

Common data, common sense

Modernising information management in councils

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Introduction

This paper is aimed at councillors, chief executives and heads of service. It looks at how councils must change the way they manage data and information to help them deliver quality services and reduce costs.

Councils rely on information communications technology (ICT) to underpin their services. Currently, similar data is held many times by different departments. The number of databases and the duplication of records make it more difficult for councils to keep them up to date. Duplication of data also means that overhead costs are higher than they need to be.

Councils are increasingly moving to centre services on specific client groups (eg, combining social work children's services with education). Reconfiguring services involves changes in business processes that need to be supported by integrated information systems. Such joined-up working should involve councils looking at ways in which they can share data – both internally and with partner agencies.

Fundamentally, this will mean a culture shift from departments collecting and managing their own datasets, to working with others who use similar data. To enable data to be shared, councils need to establish:

- **data standards** – to make sure that data is held in a standard format which, by applying appropriate technical standards, allows it to be shared between different departments and other users
- **data custodians** – who are allocated responsibility for ensuring that the data held is accurate and up to date.

Putting these foundations in place leads to a number of further opportunities. These include **customer accounts** – enabling all information about a customer of the council to be linked and be accessible from one point. In the longer term, these steps help councils and their partners to deliver joined-up services.

By adopting a long-term strategy that exploits technological advance and innovation, councils can use ICT to support change in their business processes and improve quality of service. Strong leadership and commitment from the top will be vital in ensuring that ICT objectives are clearly defined, business changes are broken down into manageable projects, and targets are delivered within time and within budget.

The purpose of this paper is to encourage chief officers and members to ensure that their council is taking steps to exploit the use of ICT specifically to improve their council's management of information. It should be used at a corporate level to assist the council to review its approach to information management. It includes examples of best practice from councils that have already started to take steps to address the issues in this paper and a checklist is provided (**Appendix 2**).

The Commission will be monitoring councils' progress in this area.

The need for improved use of ICT in the public sector

There is strong interest in encouraging the public sector to exploit the potential of ICT to enhance the delivery of public services. Customer expectations are being set by developments generally taking place in the private sector, and in some parts of the public sector, in the use of modern information systems to improve service delivery.

At a UK level, the Government has published a White Paper on modernising government¹ and a strategy for e-government², which together set an agenda for public sector bodies to use ICT to modernise and improve the way they conduct their business processes and deliver services to the public.

The Scottish Executive has established a Digital Scotland Task Force³ to champion the use of ICT in enabling Scotland to obtain maximum economic and social advantage from digital technologies. In May 2000, the Task Force produced a report that highlighted how systems, developed with the customer at the centre, and services, designed in a joined-up way, can improve service quality and reduce transaction costs. The report also made a number of recommendations on the application of information systems to enhance the delivery of public services, including services delivered by councils.

Scottish Executive Ministers, COSLA and council leaders are discussing how best to take forward the information age government agenda among councils in Scotland.

Why do councils need to change how they manage their information?

Councils provide a complex range of services, which have significant impact on their local communities. They need information on their customers, and on the properties and land in their area, so that they can provide these services effectively and efficiently.

At present, councils do not hold data on a single, customer account basis. Rather it is held in the form of unconnected departmental 'silos' with each department holding its own service information. Because all departments need information on their customers, land, and property, a substantial volume of same, or similar, data is held a number of times, in different systems, in different locations, across different services (Exhibit 1). Stirling and Clackmannanshire councils independently estimated that, within their council, they had around 50 separate databases that hold the same, or similar, land, property and customer addresses.

Systems developed with the customer at the centre...can improve service quality and reduce transaction costs.

The same, or similar, data is currently held in many places.

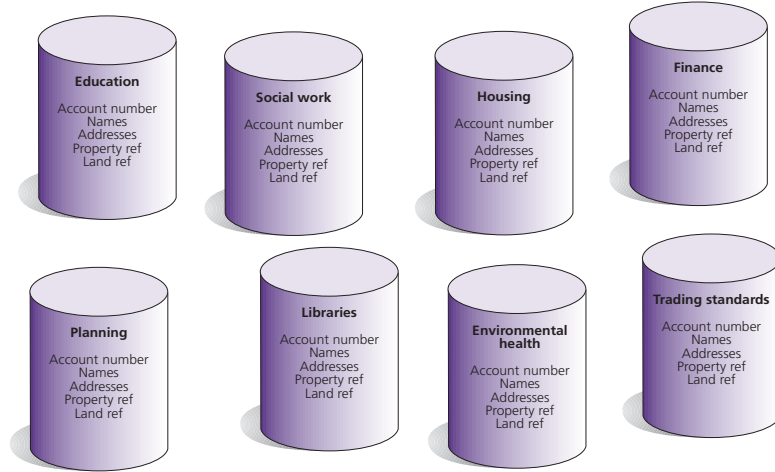
¹ 'Modernising Government White Paper', March 1999, www.cltu.gov.uk/moderngov/whitepaper

² 'E-government: A strategic framework for public services in the information age', Central IT Unit of the Cabinet Office, April 2000, www.lagchampions.gov.uk

³ Digital Scotland reports to a Cabinet committee on digital technology across all sectors of Scottish life. It comprises a number of public sector representatives (including COSLA and the Scottish Executive) along with representatives from leading companies engaged in digital technology development, www.scotland.gov.uk/digitalscotland

Exhibit 1: Information is currently held in departmental 'silos'

The same, or similar, information is held a number of times in different departmental 'silos' of information.



Data frequently changes. Because similar or the same data is held separately by councils in a number of individual databases, it is difficult and time consuming for councils to keep all of their systems up to date – time that would be better spent on front-line activity and further improving service quality.

One large council estimated that around 250 people (including tenants, owner-occupiers and businesses) change their address details every day. Multiplying this by 10 – a conservative estimate of the number of times an address is held – involves council staff having to make 2,500 alterations to address data alone every day.

When databases become unreliable, they affect a council's ability to do its job.

Moreover, if all staff involved in maintaining different databases are not informed of customer changes, data becomes out of date and unreliable. Such poor data quality affects the council's ability to do its job – letters go astray or go to people who have moved from the area, or who have died and pursuing arrears becomes more difficult, affecting the council's receipts.

Where personal data is held in many disparate systems, it increases the risk of councils failing to comply with Data Protection legislation⁴, as it is more difficult for councils to:

- track how the data are being used
- keep it up to date
- ensure that access is controlled, and
- protect the privacy of the individual.

Technology is now available to hold data securely and to share it with other organisations in a controlled way. In addition, the government is looking to progress new legislation with regard to electronic signatures and digital authorisation.

⁴ **The Data Protection Act, 1998**, entitles individuals to have a copy of all information stored, as well as a description of the data and who is being given access to the information. Any personal data processing underway must be done in accordance with the new provisions by October 2001 (some manual data processes have a longer deadline).

What should councils aim to achieve?

The long-term aim is the provision of seamless transactions across the public sector, enabling councils and their partner agencies to provide services tailored to the needs of their customers. A cornerstone in securing this objective is to have single and accurate sources of key data that use common definitions for citizens and businesses, and land and property. This data should be accessible to all data users with appropriate security safeguards. In the longer term, this will enable councils to develop information databases that are built around the information and service needs of customers.

Joined-up information provides many benefits for the customer and the council.

Exhibit 2 shows some of the benefits of joined-up information, using single data sources. In many cases, these benefits can be achieved in the short- to medium-term by linking different systems and without investing significantly in new information technology to replace legacy systems. The steps needed to begin linking and sharing data held in different systems are the same as those needed for the long-term vision of developing customer accounts. Councils need to make a start, and the next section looks at the steps that councils should be taking now.

Exhibit 2: Examples of benefits that can flow from information being joined up

Joined-up information can help to realise many benefits for councils and their customers.

- ✓ **Easier customer access** – Customer data can be linked to a range of portals (gateways) through which customers can contact the council. These portals are an extension of the one-stop-shop approach and the forms of customer access can include call centres, community access points or the Internet. Also, through linking central data sources to different services, customers only require to notify changes once, instead of many times.
- ✓ **Easier for staff to deal with customer enquiries** – For certain types of enquiries and applications (eg, benefits), customers look to receive face-to-face contact for advice and assistance. By providing staff with direct access to a database of customer information, staff are better placed to provide a higher standard of service.
- ✓ **Customer entitlement to benefits more easily established** – The same financial information is needed for many benefits, both within the council, from the Benefits Agency and other central government departments. Presenting the information for one purpose could prompt staff to check for customer eligibility/receipt of other benefits. The applicant's details could then be processed using the same base information, reducing the need for separate application forms.
- ✓ **Reduced losses due to fraud and error** – At present, details of benefit claimants' circumstances may be held a number of times both within councils and within the Benefits Agency. By conducting data-matching checks, instances can be identified where benefit is being overpaid, as a result of fraud or error. However, such data-matching exercises do not happen routinely and it may be some time before fraud and errors are discovered and recovery pursued. Using a single, accurate, up-to-date data source means that the scope for fraud and error is reduced.
- ✓ **Easier recovery of debt** – Customers may owe the council money to repay overpaid housing benefit, council tax benefit or rent arrears. Having access to a customer account that brings these debts together enables the council to adopt a corporate approach to debt recovery. This should increase the total amount recovered by making it easier for the tenant to arrange to make repayments.
- ✓ **Greater assurance in complying with legislation** – By reviewing and rationalising their information management, councils will be clearer about what data they have and what they do with it. This can help them to ensure that they comply with the relevant data protection legislation.

The first steps involve councils conducting information audits, establishing data standards and appointing data custodians.

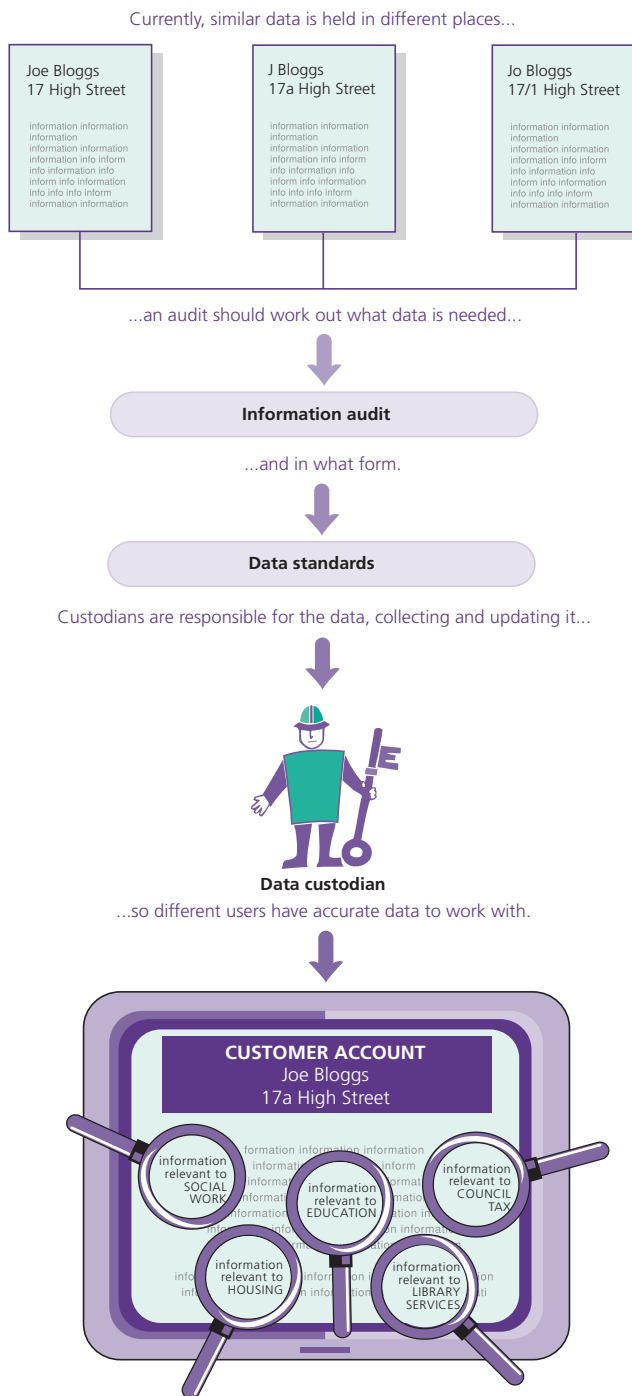
What steps do councils need to take?

The first steps involve councils conducting information audits, establishing data standards and appointing data custodians (Exhibit 3). All councils will require to have a clear understanding of:

- what information they **need** to support service delivery, and
- what data they currently **hold**.

Exhibit 3: Improving information management

Councils should be taking the following steps **now**.



For most councils, getting the right information management infrastructure in place to underpin new ways of working will mean that an **information audit** needs to be carried out. The aim should be the removal of superfluous data and information processing, and the identification of the core data needed to support new business processes (including the data that needs to be shared across the organisation and, in time, with external agencies).

Councils will need to apply **data standards**. These set common definitions for holding data (eg, names and addresses) on a consistent basis. When data standards are in place, data is much more easily accessed and shared between data users. They are central to implementing an effective joined-up information strategy.

Councils will need to establish **data custodians** who will be responsible for ensuring that data is up to date and accurate, and be accountable for its use.

All of the above issues could be tackled at the same time. However, by conducting an information audit in the first instance, a council will more readily be able to determine its corporate data standards and establish data custodians.

Both data standards and data custodians are necessary pre-conditions for realising the longer-term aim of establishing **customer accounts**, and the equivalent accounts for land and property.

Many councils have already embarked on programmes to review the way they hold and manage information, as a first step towards developing new processes and information systems to support improved service quality. An increasing number of organisations are also now starting to share the information that they gather with others; or using for their own purposes information gathered by other bodies.

It is important that improved information management supports sound processes.

It is important that improved information management supports sound processes. Best Value service reviews, reconfiguration of services and other joined-up service initiatives are all acting as drivers in changing the way services

Exhibit 4: Examples of improved ways of working by joining up services

Joined-up services enhance customer service.

The Clyde Coast and Renfrew ONE Project involves Employment Services, the **Benefits Agency** and the local councils (Renfrewshire and East Renfrewshire). Customers can now go to one site and get assistance from a personal adviser on, eg, Jobseeker's Allowance, Income Support, Council Tax, Housing Benefit, Severe Disablement Allowance and Incapacity Benefit.

Lewisham Borough Council looked at how it could work more closely with the Benefits Agency (BA). Revised procedures introduced include:

- electronic transfer of data from the BA to the council
- co-ordination of visits to customers to avoid duplicated visits by BA and council staff
- co-ordination of claim taking, advice provision and information gathering to provide a more integrated service to the customer.

West Lothian Council is developing a 'Wired West Lothian' project. Its aims include:

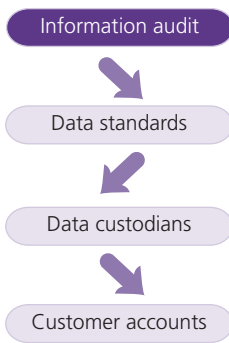
- providing a single 'gateway' for its citizens to access information on all aspects of the council's services
- providing a means for citizens and all aspects of business, education, government and community services to interact with each other.

To date, the project has resulted in two one-stop-shop initiatives:

- 'West Lothian Connected', where staff can deal with customer requirements relating to employment, benefits, inland revenue, health, and further education services
- plans for the 'Broxburn Resource Centre', to support the front-line delivery of health, housing and education services.

are delivered. Exhibit 4 provides examples of three public sector initiatives where joined-up working has been introduced to enhance quality of service.

Such joined-up working initiatives are based on the experience that different public sector organisations use much the same data when delivering public services – particularly for welfare-related services. Where this is the case, it is possible to define a single customer data set that public services can share and to eliminate the need for the public to constantly provide the same information to different service providers. The steps illustrated in Exhibit 3 will allow joined-up information management to support these changes.



Some services will have to trust others to hold and maintain what had formerly been ‘their’ data.

Information audit

Before councils can streamline their information management to support their business processes, they need to conduct an information audit. This will involve looking at:

- what information is required and by whom?
- when is the information required?
- what is the purpose of the information?

Then comparing these needs with:

- what data is currently captured, by whom and in what form?

Then:

- removing duplicated information processes.

A corporate approach will require managers and staff from all parts of the council to review their data needs. The move from ‘silos’ of information to corporate information presents a cultural challenge to councils. In moving to share common data sources, some services will have to trust others to hold and maintain what had formerly been ‘their’ data. The information audit, therefore, will take time – not just in physically taking stock of current data management processes (in councils like **Perth & Kinross** and the **London Borough of Newham** this stage alone took more than six months) but also in managing and supporting an environment and culture for change. Exhibit 5 illustrates how Perth & Kinross Council approached its information audit.

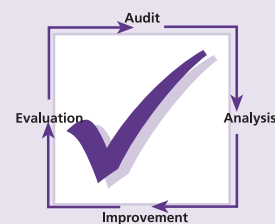
Exhibit 5: Example of a council’s approach to an information audit

Information audits take time and careful planning, and should identify duplication of data held in systems.

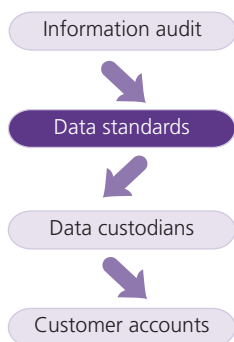
Perth & Kinross Council developed a methodology using a combination of questionnaires and workshops. Its Corporate Management Team and its Strategic Policy and Resources Committee approved the project. The project plan comprised four stages:

- **Audit** – to establish internal and external information flows
- **Analysis** – to identify information gaps, stakeholder requirements, information priorities, best practice and barriers to improvement
- **Improvement** – to close identified information gaps and recommend changes that would enable the council to better manage the information services it provides across its services and with its partner agencies.
- **Evaluation** – of the changes to ensure that information services continue to be delivered to the highest quality.

The audit and analysis stages are now complete. Workshops involving over 250 staff identified needs and priorities. Three workshops with the public, one with the Community Planning Forum and one with councillors also contributed to this work. A final evaluation of the audit and a report of workshop results are being carried out so that a draft information strategy can be put to the council.



It is important for each council to decide the information it actually needs before it creates information links between systems.



If an agreed data standard already exists, then it should be used.

It is important for each council to decide the information it actually needs before it takes the step of creating information links between systems. The information audit should identify and result in action being taken to eliminate duplicate data capture and data processing arrangements that currently exist. When the core data requirements and relationships between the information needs of different services are understood, councils can then move to identify how the required data should be held, the data standards to be applied, and who should be responsible for managing each single data source – the data custodians.

Data standards

Staff providing services need to be able to rely on the data contained within their council's information systems. Standards can be applied to ensure that the source data remains current and accurate, and in a form that enables links to be established with other relevant data sets. By having a single source of data that can be used many times, the overhead of capturing, storing, retrieving and managing data can be significantly reduced.

Data keys (ie, pieces of data that are held in the same format in different databases) can be used to link disparate systems in different departments to a single, reliable and accurate data source. Examples of data keys are postcodes or names (so long as they are held in a standard format) and national insurance numbers. By ensuring that data standards apply to data keys, councils can more easily link information systems.

There are five main areas from which data standards⁵ can be drawn. These are listed below, in order of priority:

- International Standards (eg, ISO 7372:1993, which identifies the data format of a name)
- European Standards
- British Standards (eg, BS7666, which covers the format of addresses and other land references)
- Government Standards (eg, the format of a national insurance number)
- Internal Standards (eg, a locally developed customer account number).

The general rule is that if an agreed standard already exists, then it should be used. The benefit to councils in adopting this approach is that they will be adopting standards that other partner agencies are also being encouraged (or mandated) to use.

Most council data (both financial and non-financial) have a geographic base, as most customer transactions have a direct link to an address of a property or the owner/occupier of land and property. Exhibit 6 shows how establishing data standards can help to reduce the amount of data held and enable it to be shared between councils and their partner agencies.

⁵ 'Government Data Standards Working Group', Data Standards Catalogue V1.0, September 1999, www.lagchampions.gov.uk/guldelines

Exhibit 6: Reviewing and establishing common data standards

Councils that have reviewed how data is held can start to build linked information systems.

Clackmannanshire and Stirling councils were concerned about duplication of data and lack of common standards in the way data was held. A questionnaire was developed and each department in both councils was asked to identify systems that stored details of land, property and addresses.

They found that:

- there were almost 50 separate systems that use a land, property or address reference
- about 50% of the systems use their own data standards for identification purposes
- only 5% of the systems use the 'industry standard' addressing system
- only 25% of the systems use the 'industry standard' national grid references
- two-thirds of their systems contained data that would be useful to other functions.

Falkirk Council has also used the questionnaire.

Glasgow City Council is developing a property gazetteer (a corporate property database) that will cover its £1.2 billion property portfolio. All land and property data will conform to BS7666. The benefits to the council and its customers from the adoption of a standard method for defining land and property will be:

- access to a corporate land and property information system
- a common means of retrieving land and property information
- consistent access/exchange of information with external agencies.

The council sees the adoption of these data standards and the affordability of Geographical Information Systems(GIS) as an opportunity to improve the management of its property portfolio and to add value to its customer services by ensuring the availability of a quality-assured property dataset.

Councils can adopt three main approaches to data standardisation:

- **A modular solution** that applies standards to discrete groups of related services, one at a time. For example, all services that use property data would require to make sure that their systems contain a link to a common property reference number that complies with BS7666.
- **An incremental solution** supported by a mandatory council or public sector policy on the use of common standards for all new systems. This approach requires all new systems (acquired by the council to carry out a specific function) to use the data standards that comply with the council/public sector policy.
- **An intermediate solution** that converts existing data, using specially designed software, into a common form for exchange/sharing between systems. This approach means that legacy systems can be maintained, but they would be linked to a corporate system that would ensure that the standard corporate record (eg, name, address and customer) could be accessed by the data user/customer.

These approaches mean that data standards can be phased in across council systems over a period of time. Projects that attempt large-scale change at the same time have a much lower probability of success than projects based on manageable packages of work⁶.

⁶ 'Review of Major Government IT Projects', Successful IT, May 2000, www.citu.gov.uk

Rather than attempt wholesale change at the same time, each council should decide its own priority areas for implementing data standards, taking account of:

- its priorities for enhancing information to improve service performance
- its local circumstances, and
- any joint-working arrangements with other partner agencies.

For example, reducing the levels of arrears owed to the council could mean prioritising links between the rent, council tax and housing benefit records. Tackling poverty could mean prioritising links between housing benefit records and information used by welfare benefits advisors.

Data standards on their own are insufficient to allow links to be made between systems. National technical standards⁷ are being developed for linking data sets across all government departments and the wider public sector. These are seen as the minimum standards necessary to support the range of transactions and services across government and to integrate systems within government. If these standards were to become mandatory, all systems would need to be developed to support these standards, enabling data to be shared more easily.

Data standards, and technical standards, allow a range of databases to be linked to a single data source. Data custodians have the job of keeping this source accurate and up to date.

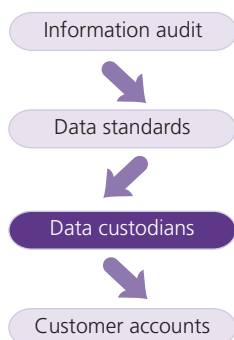
Data custodians

Data custodians are responsible for ensuring that data is kept up to date and remains accurate. They are also accountable for its use – ensuring that they know who has access to it, who does what processing to it and for what purpose. Such accountability for the use of data is a central part of ensuring that councils comply with data protection legislation.

For certain types of data, there are natural data custodians. These are people or bodies who are most likely to hold the data and to know about changes to it. For example:

- the finance service would be the natural custodian for all financial data relating to citizens' and businesses' dealings with the council
- the education service may be the natural custodian for data relating to the education of young people, with social work, libraries, and other services making use of some of this information.

A trusted partnership approach is vital in managing the relationship between data custodians and those who use the data for information management purposes. **The Forth Valley Geographical Information Service (GIS)** is an example of effective joint-working arrangements (Exhibit 7).



For certain types of data, there are natural data custodians.

⁷ 'UK Government Interoperability Framework' (Draft) March 2000, sets out the government's policies for achieving interoperability across all government departments and the wider public sector. National standards are set for computer architecture, interconnection of information systems and data integration. www.citu.gov.uk

Exhibit 7: Establishing a data custodian for geographical information

Councils in Forth Valley GIS have co-operated to develop effective joint-working arrangements.

After reorganisation, Clackmannanshire, Falkirk and Stirling councils recognised the potential benefits to service delivery of establishing a joint development and support team to be the data custodian for their geographical information.

Forth Valley Geographical Information Service (GIS) was formed as a joint team providing services across all three councils. Each council shares a third of the costs and benefits of GIS services. The GIS team also provides a commercial service and is contracted to look after the geographic data needs of the Forth Valley Division of East of Scotland Water.

This initiative has shown that councils can work together to form partnerships and benefit from economies of scale. Success factors included:

- agreeing a common statement of user requirements for a geographical information system
- agreeing a common set of data standards that can be used as building blocks
- helping to break with the culture that individual departments need to be custodians of their own data by demonstrating the advantages of corporate data
- convincing services that information systems should use data derived from the most appropriate source (eg, ordnance survey), rather than create their own data sources.

Examples of the applications that the GIS system is used for include:

- calculating road measurements for Grant Aided Expenditure
- creating desktop maps
- managing land and property
- monitoring new housing developments
- managing school placement and transport enquiries
- managing a street gazetteer.

It is possible to establish national databases managed by data custodians.

It is possible to establish national databases managed by data custodians. Examples of such initiatives currently being developed include large strategic projects like the **National Land Information Service (NLIS)** and the **Scottish Land Information Service (ScotLIS)**. Exhibit 8 provides background information on the ScotLIS development.

Councils should appoint data custodians only when they are clear about which one of their current, multiple, data sources will be the single data source to be kept up to date and to which others will be linked. The choice of which service area should act as data custodian will depend on the nature of the data and which group of staff is best placed to maintain its accuracy, manage changes, and so on.

Having conducted an information audit, established data standards and appointed data custodians, councils will be well placed to move towards managing their information in a customer-focused way (ie, the development of customer accounts).

Exhibit 8: An example of a national data custodian

ScotLIS aims to be the national data custodian for land in Scotland.

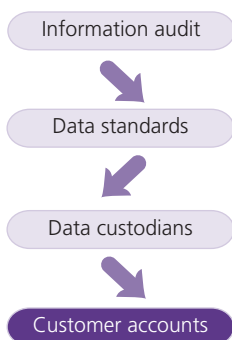
By working together with their partners, councils in Scotland are taking a consortium-based approach to the development of the **Scottish Land Information Service (ScotLIS)**. The aim is to create a central information hub that gives access to land and property-related information.

The principal data providers are anticipated to include councils, Registers of Scotland, Ordnance Survey and British Geological Survey, and ScotLIS will integrate this data into a national data set. Councils themselves would be recognised as the local custodians of property data within their own geographical boundary. ScotLIS could then make this local data available nationally to anyone wishing to subscribe to the service.

The benefit for users of land information is that their requests for information could be met from a single access point that could match their enquiry to the many available data sources, and provide the customer with a single response. By establishing common data standards and data custodians, councils could link their local data sets to a national data set, which could be accessed electronically, 24 hours a day, 365 days a year.

Likely applications include: conveyancing, planning, building control, property searches, estate management, insurance assessment, marketing, and monitoring of land usage.

Likely users of ScotLIS services include: Registers of Scotland, local government, utilities, Ordnance Survey, private sector, British Geological Survey, general public, chartered surveyors, solicitors, estate agents, insurance, environmental agencies.



Opportunities will arise to remove costly data processes.

Customer accounts

Customer accounts link selected pieces of customer information contained in various data records across different services to a single access point (eg, a one-stop-shop or a call centre). Different data users, with appropriate permission to access such single data sources, can then use these accounts to see a more complete profile of the customer, and provide a better service to the customer, than may be possible at present.

Currently, information held by different services generally only comes together at particular life events. These could be moving house, death of a spouse, or need for residential care. All of these events require customers to communicate with different parts of the council and other public sector agencies. Having a single point of contact, and providing staff with a reliable source of information, can greatly improve the service to the customer at these, often very stressful, times.

Once councils start managing enquiries and transactions through customer accounts, opportunities will arise to remove costly data processes (eg, multiple computer and manual data processing). By automatically linking changes to critical data (eg, name and address) to services' information systems, the need for clerical input by individual user services is removed. Exhibit 9 summarises how the London Borough of Newham developed a corporate database for customer enquiries and achieved improved information at lower cost.

By monitoring customer transactions (ie, customer tracking), councils will gain a clearer understanding of who uses their services. This information will be important in determining policy and expenditure decisions.

Exhibit 9: London Borough of Newham's corporate customer database

Newham's database provides full case histories of customer contacts and produces improved performance information at lower cost.

London Borough of Newham has created a 'corporate database' to enable customer front-line services staff to access detailed 'back office' information for each customer.

The system:

- provides a full case history of customer contact such as application forms and related correspondence
- allows performance monitoring by providing, for each enquiry, information on who dealt with it, how long it took to deal with, and its outcome.

The above information can be extracted directly from the system, with little effort. Previously, data for performance information had to be extracted manually, input to another system, analysed and then reported.

Examples of some of the benefits of having developed a corporate database include:

- customers now deal with fewer, more experienced, members of staff (staff have been trained to deal with a wide range of customer enquiries)
- customers do not have to repeat information because data is linked between systems
- staff now have access to a range of information about customers. For example, they can:
 - analyse visits or telephone calls by individual customers
 - analyse the type of problem presented (eg, council house repair or council tax benefit enquiry)
- customer service staff can recall letters and application forms to review progress, through having links to housing and finance section correspondence.

Eventually, the system will allow customers to review the progress of their own transactions (eg, an application for a council house or planning permission). In addition, they may also be able to book services over the Internet via a public kiosk or their own PC (eg, by completing an electronic form and e-mailing the council).

Joining up information services at a national level

Technology is now available to enable councils to link their systems so that they can better support joined-up services. There is a lot that councils can do on their own. Equally, there is a persuasive argument for councils and their partner agencies to co-ordinate investment in systems that will be used to manage similar data and support similar processes.

At a national level, there is significant potential in using joined-up information services.

At a national level, there is significant potential in using joined-up information services:

- **to achieve economies of scale.** By and large, councils run the same services. While local accountability and a local focus on service delivery is crucial it does not necessarily follow that local information processing systems are necessary. This raises the question of whether councils and government in Scotland can take more steps to:
 - develop common business processes
 - bring information systems and ICT investments together (eg, by co-ordinating procurement of ICT solutions).

The Bank Automated Clearing System (BACS) is an example of a service where the adoption of a standard approach to information management has enabled councils and others to significantly reduce the administration burden and costs in processing payments (Exhibit 10).

Exhibit 10: The Bank Automated Clearing System (BACS) – an example of a standardised approach to information management

BACS has enabled councils and others to significantly reduce the administration burden and costs of processing payments.

BACS has become the 'standard' in all councils, and indeed elsewhere, because everybody has 'signed up' to using the same data record structures and the same data processes required by the BACS system to make payments. Moreover, because suppliers of financial systems know that BACS is a mandatory requirement, it is built into all financial information systems at the design stage.

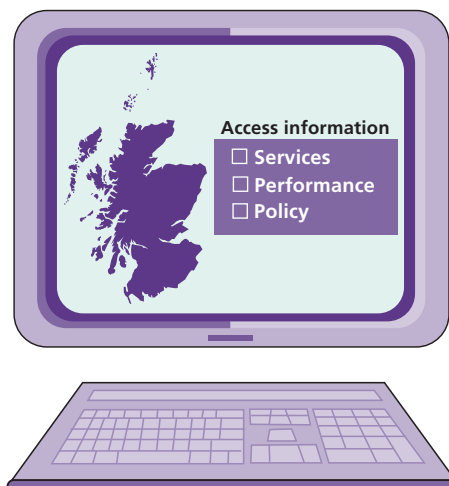
Through using BACS, payments are made directly to customer accounts (eg, staff salaries and payment of suppliers' invoices), at much reduced cost.

Don't set about reinventing the wheel.

- **to work together to develop solutions to common problems.** Councils are at different stages in implementing their ICT strategies and in working out solutions. Many could learn from the experience of others and ICT developments could benefit from a partnership approach being adopted to develop systems, which tackle the issues that all councils face. The clear message is, 'Don't set about reinventing the wheel'. Digital Scotland should help to enhance this process and its Task Force report has already made an important contribution by encouraging, for example:
 - clusters of education authorities to work together in procuring ICT services
 - public bodies to share and exchange information and learn from each other
 - all publicly funded bodies to adopt common technical and data standards
 - all publicly funded bodies to share common 'back office' processing systems.
- **to access Scotland-wide information more efficiently and economically (Exhibit 11).** From a council's perspective, information required for national statistical and other returns should be a natural by-product of its own information systems. Too often, however, the provision of this data is a costly administrative overhead. By adopting consistent data and technical standards for nationally collated data (eg, annual data required by the **Scottish Executive, COSLA** and the **Accounts Commission**), the burden on councils and other bodies could be significantly reduced.

Exhibit 11: Information access across Scotland

The potential exists for Scotland-wide information systems.



Getting started

If you have not already done so, your council needs to start getting the building blocks in place. This will involve:

- undertaking information audits to establish exactly what data your council actually needs, compared with the data that it currently collects
- agreeing data standards in collaboration with all data users (both internal and external to your organisation)
- appointing data custodians to manage the accuracy and integrity of use of the single data sources.

The results of the information audit should identify areas within the council that should be given strategic priority. It will also assist your council in agreeing short- to medium-term targets for establishing data standards and data custodians, as well as achieving the longer-term vision of developing customer accounts.

Strong leadership and commitment from the top will be vital.

However, if your council is to succeed in meeting these initial objectives, it will be important for it to embrace a corporate commitment to implementing an effective ICT strategy. Strong leadership and commitment from the top will be vital. The appointment of senior managers to lead and be held accountable for projects will be crucial in ensuring that approved ICT projects are completed by the agreed target date and within budget. Implementation of the ICT strategy should be carefully project managed to avoid any adverse impact on the quality of front-line service provided.

A lot of attention should also be given to communicating and involving staff in the work as there are cultural issues associated with the management of change and the introduction of new ways of working. Staff in some departments may take some persuasion to rely on others for their information and not set up their own duplicate systems. Also, staff in other departments may need to take on additional responsibilities as data custodians.

The potential exists for national working groups to develop practical solutions to common problems.

All councils and their partner organisations should be aiming to adopt a joined-up approach to their management of data and information, enabling them to provide better services to citizens. Because the challenges facing councils are broadly similar, there is scope to learn from the best practice of others. The potential exists for national working groups to develop practical solutions to common problems.

Your councillors and senior management team are encouraged to use the checklist included at Appendix 2 to assist them to address the issues contained in this paper.

Appendix 1: Advisory group

Alan Nairn	Director of Information Technology, Perth & Kinross Council
Alan Kirkwood	IT Manager, The Moray Council
Elma Murray	Depute Director Financial Services, Glasgow City Council
Gavin Keith	GIS Manager, Forth Valley GIS Services
Jim McGonigle	Business Improvement Team Manager, AD13, The Benefits Agency
John Wright	Head of Communications, COSLA
Kay Brown	Head of Information Technology, South Lanarkshire Council
Lesley Beddie	Director of Communications, The Scottish Parliament
Maureen McGinn	Director of Information Technology, The Scottish Executive
Roger Metcalfe	Director of Information Services, Highland Council

Appendix 2: A checklist for action

Consider the need to change and how change will be driven.

Do we have a strategy to improve the way we manage information to support the better delivery of services?



Have we appointed senior managers to lead the strategy and be accountable for implementing it?

Carry out an information audit and identify corporate information requirements.

Do we know:

- what information is required?
- by whom that information is required?
- for what purpose that information is required?
- when that information is required?

Do we know:

- what information we currently hold?
- where we hold that information?
- in what format we hold that information?

Are we clear about the information that is needed to underpin our service delivery?

Have we taken action to remove duplicate management of same or similar data?

Have we considered where information can be shared between different service users?

Apply common data standards in relation to land, property and people.

Do we know what data standards we should be using?

Do we know what data standards we currently use?

Do we have a plan to introduce and monitor compliance with agreed data standards?

Identify data custodians for core data sets who can control and account for the use of data.

Do we know who collects our different data sets?

Do we know who uses the data?

Do we know who is best placed to be the data custodian for each data set?

Are our data custodians clear about their responsibilities regarding maintenance of the data set?

Are they clear about their responsibilities to ensure that the data is processed and used in accordance with data protection legislation?

Do we have a plan to introduce changes required by the 1998 Data Protection Act?

Do we know how we will ensure that we comply with all data security legislation?

Develop linked information systems that are based on customer accounts.

Do we know what databases could be linked to allow different services to access a single accurate data source?

Have we identified which areas of the council's services should be prioritised for developing a single data source?

Do we know the data keys we should use?

Do we know how we will ensure that notifications of changes to one database are automatically cascaded to all linked systems?

Have we identified the management information (including government and other statistical returns) we should be aiming to report through linked information systems?

Do we know how we will feed our improved management information into the policy development process?



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