Local authorities spend about £7 billion a year on capital expenditure...

- capital spending forms a significant part of nearly every council’s budget
- about 40 per cent of capital spending is on housing, 20 per cent on transport and 10 per cent on schools
- over half of capital expenditure is spent on constructing or renovating buildings

...and this report identifies best practice in the management of building projects by local authorities and the private sector.
- projects should meet clearly specified service needs
- project teams should understand each other’s roles and work together effectively
- authorities should allow enough time for design and avoid making late changes
- value for money is more likely to result if a clear procurement strategy is agreed, the risks assessed and costs and methods benchmarked
- projects should be monitored closely so that they are completed on time and within budget
- all projects should be reviewed to see what lessons can be learned

But best practice is not always followed so authorities should look closely at their management of capital projects...

- the cost estimates for over half the projects surveyed were not updated at crucial stages
- there was an unjustifiably wide variation in the cost of technical services
- in over half the projects contractors were not allowed enough time to tender
- two-thirds of projects were completed behind schedule
- half the projects were outside the contract cost by more than 5 per cent
- systematic post-project review was the exception rather than the rule

...and the role of central government needs to be examined too.
- the way in which government controls spending and allocates resources affects how authorities manage both their capital programmes and individual projects
- the acquisition and management of capital resources will be the subject of a separate report in 1997
"Both the construction industry and local government are facing wide-ranging changes that affect the way that capital projects are managed."

### The pattern of capital spending

1. Councils in England and Wales spend about £7 billion a year on capital projects. About 40 per cent of this money goes on housing, followed by transport, education, police, personal social services and 'other' services (Exhibit 1). Councils' capital spending varies widely but, on average, county councils and metropolitan and London boroughs have capital budgets of around £39 million a year, and non-metropolitan districts £6 million.

2. Over half of capital expenditure is spent on constructing and renovating buildings. *Just Capital* focuses on the management of building projects, although the principles of good management apply much more widely.

### A changing world

3. Both the construction industry and local government are facing wide-ranging changes which affect the way that capital projects are managed. A report in 1994 by Sir Michael Latham, *Constructing the Team*, targeted an ambitious 30 per cent reduction in construction costs by the year 2000. New ways of working and better partnerships with clients were highlighted as the main ways of achieving improved efficiency. The extension of compulsory competitive tendering to construction-related services and the increasing reliance on private sector finance are both affecting how councils commission construction projects and manage technical services.

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**Exhibit 1**

*Capital expenditure by service, 1994/95*

Housing dominates capital spending, followed by transport, education and a range of other services.

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*Note: Other services* include arts and libraries (0.05); coastal protection, etc (0.04); sport and recreation (0.2); reclamation of derelict land (0.1); general services (1.0) – including waste collection and disposal, administrative buildings, planning and economic development, parks, etc, industrial and commercial estates, etc; fire (0.07); and probation and magistrates courts (0.07).
Complex challenges
4. Capital projects are usually complex. Many last longer than a year. Site conditions and even bad weather can throw a project off course. Funding for projects is sometimes uncertain. The Audit Commission has studied how a cross-section of local authorities manage capital projects. Learning from their experience and best practice in the private sector, the Commission has identified six criteria that define a good project and has highlighted examples of poor and best practice under each heading (Box A).

Box A
Criteria of a good project – findings of the study

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Poor practice</th>
<th>Good practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meets needs</td>
<td>Half of the projects surveyed appear budget-driven not needs-driven</td>
<td>Projects based on users' needs and service plans</td>
</tr>
<tr>
<td>Encourages effective and efficient teamwork</td>
<td>Technical department takeover of client role</td>
<td>Clearly defined roles</td>
</tr>
<tr>
<td>Allows time for design</td>
<td>Half of the projects surveyed appear budget-driven not needs-driven</td>
<td>Projects based on users' needs and service plans</td>
</tr>
<tr>
<td>Addresses value for money</td>
<td>Poor communication, especially with users</td>
<td>Clearly defined roles</td>
</tr>
<tr>
<td>Is well managed during delivery</td>
<td>Poor communication, especially with users</td>
<td>Clearly defined roles</td>
</tr>
<tr>
<td>Provides lessons for the future</td>
<td>Poor communication, especially with users</td>
<td>Clearly defined roles</td>
</tr>
</tbody>
</table>
5. A capital project is justified only if it meets service needs. Authorities should:

- carry out a needs assessment, so that right from the start the needs of those who stand to benefit from the project are fully understood. Census data, surveys, focus groups, feedback from frontline staff and study of best practice and service trends will help to establish this;

- appraise different options for meeting identified needs. The bigger and more complex the project, the more detailed the option appraisal will need to be. But all projects should use a business case approach to examine relative costs and benefits;

- agree a project brief that defines the project's essential and desirable outcomes so that they can be endorsed by the project sponsor – the service department – and by the end-users, the manager of the capital programme and the project manager. The project-brief then becomes the cornerstone for designing the project; and

- integrate projects into their capital planning process (Exhibit 2). This is important at all stages of a project, but particularly in the early stages. An authority will have many competing demands on its resources and should therefore test that a project is brought forward as part of an agreed service delivery strategy rather than as a consequence of an individual member's or officer's particular interest. The priority of one project will also have to be weighed against another.

Exhibit 2

The corporate dimension

From inception to completion, projects should be related to an authority's corporate capital planning process.
Effective teamwork

6. To be successful, capital projects need to be well organised and co-ordinated. Every project must have a client – the person or organisation responsible for procuring the construction works, paying for them and owning the completed assets. The client is normally the responsible service committee, working through a relevant department.

7. The client function needs to be led by a project sponsor – a senior person able to give overall direction and manage all the key aspects of a project. For example, the director of education will typically be the sponsor for a major project in a school. A project sponsor ‘owns’ the project and is the focal point for key decisions, but appoints a project manager to manage the project on a day-to-day basis.

8. Authorities vary in how they organise technical support for the client (Exhibit 3). There is no universal model of best practice. The key requirement is a comprehensive organisational structure that defines responsibilities clearly and ensures that people are empowered with sufficient authority to match their responsibility. Whatever structure is adopted, effective communication between the members of the team is vital, and also between the team and other key groups such as end-users, other council departments, contractors, subcontractors and the public.

9. Authorities also vary in the extent to which they use in-house or external professionals to provide technical support. In the Commission’s survey, most authorities retained a large in-house capability. Only one-third relied significantly on external consultants.

10. Where authorities rely mainly on internal staff, they should avoid staffing for peaks and use the external market to cope with uneven increases in their capital programme. Those that externalise professional services should make sure that they are not locked into paying high fees if their capital programme is cut.

11. The Commission’s survey shows that the level of fees charged to projects varies widely, from less than 2 per cent of the contract cost to more than 30 per cent. There is no link between the fee level and the use of internal or external consultants. However, fee levels above median values were concentrated in particular authorities. This suggests that effective management of the fee process is more important than who provides the consultancy service.

Exhibit 3
Models for organising key roles in construction projects

Authorities organise themselves in different ways.

<table>
<thead>
<tr>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service provider</td>
</tr>
</tbody>
</table>

Authority A
Service department incorporates technical section

Authority B
Property department provides technical section and acts as landlord for service department

Authority C
Core technical team acts as expert client for service provider – consultants provide technical services

Authority D
Technical services department provides assistance to service department to fulfill its client role

Source: Audit Commission
Box B
Key questions for elected members

<table>
<thead>
<tr>
<th>Meeting needs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How well does our capital planning process enable us to assess whether projects:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>are the best way of meeting service needs?</td>
</tr>
<tr>
<td></td>
<td>meet overall priorities and service strategies?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effective and efficient teamwork</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2. How effective are the arrangements between service departments and technical departments for working together on capital projects?</td>
<td></td>
</tr>
<tr>
<td>3. What were fee levels as a percentage of contract value for the projects that were completed in the last financial year?</td>
<td></td>
</tr>
<tr>
<td>4. How effective are we at having the right level of technical services in place at the right time and at the right cost?</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Time for design</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Do our approval mechanisms enable us to plan potential projects well in advance while still giving us control over the decision to start work on an individual site?</td>
<td></td>
</tr>
<tr>
<td>6. How often are cost estimates being updated as projects develop and how are revised estimates related to budget constraints?</td>
<td></td>
</tr>
<tr>
<td>7. How many invitations to tender in the last financial year included an allowance for provisional sums of over 10 per cent?</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Value for money</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Have we reviewed our policy on procurement in the light of the Latham Report, Constructing the Team?</td>
<td></td>
</tr>
<tr>
<td>9. How many projects in the last financial year have we applied risk management techniques to?</td>
<td></td>
</tr>
<tr>
<td>10. How could value management and value engineering help us achieve better value for money?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Delivering projects</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11. How and how often does the project sponsor report to members?</td>
<td></td>
</tr>
<tr>
<td>12. What scale of problem or variation with a project would require a reference to members?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project completion and review</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>13. What proportion of projects completed in the last financial year:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ran more than 15 per cent late, and why?</td>
</tr>
<tr>
<td></td>
<td>exceeded their contract cost by more than 5 per cent, and why?</td>
</tr>
<tr>
<td></td>
<td>have outstanding final accounts and what is the value of possible claims?</td>
</tr>
<tr>
<td>14. What changes have we made to the way that we manage this year’s projects as a result of last year’s experience?</td>
<td></td>
</tr>
<tr>
<td>15. Do we receive reports on the value achieved from our capital projects and the extent to which we achieved the objectives intended?</td>
<td></td>
</tr>
</tbody>
</table>
### Meeting needs

1. How are we including an understanding of users' needs when we propose and design projects?

2. Before presenting projects to members, how rigorously do we:
   - define the objectives of the project in a project brief?
   - assess projects against corporate objectives and service plans?
   - justify projects in a business case and consider whether there are other options for meeting the service need?
   - identify the time-critical elements of a project?

### Effective and efficient teamwork

3. How good are we at defining, for each project, the roles of project sponsor and project manager and the relationships they have with end-users, the design team and other technical specialists?

4. How far are professional consultancy costs – whether internal or external – being charged to projects?

5. Are arrangements in hand to benchmark fee levels against the median values from the Audit Commission's survey?

6. To what extent (and how) are we matching the method of employing and paying consultants to the type of project?

### Time for design

7. How are we ensuring that we are allowing sufficient time for:
   - the detailed design of projects?
   - project sponsors and end-users to be consulted and to sign-off project designs?
   - updating design costs?
   - pre-tender reviews?

### Value for money

8. Has a report on procurement been submitted to members, in the light of the Latham Report, Constructing the Team, covering:
   - tender limits and tender periods?
   - approved lists and shortlisting processes?
   - elected member involvement?
   - partnership working, probity safeguards and the role of internal audit?

9. How are we making sure that our estimates of design costs reflect established cost planning techniques and up-to-date data?

10. What skills do we need to develop to be able to apply risk management, value management and value engineering techniques?

### Delivering projects

11. How effective are our project information systems and procedures in terms of enabling us to monitor progress on site, and check spending and commitments against progress made?

12. What changes do we need to make to our standing orders and financial regulations so that the responsibility and process for authorising and reporting variations are clearly defined?

### Project completion and review

13. Are we managing project handovers in a systematic way?

14. How well are we monitoring the settlement of final accounts?

15. Do we have corporate procedures for reviewing the lessons from each project, and how can we make sure that the lessons are spread throughout the council?
time for design

'Allowing sufficient time for design should generate accurate cost predictions.'

12. One of the first decisions authorities have to make is when to start planning a project in detail. Some authorities begin once a project is included in their capital programme. Others wait until funding is secured. This approach is understandable. Authorities do not want to waste scarce resources on a project that does not go ahead. But apparent caution can lead to higher expenditure if preparatory work has to be rushed to meet funding deadlines. Authorities should have clear procedures for accepting a project into their capital programme and specifying how far its planning should proceed.

13. Whenever planning starts, it is important to allow enough time for detailed design. The golden rule of the six Ps – prior preparation and planning prevents poor performance – applies particularly to capital projects. There is the greatest opportunity to reduce costs (and avoid costly mistakes) at the start of a project (Exhibit 4). Late design changes increase costs.

14. Allowing sufficient time for design should generate accurate cost predictions. But in two out of five projects surveyed, there was a difference of more than 15 per cent between the estimated cost at final design stage and the lowest tender. In addition, half of the project cost estimates were not updated between the initial estimate, scheme design and pre-tender stages. Authorities should allow sufficient time for updating cost estimates and for a thorough pre-tender review. Lack of time for design may also contribute to the relatively high allowance made in tenders for contingencies – the sums provisionally included in a contract to cover items that have not been sufficiently measured or described for the contractor to price or, in the case of a renovation, to allow for additional items as a project progresses. In 35 per cent of projects surveyed, provisional sums and contingencies represented more than 10 per cent of the contract sum.
A key part of planning any project is to consider the best method for procuring its delivery. This involves choosing between in-house or external expertise, deciding whether or not to pre-select specialist contractors, and opting between a design and build route or the traditional designer-led approach. Fieldwork authorities tended to follow the traditional route which often works well, but not always. Authorities should therefore evaluate and select procurement options on a project-by-project basis. Having decided on their method of procurement, they should consider their approach to tendering. Authorities should make sure that:

- the time allowed for submitting a tender meets the industry-recommended norm – over half the projects surveyed used shorter periods (Exhibit 5);
- the number of tenderers invited to bid is kept reasonably low to give contractors a good chance of success and to reduce administrative costs;
- procedures for drawing up lists of approved contractors are thorough, but take account of the cost to contractors of complying with pre-qualification requirements;
- cost-thresholds for full external advertisement of tenders are balanced between being so high that there are too few bids and so low that too much administrative work is generated; and
- elected members approve and monitor tender procedures and agree the circumstances that would trigger their involvement in the tendering of a particular project.

Local authorities need to put as much effort into making contracts work as they do into selecting contractors. Partnership working is the key. But this should not be at the expense of public accountability. Using internal auditors to audit processes on behalf of the project manager can help to get the balance right between partnership and probity.

Well-managed projects can also maximise value for money by:

- evaluating systematically the risks associated with projects, especially large ones;
- using the most up-to-date information to cost each component of a project; and
- developing the use of value management and value engineering techniques. Value management means that, at each stage of a project, both client and technical team assess whether the agreed objectives are being met in the most cost effective way. Value engineering focuses on individual components and materials, and examines the level and associated costs of the specification and whether they are appropriate.
delivering projects

18. A well-managed project will normally be completed on time and within budget. But in the Commission's survey, two-thirds of projects ran late and half were 15 per cent or more behind schedule (Exhibit 6). Moreover, one-quarter of projects cost more than 5 per cent above the initial contract sum and one-quarter more than 5 per cent below.

19. There are six key steps that authorities can take to reduce the risk of cost and time overruns (Exhibit 7):

- **putting information systems in place:** good project management is impossible unless local authorities have good management information systems;
- **agreeing a monitoring process:** some authorities have more formal monitoring mechanisms than others. Whatever approach is adopted, accountability for all aspects of the project should be clearly defined and agreed;
- **monitoring progress regularly:** the project manager will need to monitor all the variable elements of the project, both in terms of work achieved against the project plan and money spent against budget. This will normally be done monthly to match the cycle of checking and paying contractors' invoices;
- **acting on monitoring results** should provide early warning of likely cost-overruns or delays;
- **controlling variations** in the work undertaken by, and payments made to contractors, formal procedures for signing off, reporting and recording variations will provide a sound framework for controlling this process. The procedures will need to be adapted according to whether the variation is significant or minor; and
- **reporting significant problems** to elected members quickly: delaying decisions in these cases can make such problems difficult and expensive to resolve.

---

Exhibit 6

**Construction period as a percentage of planned period**

Two-thirds of projects run late.

**Construction time as a percentage of planned time**

- [Graph showing the distribution of construction times as a percentage of planned time.]

Source: Audit Commission survey
project completion and review

20. When a new or renovated building is completed, there should be a proper handover. This should include a certificate of practical completion, built drawings, specifications and manuals. In the best cases, it also includes demonstrations and practical instructions from the contractor or technical team.

21. As soon as a project is complete, authorities should aim to settle the final account as quickly as possible. Delays make it difficult to budget for future capital work because they increase uncertainty when assessing the resources available against liabilities outstanding.

22. Examples of post-project review were rare in the Commission’s study. But systematically reviewing the lessons from each project enables authorities to:

• assess what was achieved at what cost; and
• learn from the success and failures of a project, so that future projects can deliver better value for money.

Exhibit 7
Six key steps in delivering projects

The hallmark of a well-managed project is to deliver its planned objectives to the right quality on time and within budget.
next steps

23. The Commission's study identified several authorities that met most of the criteria of a good project. But none had all the elements of good practice in place. Evidence from time and cost overruns and from expenditure on professional fees suggests that many authorities could achieve much better value for money. Members and officers should use the best practice identified in this study (Box A) and the key questions (Boxes B and C, see centre pages) to assess their own performance. More information on how to implement good practice will be included in a management handbook (to be published in Autumn 1996). And help with assessing their own performance will be available to individual local authorities through local audits.

24. Central government's control of the capital expenditure system inevitably influences local authorities' actions and their ability to achieve economy, efficiency and effectiveness. Phase 2 of this study, to be published in Spring 1997, will address this issue.

If you want to know more

Local authorities will benefit from using:

- the three free copies of Just Capital that have been sent to the chief executive of each authority. It looks at all these issues in more detail and includes background information, case studies and specific guidance; and
- the assistance available from their external auditor.