assessment. Early failures result in relatively small resource implications. Failures which are not recognised until implementation impact on human resources and staff morale; upon trust finances and the public purse; and upon political and public perception.

Sometimes the reasons projects fail are unpredictable. Regrettably, however, many projects fail for predictable reasons.

Predictable failures

Predictable failures generally occur because of errors in the business planning, project planning, project management and procurement processes. Such failures can often be avoided by adherence to the processes detailed in the Capital Investment Manuals produced by the Treasury and the Scottish Executive, the Treasury Five Case Model, and the PRINCE 2 project management tools and methodology.

Unpredictable failures

The business case represents a planned response to a perceived business need at a particular moment in time. Unpredictable project failures arise largely from changes in the business environment, the financial environment, the clinical environment or the wider political environment. The larger the project and the longer the planned schedule of the project, the greater are the risks of unpredictable failure.

To minimise and mitigate against unpredictable failures, the first step of each phase of the process is re-evaluation of the strategic need, aiming to identify potential failure before large human and financial resources are expended.

Much has been written about project failures. For one succinct analysis and check list, see [Common project failures & remedies](#) from the Scottish Capital Investment Manual (SCIM).

Knowledge, personnel and skills required in constructing a business case

Business case development should be regarded as a mini project within the wider eventual project proper. It should be approached with a clear understanding of the components required to bring the full project to a successful outcome.

Key skills and functions

- Organisational
- Financial
- Managerial
- Project management
- Technical
- Human resource
- Contractual and procurement
- Estates and facilities
- IM&T and information governance

- Clinical governance

Key skill-holders – your key partners in planning

These include the following:

- Clinical leads, general managers and executive directors within the trust
- Regional and central funding bodies for larger projects
- Clinicians who are most likely to benefit from the new service
- Professional colleagues within the radiological department
- Trust finance director and directorate accountant
- Projects director and project manager
- Estates manager
- IM&T manager
- Information governance manager
- Clinical governance manager
- Contracts or procurements manager
- Human resources department
- Any personnel group likely to be affected!

Remember that any change to the status quo may be driven or blocked by your potential partners. Ensure they all feel part of the process of change.

The decision makers and the local and national decision-making processes

At each phase of business case evolution, a decision will be made whether to proceed to the next stage. Diagnostic imaging is inherently capital and revenue intensive. Radiology projects may vary in size over several scales of magnitude. Accordingly, depending on the size of the project, decisions regarding the acceptance of a business case lie at various levels.

For small projects up to around £5,000, decisions may be made at the level of the department or directorate general manager. For larger projects, most traditional or foundation trusts have a decision-making body below the level of trust board.

For yet higher levels of project funding in non-foundation trusts, approval may be required by the trust board itself. For very large projects, Treasury approval is required (see Appendix 2 for further details).

For foundation trusts, there is more leeway in the decision-making process, and precise decision mechanisms vary between Trusts. Although the Strategic Health Authorities (SHAs) and primary care trusts (PCTs) have now been abolished, local stakeholders should continue to be involved in the consultation processes, and Monitor, the body responsible for overseeing foundation trust financial and clinical governance issues, will wish to be informed about projects which could potentially adversely impact on the corporate or clinical stability of the trust or its local health economy. Monitor will ultimately intervene and will insist on remedial action if a large or mission-critical project does not proceed in accordance with plan, or if there are unanticipated over-runs on budget or timing (see Appendix 3. Foundation trusts and Monitor).

When producing a business case involving procurements greater than around £100,000, one should also be aware of the European Union rules on procurement which are updated on January 1 every two years (see Appendix 4. EU Public Contracts Regulations).

Project skills

The business case should be approached with a clear understanding of project management, project hierarchy, project methodology, and the skills and roles required to bring the whole project to a successful outcome. The requisite skills are often readily available within a large NHS organisation and, for smaller projects, the general manager, clinical lead, department accountant and other departmental staff may together possess these skills. One must not, however, underestimate either the work required or the value of external expertise. This especially holds for larger projects, particularly those involving construction or for more specialised installation. For a fuller account of project management, see Appendix 5. Project management.

Financial and accounting skills

At each stage of its evolution, in accordance with the Treasury Five Case model, a business case is assessed for affordability and good value for money. A radiology department uses a considerable proportion of trust revenue and capital resources. Business cases can vary markedly in size and, accordingly, the decision making process may lie at the level of department/directorate, trust, or the Treasury. Your directorate accountant and your trust's finance department play pivotal roles in the construction of your business case.

There are several models available for funding a project. Which model to use is dependent on project size, lifespan, capital and revenue cost, and the availability of different sources of capital and revenue funding. A fuller examination of available alternatives and their relative merits and demerits is given in Appendix 6. Funding options.

You should be aware that the national and EU rules about tendering for large and medium-scale projects should be reflected in your business case (see Appendices 2 and 4).

Human resources (HR)

With all but the smallest projects, there are human resource implications. The issues involved may have important human consequences and financial resource implications. Again, while many of the issues may be handled by department staff, expert advice and support is available from your HR department. Issues include:

- Employment
- Change management
- Staff training.

Employment

Your trust's HR department has experience in handling the human, legal and financial issues arising from staff recruitment, deployment, redeployment, retention, reallocation and redundancy. In particular, they are likely to have knowledge and understanding of employment law.

Change management

Staff may well feel threatened by the process of change and these issues need handled in an appropriate and sensitive way. Use HR's expertise to plan the best strategies to handle these issues. Inept management will cost you dear both in budget and the ultimate success of the project. Ensure that likely costs are foreseen and allow for the unexpected.

Training

Any project may carry with it training issues. New equipment may require specialised training. In some instances, providers of new equipment may provide some training. It is essential to ensure that required training will be given and that it is contained within the overall budget.

IM&T

The IM&T implications of major NHS projects are frequently underestimated or overlooked and should be considered early in the planning process (see Appendix 7).

Staff buy in

Existing staff within a radiology department should be regarded as key to the project's success. A project may well also result in changes in practice and roles of clinicians, managers and other key staff groups. Staff should be consulted very early in the project development.

If at all possible, one must endeavour to allow these key staff to own the project, by early consultation and by involvement in project planning and key decisions.

Clinical governance

Most substantial projects carry a clinical governance payload. Key considerations include patient safety, patient protection, patient data and patient involvement. Ensure your clinical governance groups know what is envisaged.

Information governance

If your proposed project uses, communicates, transfers, or stores patient or staff clinical or personal data, due regard must be given to the means by which this data will be handled and safeguarded.

There is extremely useful guidance on the NHS Connecting for Health website, with Information Governance Toolkits tailored to various NHS organisations including acute NHS trusts at:

<https://www.igt.connectingforhealth.nhs.uk/>

The advice on the site is succinct, readable and comprehensive. An Information Governance Statement of Compliance (IGSoC) and an Information Governance Assurance Statement should be completed (<http://www.connectingforhealth.nhs.uk/systemsandservices/infogov/igsoc/links>). The latter is a mandatory

requirement for connection to the NHS National Network (N3) and other Connecting for Health facilities. A fuller discussion is given in Appendix 8. Information governance requirements.

Estates

Ensure that your estates department are involved early in the process. They have overall responsibility for any new building work and the necessary infrastructure required within this.

Contracts and procurement

Most trusts have skilled contracts and procurement staff. They will often expect a business case to be expressed in terms of preferred or shortlisted options in a common financial format, where each option can be satisfactorily compared with the others. This is not a job for amateurs! They also have knowledge of the providers and possess the negotiation skills to ensure robust contractual arrangements. In addition, they are familiar with the law on contracts and national and EU rules on procurement and tendering. Their experience, knowledge and skills are essential for your business case (see Appendices 2, 4 and 6 for more information).

Phases of business case development

Business case development should be considered an iterative process. In accordance with the best-practice guidance given in the Treasury Green Book and the Capital Investment Manuals (see Appendix 1), a fully sized business case is usually considered in terms of three phases:

- Scoping phase, usually expressed as the strategic case
- Planning phase, usually expressed as the outline business case
- Procurement and detailed project planning usually expressed as the full business case.

Project scales

The size and cost of a project determines the rigour with which the full scoping, planning and procurement model is followed. A small project may be expressed as a business case on one or two A4 sheets. A business case for a much larger project requires considerably more detail with key outputs from each of the iterative stages. Representative templates are given on pages 30 and 32.

The evolution of a fully sized business case

The phases and processes involved in business case development are detailed in the Capital Investment manuals, the Office of Government Commerce, the Scottish Executive and in PRINCE 2 manuals in differing but parallel terms. All adopt similar approaches; however, for the purposes of clarity, the key outputs from the three phases are detailed below.

Project phase	Output
<i>Phase I. Scoping</i> Strategic outline programme & Strategic outline case	The strategic context The case for change The preferred way forward Indicative costs
<i>Phase II. Detailed planning</i> Outline business case	Full five case model evaluation of the options to deliver the 'preferred way forward' Detailed costs The preferred option chosen The 'likely contract' The overall plan for procurement – the procurement strategy
<i>Phase III. Procurement</i> Full business case	Details of the procurement process Details of the management arrangements to deliver the project A document suitable for a final investment decision A contract ready for signing

Phase I. Strategic outline programme

Having ascertained that there is a need for change, the strategic context and the case for change are explored, and a 'preferred way' found which meets the strategic imperatives of the trust, the local health economy and the broader NHS.

Key outputs

- The strategic context
- The case for change
- The preferred way forward
- Indicative costs

To do list

Any project must match the strategic direction of the trust and the wider health economy. In general, a project will seek to do one of the following:

- Provide a new service
- Expand or improve an existing service
- Ensure ongoing provision of current service
- Contract or curtail an existing service.

The strategic outline programme should state the strategic outline context and indicate that the proposed development is in line with the strategic aims – the 'strategic fit'. Having indicated a case for change, that case should be justified – the strategic outline case. The eventual output from the scoping steps should include the following:

- The strategic context in terms of the trust's strategic plan
- The key strategic service requirements
- The funding body's investment and business objectives
- Expression of the key strategic requirements as SMART terms – the objectives must be:
 - Specific
 - Measurable
 - Achievable
 - Relevant
 - Time constrained
- The current market for the new service – be aware that markets often change rapidly in accordance with, for example, health perceptions, political expediencies and changing costs
- The benefits and risks of the status quo
- The benefits, risks and constraints of the proposed project
- Key project dependencies
- Key critical success factors
- Long list of options for a way forward
- Strengths, weaknesses, opportunities and threats (SWOT) analysis on basis of research and consultation
- Shortlist of options for a way forward
- The preferred way forward
- Indicative costs.

Available options should be explored. A long list should be prepared and pared down to a manageable shortlist on the basis of analysis and consultation (see Phase 1. Consultation processes).

As indicated above, the documents produced should refer to the Treasury Five Case Model and the Capital Investment Manuals as in many cases this will form the basis on which the proposal is assessed (see Appendix 1). In particular, it should follow the five arms of this model:

- Strategic – meets appropriate strategic aims and objectives
- Economic – is good value for money
- Commercial – makes good business sense
- Financial – is affordable
- Managerial – is achievable.

At the end of this first phase, the following should be met:

- A clear strategic case should have been made

- The project should be commercially feasible and deliverable
- The project should be affordable within an agreed budget
- The project should meet clear, measurable management deliverables.

The strategic outline case should end with a recommendation signed by the project sponsor.

Phase I. Consultation processes

The decisions made in this process are crucial to the eventual project success, and should be owned by the whole team. At key decision points, it is prudent to bring together the potential users, project staff and stakeholders at brainstorming sessions. Typically, one would use a workshop to agree the following parameters:

- Overarching business needs
- Investment objectives
- Scope of the project
- Desired outputs and outcomes from the project
- Critical success factors
- Possible broad options, often expressed as a long list.

A second workshop is generally required to firm up the broad options into a usable shortlist. Conventionally, this has been expressed in terms of:

- A reference project – often, but not always, taken forward as the preferred option.
- A 'do nothing' option
- A less ambitious option
- A more ambitious option.

Workshops are explored more fully in Appendix 9. Workshops in business case planning.

Phase II. Detailed planning – the outline business case

Having re-checked the business parameters examined in Phase I to ensure that the strategic context and the underlying commercial, financial, economic and managerial drivers remain valid, the outline business case examines the preferred way forward in detail and generates a more detailed preferred option, a detailed draft of a likely contract and an intended plan to procure the project.

Key outputs

- Full financial, commercial, economic and managerial evaluation of options
- Preferred option generated from shortlist options by strategic, economic, commercial, financial and managerial option appraisal
- Statement of commissioner/purchaser/stakeholder support
- Likely contract
- Procurement strategy.

To do list

A: Strategic, economic, commercial, financial and managerial option appraisal

I: Assess the options

For each of the five-case model parameters, assess the options from Phase I:

- The status quo option; that is, no change
- The reference project, generally the preferred project against which others are evaluated
- A further, more ambitious option
- A less ambitious option
- Strategic assessment
 - Re-evaluation of strategic context and shortlist generated by Phase I
- Full financial, commercial, economic and managerial evaluation of options
 - Review of the indicative costs stated in Phase I
- Value for money (VFM) assessment including:
 - Full evaluation of costs
 - Assessment of risks including service risks and optimism bias, sensitivity analysis and switching value (crossover value) analysis and scenario planning. For a fuller discussion on these seemingly obscure terms, see Appendix 10. Assessing risk and sensitivity to risk.
- Financial (affordability) assessment:
 - State treatment of the project on the balance sheet
 - Do full financial profile for each shortlisted option
 - Adjust all costs to net present value (NPV); see Appendix 11. Normalisation of costs
 - Assess non-financial risks and benefits
 - Assess uncertainties (sensitivity analysis)
 - Assess financial impact on the funding body.

II. Describe preferred option.

B: Procurement strategy

- Detail preparations for potential contract
- Detail procurement strategy
- Specify whether regional procurement or other collaborative arrangement
- Specify method of procurement/tender etc
- Specify advertising project – eg, local, national and international trade journals etc
- Specify rules relevant to contract such as Official Journal of the European Union (OJEU) rules, Public Contracts Regulations 2006 (see Appendix 4. EU Public Contracts Regulations).
- Specify nature of negotiations
- Specify timescales
- Specify evaluation criteria for tender
- Specify service streams
- Specify apportionment of risk
- Specify incentives and penalties for project completion and service delivery

- Specify service level agreement and penalty thresholds
- Specify costs for increased volume of service
- Specify costs and criteria for maintenance, hardware and software updating and other key contractual issues
- State standard form of contract to be used.

Phase II. Consultation processes

As in Phase I, consultation is the key to success. A workshop is usually used to assess each of the shortlist options defined in Phase 1, looking at strategic, commercial, economic, financial and managerial parameters. Conventionally, these are expressed as a grid, often prepared before the workshop, and subject to modification and final agreement as an agreed option by the consultation group forming the workshop.

A second workshop is often required to explore the potential procurement options, the service specification and the likely contract.

A final workshop should decide procurement strategy, project plan, post-project arrangements and post-implementation evaluation. Some of the functions performed by this stage may also form part of Phase III. Workshops are explored more fully in Appendix 9. Workshops in business case planning.

Phase III. Procurement – the full business case

Having fully developed the procurement strategy in the outline business case, the steps to date are re-evaluated to ensure they remain valid. The intended procurement process is decided. The commercial, contractual managerial and project management details are finalised in the light of negotiations with suppliers. A tendering process is prepared and implemented. The tenders are evaluated. A final supplier is chosen. The final contract is prepared for signing.

Key output

- Final contract ready for signing.

Documentation required

A statement that a re-evaluation of project has been undertaken to ensure the project and preferred option identified at Phase II remain strategically appropriate and affordable etc.

- Details of procurement process
- The contract itself
- A statement of approval for signing by senior managerial team

I. Details of procurement process

- The tendering process
- The tendering criteria to be met by suppliers who wish to tender
- The offers tendered
- Details of tender evaluation and selection of a preferred supplier. Selection must be made on the basis of explicit evaluation parameters and arrangements available to suppliers prior to tender.
- Detailed economic appraisals of:
 - The offers at final tender
 - Costs expressed as full cost over contract period and lifetime investment corrected to current date (see Appendix 11. Normalisation of costs)
 - Costs falling upon organisation on other public sector organisations from each option
- Preferred choice chosen on basis of costings, non-financial benefits and risks, and sensitivity analysis.

II. The contract itself

- The negotiated deal and contractual arrangements
- The financial implications of the deal
- The project management arrangements and plans
- Full benefits realisation arrangement and plans
- Full change management arrangement and plans
- Risk management arrangements and plans including any risk-sharing arrangement
- Full contract management arrangements and plans
- The arrangements for any change in the contract
- The contracted consequences of either party failing to meet contractual responsibilities
- The arrangements for post-project evaluation

III. A statement of approval for signing by senior managerial team

Appendix 1. The Treasury Green Book, the Capital Investment Manual and the Scottish Capital Investment Manual

The Treasury Green Book (http://www.hm-treasury.gov.uk/data_greenbook_index.htm) is a definitive guide to the preparation of public sector business cases, containing not only valuable advice on the calculation of the investment related costs, but practical advice on the preparation of business cases.

A selection of the most relevant pages is given here.

- [Business case guidance home page](#)
- [Public Sector business cases using the Five Case Model: guidance](#)
- [Public Sector business cases using the Five Case Model: templates](#)
- [A short 'plain English' guide to assessing business cases](#)

The Capital Investment Manual and its Scottish equivalent (the Scottish Capital Investment Manual) have been the definitive guides to investment in small and large projects since 1994 and 1996 respectively. Each of these provides sections on business case development from initiation to post-project evaluation, in either online or downloadable format. While, south of the border at least, some of the mechanisms described have been superseded by subsequent guidance, and both pre-date private finance initiative (PFI) and foundation trusts, both contain links to relevant updates. These manuals provide invaluable advice in a highly readable format. Both are worth a look as some readers may find one or other more digestible. Relevant links are given below.

- [Capital Investment Manual](#)
- [Capital Investment Manual Business Case Guide](#)
- [Scottish Capital Investment Manual](#)
- [Scottish Capital Investment Manual Business Case Guide](#)

Appendix 2. Treasury limits

The limits for capital spends are defined by the Treasury and are regularly updated. At the time of writing, the most recent documentation still refers to NHS bodies which are about to be dissolved. Relevant updates will appear on the [Department of Health](#) website.

The arrangements for delegated limits for trust capital investment changed as of December 2010. Foundation trust arrangements before this were defined by a trust's turnover and by its performance under Monitor scrutiny.

Since December 2010, a £3 million effective limit has been placed on non-foundation trusts' limits to spend without prior strategic health authority approval (SHA). For sums between £3 million and £35 million, SHAs may approve. Above £35M, both Department of Health and Treasury approval must be given. These limits may be subject to further constraint by the Department of Health.

It has been made clear by central government that all trusts will eventually assume foundation status. Capital spending by foundation trusts limits will no longer be limited by turnover and performance. The figure they are allowed to spend will be defined by adding sums they generate internally to their prudential borrowing limit (PBL), this latter figure derived from a complex accountancy parameters for each individual foundation trust. See also Appendix 3. Foundation trusts and Monitor.

Appendix 3. Foundation trusts and Monitor

Foundation trusts

Foundation trusts were formed under the Health and Social Care (Community Health and Standards) Act 2003. It was intended by the then government that decision-making processes should be devolved to individual healthcare trusts. Foundation trusts are not under direct control of the Health Secretary, and have considerable freedom to organise services as they (or more strictly, their Boards of Governors) feel is in line with their local needs.

Along with this operational freedom, foundation trusts have more financial freedom. Old-style trusts are limited in their ability to fund and acquire funding for large capital projects. Foundation trusts can use innovative methods of funding and can borrow money for large project outside the NHS. Their limit to spend is defined by the sum of internally generated monies and their prudential borrowing limit (PBL). The PBL is determined individually for each foundation trust on the basis of five accountancy parameters. For details, see Appendix 6. Funding options.

In time, while it is intended that all NHS trusts will become foundation trusts, it was recognised from the outset that trusts varied in their corporate performance and their financial maturity. Trusts were only allowed to attain Foundation status if they were able to prove their performance was satisfactory. In order to protect health services and public money, an independent regulator, Monitor, was formed.

Monitor

Monitor ensures that foundation trusts provide service quality and financial stability. Each foundation trust reports quarterly to Monitor, and is given two risk ratings, for governance (rated red, amber-red, amber-green or green) and finance (1 is bad, 5 is good). These affect, amongst other things, a Trust's freedom to borrow. Significantly poor ratings result in 'action plans' and 'monthly reports'. Good ratings result in a hands-off approach.

Monitor's key documents are available on the [Mandatory Guidance](#) web page and includes pages on:

- Information foundation trusts must supply to Monitor ([Terms of Authorisation](#))
- How Monitor assesses trusts against those Terms of Authorisation ([Compliance Framework](#))
- How trusts must report to Monitor ([NHS Foundation Trust Annual Reporting Manual](#))
- How trust's prudential borrowing limit is determined ([Prudential Borrowing Code](#)).

Appendix 4. Procurement and EU Public Contracts Regulations

Public contracting authorities have a legal obligation to comply with the Public Contracts Regulations 2006.

The Department of Health (including the Dental Practice Board; National Health Service Strategic Health Authorities; NHS trusts and the Prescription Pricing Authority) is clearly listed as a Central Government Body under Schedule 1 of the regulations and therefore, when procuring over set financial thresholds, must comply with the regulations in their entirety. The key principles of the legislation should also be followed for all purchases regardless of financial value.

Key principles

- Purchasers must behave 'transparently' by advertising their requirements openly to encourage competition.
- Discrimination is specifically forbidden.
- Purchasing decisions must be objective and based on pre-set criteria relevant to the purchase.

EU thresholds are set every two years and, at the time of writing (1 January 2012 issue) are:

- Supplies £113,057
- Services £113,057
- Works £4,348,350

Business decisions relating to how a purchase is to be financed and whether to buy, lease or outsource should be taken by the organisation before any procurement exercise. It is necessary for the contracting authority to provide the market with as much information as possible regarding their requirements/aspirations in the specification at the start of the procurement process; this allows the market to respond appropriately providing for a robust final contract.

Contracting bodies can face significant penalties for non-compliance with the regulations. Three particular areas to consider are the following.

- Evaluation criteria – the contracting authority must provide the criteria to be used to evaluate any tender submission. Once the criteria have been agreed and published, they must be used throughout the procurement process. A contracting authority must not evaluate tenders using criteria other than those that all tendering suppliers have been made aware of prior to submitting their tenders.
- Calculation of contract value – the value of the proposed contract must be estimated before undertaking a procurement to determine which rules apply. The value of the contract is the total consideration to be paid over its full term and not simply the estimated annual expenditure. Where the term of the contract is indefinite or uncertain, the annual consideration should be multiplied by four years to give the total of the contract. See also Appendix 11. Normalisation of costs.
- Aggregation – contracts of a similar nature should not be artificially split into different parts to avoid the application of the organisations minimum threshold for the applicable EU Threshold. If there is doubt as to whether contracts must be aggregated, advice should be sought from your organisation's procurement/supplies department.

Things to consider before commencing a procurement process

- Is there a current contract/framework (nationally; regionally or locally) that may cover your requirement? Your procurement/supplies department will be able to provide you with the appropriate information and support.
- Is the requirement specific to your department/business unit or may other areas of the organisation require the same or similar? Your procurement/supplies department should be able to support further discussions.
- Do you have a clear understanding of what your scope/requirements are? If not, speak to your procurement/supplies department, they may be able to share contract data/specifications from other contracting organisations and learn from lessons of others.
- Do you know the market place you wish to work with? Again your procurement/supplies department should be able to support your research and understanding.
- If the contracting authority is carrying out a 'tender' process sufficient time must be allowed, generally the whole process can take approximately three to four months.

Useful links

- www.dh.gov.uk/en/Aboutus/Procurementandproposals/index.htm
- www.dh.gov.uk/en/Aboutus/Procurementandproposals/Tenders/index.htm
- http://simap.europa.eu/buyer/forms-standard/index_en.htm

Appendix 5. Project management

- Why use PRINCE 2?
- PRINCE project methodology
- Project hierarchy

Why use PRINCE 2?

Projects which are poorly organised fail. Examples of projects which have overrun in timeliness, cost, or project deliverables include various NHS IT projects, the Passport Office and the Scottish Parliament building.

The project methodology used almost universally in UK public service projects is PRINCE (PRojects IN Controlled Environments) now in its second edition PRINCE 2. PRINCE 2 is a UK government process-based, project framework. It is free, readily available in both printed and web-based formats, user-friendly and rigorous in its approach.

A successful project is one which delivers quality results by predefined parameters; delivers by the pre-agreed time; and which delivers within budget. PRINCE 2 helps those running a project achieve this.

PRINCE project methodology

PRINCE 2 breaks down projects into easily manageable chunks. Projects are driven in an organised and controlled linear manner along a clear path with defined phases and project milestones. PRINCE 2 mandates:

- Clear project aims
- A clear project commencement
- A defined time span for the project
- Prerequisites for the project
- Who does what
- What it all costs?

Its methodology includes:

- A clear time line with organised and controlled start, middle and end
- A clear management structure with defined project roles
- Management by exception that is to say, at each level, those managing part of the process are set clear boundaries, and refer upward where these would be exceeded.
- A project board which has three key members:
 - Business or customer
 - User
 - Technical or specialist
- Project assurance:
 - Business or customer assurance – responsibility of business or customer representative on project board
 - User assurance – responsibility of user representative on project board
 - Technical or specialist assurance – responsibility of technical or specialist representative on project board
- Project support – this must be adequately staffed if the project is to succeed
- Control mechanisms including:
 - Quality control
 - Risk management
 - Identifying and controlling changes within the project
 - Document control.

Project management is a subject in its own right, much of which lies well beyond the scope of this document. For more detailed information on PRINCE 2, there is readily available printed and online material (see References), or attend a PRINCE 2 training course.

Project roles

The structure below may not be followed to the letter, and is not exactly as specified by PRINCE 2. It is essential, however, that the individual responsibilities and the lines of responsibility are clear.

- Trust board
- Project owner or senior responsible owner

- Project sponsor
- Project board
- Project manager
- Project team
- Team members and professional advisors

The trust board function

The trust board has overall organisational responsibility for the project. It ensures that the project meets the key strategic, commercial, affordability, best value-for-money and achievability parameters required for any Health Service project which uses public money. It has an ongoing responsibility to ensure that the project continues to meet these parameters and has the authority to authorise financial and human resources to complete the project and to postpone or shelve the project if it becomes apparent that it is unachievable, unaffordable, or otherwise ceases to meet strategic or commercial drivers. Its functions are:

- To be in overall charge of project
- To ensure that project meets the key strategic direction and aims of the trust identified in scoping the project
- To have clear SMART objectives
- To ensure the project remains commercially valid, affordable, achievable and manageable, that is, it satisfies the treasury five case model
- To maintain and ensure visible commitment to the project
- To define the role of the project owner (generally the chief executive) in the project
- To define and ensure all necessary support for project sponsorship
- To monitor or report and act on project performance, most particularly in terms of costs, schedule and quality issues.
- To act as a final arbiter of decisions exceeding the authority delegated to the project owner.

Project owner

The project owner or senior responsible owner is a named manager, generally at trust board level, often the trust chief executive or an overall trust project director, who appoints the project manager on behalf of the trust board. He or she acts as the trust guarantor for the project, and must demonstrate to all that the trust supports the project.

The key responsibilities are:

- To act on behalf of the trust board in the decision-making process
- To ensure the business case meets the criteria given above for the trust board
- To agree a budget for the project
- To recruit a suitable project director
- To put in place an appropriate project structure and lines of communication
- To ensure a clear and agreed project brief
- To ensure appropriate performance management, reporting and documentation
- To arbitrate upon deviations from the agreed scope, costs, quality and schedule of the project
- To report to the trust board on exceptions to the above where these would impact adversely
- To demonstrate and promote commitment visibly to the project.

Project sponsor

The project sponsor initiates the project and must be a named individual. In some instances, he or she may also be project manager but, especially for larger projects, another named individual, the project manager, will have the necessary organisational skills to carry the project through.

Project board

The project board takes overall executive responsibility for turning the plan into reality, and for ensuring that all goes in accordance with the plan. It is accountable to the project owner. It is delegated responsibilities by the project owner and it reports to the project board on progress, resource variations beyond its delegated limits and, deviations from agreed timelines. The financial, corporate governance, clinical governance oversight and reporting roles of the board are generally taken by named individuals. In accordance with PRINCE 2 principles, it should contain business, user and specialist representatives. In order to facilitate decision-making, most trusts use small project boards, with individual members performing dual functions. The operational functions are passed down to the project team by the project manager. As issues requiring specialist knowledge or skills arise, expertise on these may be brought in to provide relevant advice.

Project manager

The Project Manager is the operational manager who runs the project team. He or she sits on the project board and reports to the board on progress, resource requirements and any variations from project timeline and budget. A project manager is appointed by the project board and should have the key experience and skills commensurate with the project size and complexity. Ideally, the project manager for the full project should be chosen as early as possible, and should play a key planning role in production of the business case. One should be aware however that, on occasion, the specialist skills may be required to project-manage the subsequent full project may be a scarce or bought-in resource, particularly with large or complex procurements.

The project manager is recruited by the chief executive or by trust's project director. The roles of the individual appointed include:

- Fully develop the business case
- Fully develop the budget for the project
- Produce the project the brief, project plan and project control and quality of procedures in line with the PRINCE 2 principles
- Lead the project team in bringing the project to a successful conclusion
- Ensure co-ordinated planning of the project to meet project milestones and eventually delivery
- Ensure adequate resourcing within agreed delegated budgets for the different parts of the project
- Ensure satisfactory performance of external suppliers and contractors
- Ensure proper monitoring of schedules, costs and quality arbitrate upon issues which do not substantially impinge upon agreed costs, schedules or quality
- Report to project board on issues which significantly impact upon cost schedules or quality ensuring eventual satisfactory project delivery
- Ensure satisfactory evaluation of eventual project benefits.

Project team

The project team consists of the key operational staff, who through staff they manage or hire, perform the key groundwork in making the project deliver.

Appendix 6. Funding options

Trust or department capital allocation and revenue allocation

Traditionally, before the establishment of foundation trusts, most radiology project funding was obtained by a trust allocation of capital and revenue generally derived from the Treasury. For a service department like radiology, that allocation was decided on the basis of a trust's requirement for radiological imaging. In general, the trust had and, continues to have, a body composed of clinical and managerial staff which prioritises the various calls upon the trust's capital and revenue allocation. In more recent years, and particularly for foundation trusts, there is now more freedom to find more innovative solutions for capital and revenue funding.

Capital provision from the private sector

Foundation trusts now have, within limits, freedom to borrow directly from the private sector for capital projects (see also Appendix 2. Treasury limits).

Leasing

Under leasing arrangements, the capital funding of a project is taken over by an outside provider. The leasing company is paid a revenue sum for the hire of the capital items, and generally accepts responsibility for maintenance and replacement.

Such an arrangement can be advantageous all round. It can avoid a large capital expense for expensive equipment. It devolves technical, maintenance and human resource issues to a secondary provider.

Its principal disadvantage is the revenue cost, although some very competitive arrangements can be available. Leasing companies have considerable experience of dealing with individual capital items and can themselves make (and pass on) greater economies of scale than individual NHS trusts.

Public private partnership

While there are some other alternatives, the public private partnership arrangement most commonly used is the private finance initiative (PFI). PFI is particularly suitable for large capital schemes. A considerable amount of advisory material is available on the Department of Health website. Typically, a private company takes over the design, build, finance and operation of the scheme (DBFO). A major advantage to the public purse is the transfer of the quite substantial risks arising from large capital projects. There are, of course, some disadvantages to this approach. First, there is some loss of control of the service. This should be avoided by careful contract wording. Second, at a time of rapid innovation, it is crucial that a service is responsive to emerging needs. This has not invariably been the case with PFI arrangements. Third, and a source of some quite public criticism, a PFI project can result in a heavy revenue burden over a prolonged time period. Be that as it may, for most large projects, PFI must be considered. Several relevant links are given in the reference section.

Managed service

A service or a substantial part of the service is devolved to an outside company. Common examples include IT as a whole, PACS and radiology information systems. The company providing the service, which will often have considerable experience in its particular field, undertakes the provision, management, maintenance and regular updating of the service.

The services provided can be very good, reflecting the experience of the companies of the field. It is in the best interest of the suppliers to ensure good service. Advantages of scale should be evident for the supplier and customer.

Penalties should be put in place for failure to deliver services. Even large suppliers can have difficulties in meeting their contractual undertakings. One should also be aware that the size of the contracts, and the level of commitment required in accepting a single service supplier, makes it very difficult to switch suppliers if the service provided does not come up to expectations or even to contract.

In general, most arrangements are volume sensitive. Potential hazards include inaccurate estimates of volume, or change in volume. IT and networking requirements can, for example, show geometric growth. It is notoriously difficult to estimate future requirements yet an inaccurate assessment of these requirements will invariably result in either service under-provision, an extra unexpected requirement for revenue, or revenue wastage. The consequences of variations from contracted service volumes must be explicitly stated and understood by all parties. Contracts must be worded very carefully to avoid subsequent misunderstandings and large unexpected revenue and capital surprises.

Third sector capital funding

Third sector (charity) capital funding is frequently available for large capital items. Most healthcare-related charities are willing to consider bids for capital funding in radiology departments. This can result in improved service provision. There are some caveats. First, revenue funding is only rarely available. Most if not all capital items require revenue expenditure. It is distinctly unwise to accept a donated capital item if the revenue requirements cannot be met. Second, donated or partially donated capital items can impose a requirement for further capital expenditure such as buildings and infrastructure. Again, these must be fully costed and, if possible, included within the funds provided by the donor.

In-house charitable funds

Many trusts have access to funds derived from donated individual bequests, legacies and other donations. Generally, again, these are usually, though not invariably, purely capital resources for which revenue implications should be fully costed.

Revenue neutral and/or capital neutral schemes or part-schemes

As indicated in the main text, valid reasons for a business plan include cost reductions and efficiency gains. A project can be made capital or revenue neutral by funding the services provided with savings from the efficiencies gained. There are many available options which can be useful if capital or revenue funding is severely restricted. It is essential to ensure, however, that the anticipated gains from efficiencies are not only fully estimated but also fully realised!

Co-operative projects – working with other departments, trusts and private companies

Examples of co-operative projects have included tertiary services, medical physics and radiotherapy. Trusts often welcome an opportunity to share the high inherent revenue and capital costs of radiological services. Co-operative projects can result in economies of scale, and in reductions in the inefficiencies of equipment usage often found in the NHS.

Similarly, many private companies offer to reduce their charges for services they manage in return for their freedom to use or sell unused slots in their services.

National and regional projects

Some large projects are sponsored by regional or national bodies and come with the necessary capital and revenue funds. When applying for these funds, one must recognise that the revenue estimates and funding are tightly controlled, that costs for items not included in the stated documentation will not be funded, that year-on-year increases in costs are also unlikely to be forthcoming, and that time-limited funding for a service will leave a revenue burden when the funding ends!

Appendix 7. IT Provision and costing checklist

Most radiology projects have significant IT implications. Many projects underestimate the costs of IT. It is advisable to fully cost the IT implications of radiology projects. Many of the items listed below have both capital and the revenue implications. Some of the costs may use existing equipment, but good business practice dictates that a costing is applied to these. Even where existing infrastructure can easily manage the new project, taking account of the 'opportunity costs' can identify underuse of resources within the organisation, and can predict step costs in future projects; that is, costs incurred where existing infrastructure cannot quite manage and a large step in resourcing is required.

Enabling costs (required from initiation of service)

- PCs and associated peripherals – printers, scanners etc, PC software and licences
- Servers to run system
- Server software and licences
- Backup equipment
- Backup software and licences
- Uninterruptible power supplies
- Network infrastructure – cabling, routers and switches, etc
- Estates – building and room costs, power points and other electrical supplies, air-conditioning, furniture, desks, wall mounts and shelving etc
- Stationery and other expendables

Project costs (required during project development)

- Staff – radiology, supplier, IT/other
- Project management
- Supplier – software; project management

Support costs (ongoing costs once service is running)

- Support for infrastructure, hardware, backups, maintenance, user training, user support. This requires:
 - IT staff
 - Department staff
 - Supplier staff
 - Maintenance costs
 - Upgrade costs

Costs should be expressed as full lifetime costs (five years, non-recurring and recurring)

Appendix 8. Information governance requirements (from the Connecting for Health website – Crown Copyright)

At the time of writing, all NHS trusts are, as a condition of connection to the NHS N3 network, signed up to the Connecting for Health Information Governance Statement of Compliance (IGSoC). You should be aware that any service you initiate which connects directly or indirectly to the N3 network must satisfy the IGSoC. Your trust submits each year an Information Governance Toolkit Assessment and an Information Governance Assurance Statement. You must therefore ensure that your trust's Information Department are fully aware of any new service handling patient or staff information.

Some useful shortcuts are:

- [Connecting for Health Information Governance](#)
- [Information Governance Statement of Compliance](#)
- [Information Governance download page](#)
- [Portal to explanatory Information Governance Toolkit material](#)
- [Information Governance Toolkit](#)

Information governance management checklist

- There is an adequate information governance management framework to support the current and evolving information governance agenda.
- There are approved and comprehensive information governance policies with associated strategies and/or improvement plans.
- Formal contractual arrangements that include compliance with information governance requirements, are in place with all contractors and support organisations.
- Employment contracts which include compliance with information governance standards are in place for all individuals carrying out work on behalf of the organisation.
- Information governance awareness and mandatory training procedures are in place and all staff are appropriately trained.

Confidentiality and Data Protection assurance

- The information governance agenda is supported by adequate confidentiality and data protection skills, knowledge and experience which meet the organisation's assessed needs.
- Staff are provided with clear guidance on keeping personal information secure and on respecting the confidentiality of service users.
- Consent is appropriately sought before personal information is used in ways that do not directly contribute to the delivery of care services and objections to the disclosure of confidential personal information are appropriately respected.
- Individuals are informed about the proposed uses of their personal information.
- There are appropriate procedures for recognising and responding to individuals' requests for access to their personal data.
- There are appropriate confidentiality audit procedures to monitor access to confidential personal information.
- Where required, protocols governing the routine sharing of personal information have been agreed with other organisations.
- All person identifiable data processed outside of the UK complies with the Data Protection Act 1998 and Department of Health guidelines.
- All new processes, services, information systems and other relevant information assets are developed and implemented in a secure and structured manner, and comply with information governance security accreditation, information quality and confidentiality and data protection requirements.

Information security assurance

- The information governance agenda is supported by adequate information security skills, knowledge and experience which meet the organisation's assessed needs.
- A formal information security risk assessment and management programme for key information assets has been documented, implemented and reviewed.
- There are documented information security incident / event reporting and management procedures that are accessible to all staff.
- There are established business processes and procedures that satisfy the organisation's obligations as a Registration Authority.

- Monitoring and enforcement processes are in place to ensure NHS national application Smartcard users comply with the terms and conditions of use.
- Operating and application information systems (under the organisation's control) support appropriate access control functionality and documented and managed access rights are in place for all users of these systems.
- An effectively supported senior information risk owner takes ownership of the organisation's information risk policy and information risk management strategy.
- All transfers of hardcopy and digital person identifiable and sensitive information have been identified, mapped and risk assessed; technical and organisational measures adequately secure these transfers.
- Business continuity plans are up to date and tested for all critical information assets (data processing facilities, communications services and data) and service-specific measures are in place.
- Procedures are in place to prevent information processing being interrupted or disrupted through equipment failure, environmental hazard or human error.
- Information assets with computer components are capable of the rapid detection, isolation and removal of malicious code and unauthorised mobile code.
- Policy and procedures are in place to ensure that Information Communication Technology (ICT) networks operate securely.
- Policy and procedures ensure that mobile computing and teleworking are secure.
- All information assets that hold, or are, personal data are protected by appropriate organisational and technical measures.
- The confidentiality of service user information is protected through use of anonymisation techniques where appropriate.

Clinical information assurance

- The information governance agenda is supported by adequate information quality and records management skills, knowledge and experience.
- There is consistent and comprehensive use of the NHS Number in line with National Patient Safety Agency requirements.
- Procedures are in place to ensure the accuracy of service user information on all systems and/or records that support the provision of care.
- A multi-professional audit of clinical records across all specialties has been undertaken.
- Procedures are in place for monitoring the availability of paper health/care records and tracing missing records.

Secondary use assurance

- National data definitions, standards, values and validation programmes are incorporated within key systems and local documentation is updated as standards develop.
- External data quality reports are used for monitoring and improving data quality.
- Documented procedures are in place for using both local and national benchmarking to identify data quality issues and analyse trends in information over time, ensuring that large changes are investigated and explained.
- A robust programme of internal and external data quality/clinical coding audit in line with the requirements of the Audit Commission and NHS Connecting for Health is in place.
- A documented procedure and a regular audit cycle for accuracy checks on service user data is in place.
- The Completeness and Validity check for data has been completed and passed.
- Clinical/care staff are involved in validating information derived from the recording of clinical/care activity.
- Training programmes for clinical coding staff entering coded clinical data are comprehensive and conform to national standards.

Corporate information assurance

- Documented and implemented procedures are in place for the effective management of corporate records.
- Documented and publicly available procedures are in place to ensure compliance with the Freedom of Information Act 2000.
- As part of the information lifecycle management strategy, an audit of corporate records has been undertaken.

Appendix 9. Workshops in business case planning

Consultative workshops should form part of every robust business case. Workshops bring together key participants in the process. It is essential that only the correct individuals are present. It follows that all present should have not only the requisite skills, but the authority to make decisions in their key fields.

Each workshop should contain a sufficiently small number of participants to streamline the decision-making process. Core members in a workshop are:

- Facilitator
- External stakeholder or commissioner
- User representative
- Financial representative
- Technical representative
- Project manager.

In addition, at project initiation, senior representatives of the trust board and the trust programme direct should attend – the project must not proceed without their support.

As the project develops, this core group should call in as required any specialist support, as temporary members.

The workshops should be tightly managed with clear agendas and strict timetables. Considerable preparation is mandatory as will be evident from the workshops suggested in the main text – see Phase I. Consultation processes and Phase II. Consultation processes.

A fuller description of workshops is given in the Capital Investment Manual, while the Scottish Capital Investment Manual provides a useful table of workshop objectives, participants and key outputs – see references under Appendix 1. The Treasury Green Book.

Appendix 10. Assessing risk and sensitivity to risk

When evaluating options in Phase II of a business case to find a preferred option, one must be aware that any estimate of the costs and benefits is subject to risks which can radically alter the rankings. Such risks can be due to inherent uncertainties in assumptions made.

Sensitivity analysis, as used in the context of a business case, examines and quantifies how prone to error these rankings might be to changes in the parameters assumed in the option appraisal process. It is, in essence, a 'what if' critical analysis of the relative scores given for the options examined.

Optimism bias arises where an over-optimistic assumption results in a cost overrun.

Sensitivity analysis

To perform a sensitivity analysis, it is necessary to examine the grids of benefits and costs agreed by an option appraisal workshop:

I: Sensitivity analysis of benefits

- Step 1. Tabulate parameters, weights, scores and weighted scores.

Table 1. Weights agreed by the workshop for the different parameters

Parameter	Weight
Increased accessibility	40
Reliability of service	30
Accuracy of service	20
Better use of scarce staff	10
	100%

Table 2. Scores agreed by the workshop for a particular evaluated option

Relative benefit of an option	Weight	Score (max=10)	Weight × Score
Increased accessibility	40	10	400
Reliability of service	30	9	360
Accuracy of service	20	8	160
Better use of scarce staff	10	5	50
	100%		970

Table 3. Scores determined for all the options

Option	Weight × Score
Option A	970
Option B	810
Option C	910
Option D	550
Option E	670

- Step 2. For each option in Tables 1 and 2, determine upper and lower bounds for the scores. One way of doing this is to look at disagreements about the scores between the workshop members.
- Step 3. In a similar manner, apply upper and lower bounds for the weightings allotted to each parameter examined. Be aware that alteration of a single weighting value affects the others – the sum of all must be 100%.
- Step 4. Recalculate the scores on the basis of upper and lower bounds.

II: Sensitivity analysis of costs

Capital and revenue costs anticipated may vary considerably! These variations rarely have a positive effect on costs. Examples of commonly encountered sources of cost uncertainty include:

- Increases in revenue costs such as maintenance and labour
- Unanticipated cuts in revenue provision
- Delay in realisation of benefits
- Delay or failure of realisation of efficiency gains
- Change in demand for service or in volume performed

- Failure of project timescales.

These and similar uncertainties should be costed. By applying a measure of likelihood to each uncertainty, and making allowances where uncertainties are interdependent, one should perform a 'what if' type of analysis to the various risks.

III: Switching value analysis (crossover point analysis) and scenario planning

It can focus the discussion of costings at option appraisal, if one can determine the point at which a key uncertain parameter would have to change in order to alter the rankings (switching value analysis).

Similarly, optimistic, pessimistic and neutral scenarios can be subjected to analysis and their effects on cash-flow calculations (scenario planning).

Both methodologies can provide invaluable assistance in assessing different workshop options. It also strengthens the final decision reached if such an analysis does not alter the rankings.

There is a particularly helpful discussion on sensitivity analysis, switching (crossover) values and optimism bias in Step 6 of the [Capital Investment Manual Business Case Guide](#).

Optimism bias

For many, largely human, reasons, most projects underestimate costs. It is therefore recommended that costs have a factor applied to make them more realistic! The Department of Health publishes two relevant guidelines, the first applies to building projects, the second to IM&T projects.

Optimism bias for building schemes

- http://www.dh.gov.uk/en/Managingyourorganisation/NHSprocurement/Publicprivatepartnership/Privatefinanceinitiative/Change totreasurygreenbook/DH_4067488
- http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4093657.pdf

Optimism bias for IM&T schemes

- http://www.dh.gov.uk/en/Managingyourorganisation/NHSprocurement/Publicprivatepartnership/Privatefinanceinitiative/Change totreasurygreenbook/DH_4115144
- http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4115150.pdf

Appendix 11. Normalisation of costs for comparative purposes

Potential solutions to a business problem may differ widely in their lifespans and in their capital and revenue costs. When examining these costs and values, due regard must be paid to the diminution in perceived value of a sum of money with time. In simple terms, a pound in your pocket today is worth considerably more to you than a promise of a pound in five years. In order to express the lifetime costs of potential projects and to allow valid comparison of the relative costs of these projects, it is customary to express the values and costs in a normalised form, the net present value. In order to do this, a discount rate set by the Treasury (currently 3.5%) is used to apply a discount factor for each year of the project lifespan, the correction applied to values and costs at each year of a project's lifetime and the result expressed as a figure designed to reflect lifetime costs at current values.

The actual determination of the net present value for these values and costs is slightly more complex, and is the realm of your directorate or trust accountant. For those interested, much is written on the web, mostly in fairly opaque prose intended for accountants. A relatively simple exposition of NPV is at:

www.ehow.com/how_2187130_calculate-net-present-value-npv.html

For those who are budding accountants, there are Excel spreadsheets to do the calculations – see, for example:

www.vertex42.com/Calculators/npv-irr-calculator.html

Template 1. An abbreviated template for small projects

Small capital business case: outline or full

Proposal:	
Business unit:	
Dept/Ward:	
Site:	

Business case record of sign off/approval

	Name	Signature	Date
Business Unit: Clinical Director			
Business Unit: Executive Director			
Business Unit: Accountant			
Clinical Lead			
Capital Accountant			
Estates			
Facilities			
Human Resources			
IM&T			
Information Governance			
Fire Safety Officer			
Infection Control			
Supplies			
Project management			
Project Sponsor			
Project Lead/Manager			

1. Executive Summary and Recommendation
2. Introduction/Background
3. Strategic Context/Corporate Plan
4. Project Scope and Objectives
5. Key Benefits
6. Constraints
7. Risk Analysis
8. Options
9. Financial Analysis
10. Impact Analysis

11. Consultation/Stakeholder Support
12. Project Management/Delivery/Evaluation
13. Guidance/Legislation/Etc
14. Appendices

Template 2. A less abbreviated template for larger projects

Capital business case: outline or full

Proposal:	
Business Unit:	
Dept/Ward:	
Site:	

Business case record of sign off/approval

	Name	Signature	Date
Business Unit: Clinical Director			
Business Unit: Executive Director			
Business Unit: Accountant			
Clinical Lead			
Capital Accountant			
Estates			
Facilities			
Human Resources			
IM&T			
Information Governance			
Fire Safety Officer			
Infection Control			
Supplies			
Project Management			
Project Sponsor			
Project Lead/Manager			

1. Executive Summary and Recommendation
2. Introduction/Background/Case for Change
<ul style="list-style-type: none"> ▪ Provide some background information. ▪ Describe existing service provision. ▪ Provide an overview of the issues. ▪ Describe how the proposal would address/improve the situation. ▪ Describe the process that has been followed to reach this point. ▪ Detail who has been involved and who is affected by the proposal.
3. Strategic Context / Corporate Plan
<ul style="list-style-type: none"> ▪ State relevant key business and service needs and priorities. ▪ State how project fits in with these needs with the trust corporate plan, the business unit/directorate plan/department plan. ▪ State how the proposal will assist in the achievement of national / local target(s) <ul style="list-style-type: none"> – Target 1 – – Target 2 – etc... ▪ Is a specific commissioner requirement or issue addressed by the proposal? ▪ Does proposal improve use of resources? How?
4. Project Scope and Objectives

- State in detail the scope of the project.
- State key objectives in meeting service need. Objectives should be ‘SMART’:
 - Specific
 - Measurable
 - Achievable
 - Realistic
 - Timely.
- State key benefits:
 - Measurable benefits
 - Qualitative benefits.
- Specify benefits as:
 - Organisational
 - Clinical
 - Staffing Resources
 - Training / Skills
 - Financial
 - Equipment
 - Other.
- Specify the workshops and meetings held to identify and scope objectives, measurable benefits and qualitative benefits. Specify the involvement of key stakeholders in these consultative and analytic processes. See also Section 10 below.

5. Constraints

- Consider the proposal in terms of constraints and detail them. Consider constraints under the following headings:
 - Organisational
 - Clinical
 - Staffing Resources
 - Training / Skills
 - Financial
 - Equipment
 - Other.

6. Risk Analysis

- All risks associated with a proposal must be considered and quantified. State the risks identified under the following risk categories and specify how they will be managed and mitigated:
 - Development risks
 - Implementation risks
 - Operational risks
- Types of risks to consider are:
 - Staffing resources
 - Capacity
 - Changing working practices both within a service and involving other departments
 - New skills required
 - If the proposal was not implemented, what would the risks and/or possible implications be?
 - Infection control risks
 - Information governance and other data risks
- **Include formal risk assessment documents as appendices**

7. Options

- A range of alternative options must be formulated and examined as part of the process of considering a proposal. Use Green Book parameters to express your options.
 - Describe each option considered.
 - Describe how each option would or would not achieve the proposals objectives.
 - It must be demonstrated that all options have been fully explored to identify the optimal solution.
 - Criteria used to evaluate the options must be identified and described.
 - Identify the preferred option and explain why.

8. Financial analysis

- Detail fully the financial implications of the proposal. Ensure you have fully liaised with any other service on which your proposal depends. Services sometimes overlooked include:
 - Supplies
 - Estates
 - Finance
 - Facilities
 - IM&T.
- If the proposal involves equipment you must explore the option of leasing equipment.
- Capital, non-recurring and recurring costs must be fully investigated and detailed.
- Describe how recurring costs will be funded. Has approval been given for funding?
- Will the proposal have an impact on patient activity levels and income – describe how and quantify.
- What contingency provision has been allowed for – quantify and describe assumptions.
- A detailed breakdown of figures should be attached as an appendix to the proposal document including any assumptions made.

9. Impact analysis

- Describe what the consequences / impact of implementing the proposal will be. Include:
 - Activity
 - Income
 - Staffing
 - Clinical support services
 - Non-clinical support services: estates and facilities.

10. Consultation/Stakeholder Support

- The extent of consultation undertaken will depend on the nature and scale of the proposal. There may well be internal and external stakeholders.
 - Detail any correlation or overlap with any other trust or directorate service development proposals.
 - List any key stakeholders where not already mentioned.
 - Describe how stakeholders have been consulted – in what forums has the proposal been discussed. Detail all stakeholder involvement in workshops, meetings and other consultation processes.
- Attach any relevant statements of support and details of any other relevant agreements.
- Provide evidence that the proposal is supported (or otherwise) by the stakeholders.

11. Project Management / Delivery / Evaluation

- Detail how the proposal will be project managed, delivered & evaluated, including:
 - The accountability arrangements
 - Project team membership, and the responsibilities of individuals.
- Provide details of overall project timetable, include key milestones.
- Describe how the project's progress will be monitored, in terms of timescales & financially.
- Describe how the project will be evaluated.
- How will you measure / demonstrate that the objectives/benefits have been achieved? Who will this be reported to and when?
- Terms of reference for project boards must be prepared detailing the above.

12. Guidance/ Legislation / Etc

Reference any relevant NHS or technical guidance, frameworks and legislation

13. Appendices

- List & attach relevant appendices to the business case. Include:
 - Financial analysis
 - Clinical brief
 - Operational policy
 - Quotations
 - Project programme / timetable
 - Evaluations (eg: trialling of equipment)
 - Risk assessments

Large business case templates

Large business case templates vary in their complexity, size and content. Their layout is much more defined by Treasury needs than by individual trusts. Where a capital project exceeds £35 million, the parameters laid out by the Treasury must be followed. The Treasury Green Book site and the Capital Investment Manual recommend the templates published by the Health Financial Management Agency (HFMA). These are copyrighted by the Treasury (Crown copyright) and available at: www.hm-treasury.gov.uk/d/greenbook_toolkittemplates170707.pdf

Training is also available from the HFMA itself. See www.hfma.org.uk

Bibliography

General

Many of the references are included in the main text, but are given here for convenience.

Treasury Green Book www.hm-treasury.gov.uk/d/green_book_complete.pdf

The Capital Investment Manual
www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4119896

The Capital Investment Manual Business Case Guide
www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4122520.pdf

The Scottish Capital Investment Manual www.scim.scot.nhs.uk/

The Scottish Capital Investment Manual Business Case Guide www.scim.scot.nhs.uk/Manuals/BC_Guide.htm

Business case templates

Excellent templates for business cases are published by the Health Financial Management Agency (HFMA). They are copyrighted by the Treasury (Crown copyright) and available at www.hm-treasury.gov.uk/d/greenbook_toolkittemplates170707.pdf

Unsuccessful projects

Chapter 9 of the Scottish Capital Investment Manual Business Case Guide is a succinct summary of Office of Government Commerce guidance about project failure. See www.scim.scot.nhs.uk/PDFs/Manuals/BC/BC_Guide_6.pdf

Private finance initiative (PFI)

DH guide to PFI
www.dh.gov.uk/en/Managingyourorganisation/NHSprocurement/Publicprivatepartnership/Privatefinanceinitiative/index.htm

Invaluable advice for planning a PFI case
www.dh.gov.uk/en/Managingyourorganisation/NHSprocurement/Publicprivatepartnership/Privatefinanceinitiative/PFIguidance/DH_4108133

Advice on treatment of staff transferring under PFI arrangements
www.dh.gov.uk/en/Managingyourorganisation/NHSprocurement/Publicprivatepartnership/Privatefinanceinitiative/PFIguidance/DH_4071530

Use of workshops in business case planning

Both the Capital Investment Manual and the Scottish Capital Investment Manual describe suggestions for the use of workshops. Chapter 8 of the Scottish Capital Investment Manual Business Case Guide forms a useful summary www.scim.scot.nhs.uk/PDFs/Manuals/BC/BC_Guide_5.pdf

Project management and methodology – PRINCE 2

PRINCE 2 is the standard project management tool used to express, control and evaluate projects. Much of the material is public domain and available online and widely available in printed format. Online, written and residential training in the use of PRINCE 2 is available from the PRINCE 2 website. See:

<http://www.prince-officialsite.com/>

Published material

There is a wealth of published material both from the Stationery Office (TSO) and non-government publishers. Below is a small sample. Style, content and readability vary.

Office of Government Commerce. *Managing Successful Projects with PRINCE2*. The Stationery Office 2009. ISBN 978 0 11 331 059 3

This is comprehensive, and suitable for those who want to study PRINCE2 in depth. It must be said that it contains a great deal of material and is best suited to those who wish to explore project management in depth.

Nick Graham. *Prince2 For Dummies*. Wiley 2008 ISBN 978-0-470-51919-6

This is in much more digestible format, and perhaps less daunting than the above. Don't be misled by the title. This probably contains all you need to know about PRINCE2.

Software tools

Microsoft Project© or similar

Software tools are invaluable in expressing and documenting and charting project timelines, key deadlines, dependencies and responsibilities. The charts produced (for example, Gantt charts) can be used as tools to help drive forward a project. Microsoft Project is much more than a charting tool however. It is deceptively easy to use. It is almost worth learning purely for the understanding of project management it imparts.

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