

Knowledge management in the Scottish local government context

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Abstract

This study attempts to broadly situate knowledge management within the context of Scottish local government and explore through quantitative and qualitative methods four linked themes or strands. Partially replicating a previous study and based around notions of organisational learning and socially constructed knowledge, these investigate the levels of awareness of knowledge attributes and knowledge management, the degree to which KM might be emerging in this part of the public sector, progress in terms of KM maturity and the approaches adopted to measuring the impact of knowledge management.

A survey of, primarily, Scottish local authorities and an illustrative case study are used to highlight the dual paradigm nature of knowledge management, lend support to a socially constructionist perspective of knowledge and relate findings to previous research. Overall, levels of awareness were found to be low, with knowledge management emerging mainly in those areas associated with reform and improvement. Scottish local government does not appear to have progressed to a high level of KM maturity and there is little evidence for the direct measurement of the impact of knowledge management.

While the survey and case study show that knowledge management is recognised as people based, or sitting within a humanist paradigm, many of the agendas which might drive it for local government sit within an IT paradigm. It concludes with a recognition of the limitations in its methodology and provides tentative suggestions for further research.

1.0 Introduction

1.1 The research problem

Faced with calls for ongoing efficiency savings, transformation, reform and improvement, this study attempts to identify the elements of knowledge management (KM) that either strategically or tactically have had the most relevance and positive impact within the Scottish local authority context.

This research broadly attempts to address four linked questions:

- What are the current levels of awareness of KM within this sector?
- How has KM emerged within it?
- What progress is being made in terms of these organisations KM maturity?
- How is its impact being measured, monitored and evaluated, particularly in terms of improving efficiency and effectiveness?

1.2 Rationale

Compared to studies of the private sector there are relatively few studies of knowledge management in public sector organisations (Syed-Ikhsen and Rowland, 2004), though this area has increasingly been recognised by, for instance, the British Standards Institute (2005), Head (2003), Skyrme (2003), Sinclair (2006a,b) and TFPL (2002, 2003). As such, this research could be important in determining how part of the public sector has engaged with the concepts and tools embodied within knowledge management. It effectively seeks to assess how far and how fast Scottish local government has developed and the extent to which knowledge management practices are evident. The sector has seen ongoing requirements to transform the way it delivers services, organising them around the needs of the service user rather than the service producer, making them easy to access and minimising the collection of customer details by sharing this information within and across local government organisations. There has been a focus on developing shared services and how far they might transform local government in Scotland. At the outset of this research it appeared timely to determine whether the efficiency gains that may be possible with better knowledge management have been put in place and how the impact of this has been measured.

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The culmination of this research might benefit those who are currently trying to assess what knowledge management may achieve within their organisation. It could potentially also provide an indication of whether local authorities are at similar or different levels of KM maturity.

With that in mind, the audience for the research, outside others researching aspects of knowledge management within the public sector, should be local authority managers, local authority organisations such as COSLA (the Convention of Scottish Local Authorities) (3.1.2.4) and partnership agencies such as the Improvement Service (3.3.4) and those involved in implementing knowledge management programmes.

1.3 Aims and objectives

The general approach to the research problem is to examine four strands: what the current levels of awareness of KM are across Scottish local authorities, how KM has emerged within them, what stage in terms of KM maturity can each be said to be at and, how are they monitoring and evaluating KM.

The main aim of the research is to assess what aspects of knowledge management have had the most relevance and positive impact within the Scottish local government context, explored in terms of:

Awareness: To identify the current level of awareness of KM within Scottish local authorities and what it means to decision makers.

Emergence: to explore how KM initiatives have emerged within Scottish local authorities.

Progress:

- To determine at what level of KM maturity Scottish local authorities can be said to be at.
- To determine which barriers to implementation have been identified in local authorities.

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Measurement:

- To identify what measures of success have been adopted or considered.
- To determine what types of monitoring/evaluation are being used and ask what the overall impact KM has had in terms of efficiency/effectiveness.

2.0 Methodology

2.1 Research design

The approach to research design was to use a mixture of both quantitative and qualitative methods in order to assist in making comparisons and facilitating both breadth and depth in the research. The intention in using multiple methods was to increase the likelihood that there might be greater validity and reliability when the results were analysed and interpreted.

2.1.1 Awareness

The approach to research design stems from the preferred high-level model of knowledge management. Three have variously been identified as (McAdam and Reid, 2001, p.232):

- Knowledge category models
- Intellectual capital models
- Socially constructed models

The last of these was adopted for this strand of the research, having value in that it assumes a broad definition of knowledge and represents knowledge as being linked to organisational learning (4.1.1).

Quantitative methods: survey of Scottish local authorities to identify awareness levels and usage of KM, based on the approach used by McAdam and Reid (2000). This would potentially use the four areas they examined: knowledge construction, knowledge embodiment, knowledge dissemination and knowledge use/benefit.

Qualitative methods: a small number of case studies might be used to examine in more depth what the perception of KM is from different perspectives within the organisations. This might assess what awareness there is from the perspectives of human resources, IT/Modernising Government units, corporate policy units, information services units and human resources.

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2.1.2 Emergence

Quantitative methods: survey of the 32 local authorities in Scotland to assess how KM has emerged. This survey may also determine which authorities could be approached for case study analysis.

Qualitative methods: interviews with individuals who are actively involved in knowledge management within the Scottish local authority context. This stage would be used to assist in refining the research design and identifying and building a network of contacts that could be approached to become involved in the case studies. The results of these initial preparatory interviews (drawn primarily from one local authority) are summarised in 4.2.1.

A study of knowledge management in 10 local government organisations by Morton and Lacey (2006) found that KM had emerged primarily in response to external criticism from the Audit Commission. One aspect of the research is to test whether this has been the case in Scotland, or if KM initiatives emerged as a result of internal factors or a combination of both.

2.1.3 Progress

Quantitative methods: the survey of Scottish local authorities should seek to determine at what stage each organisation might be able to be categorised in terms of its overall knowledge management maturity.

Qualitative methods: if feasible, the case studies could be one for each of the five stages of maturity, assuming there are organisations which fall into each category. This aspect of the case study analysis would explore through semi-structured interviews what the contributory factors were to their level of KM maturity (cultural, technological, organisational and managerial). Aspects to explore could be:

- Cultural – the degree of openness and knowledge sharing, evidence of communities of practice;
- Technological – the tools used to facilitate information/knowledge transfer between and within local authorities;
- Organisational – the structure of the organisation;
- Managerial – the degree of leadership or championing of knowledge management evident.

2.1.4 Measurement

Quantitative methods: the survey of Scottish local authorities could attempt to identify what the measures of successful knowledge management implementation are and whether formal tools are being used in order to enable benchmarking comparisons with other organisations or whether internal performance measurements are the preferred approach.

Qualitative methods: the case studies could explore in more depth whether the approaches or measurement tools used have been able to identify knowledge management's contribution to organisation efficiency.

2.2 Data and information collection techniques

The data collection techniques used were survey and case study analysis, while information was collated from a literature review and environmental scanning.

2.2.1 Literature review

The literature reviewed in exploring the context and background for the study (3.0) included the relevant legislation, government strategies and policies that define and shape the local authority landscape and the various agendas with which it is faced. The search strategy also concentrated on sources that identified knowledge management projects and programmes within local government, specifically in the United Kingdom.

A reference management software package was used during the study to track references and capture any notes made on them. A number of alternative reference management packages ranging from the commercial software applications ProCite, Reference Manager, Endnote and Idealist to freeware, Scribe 2.5 and BiblioExpress, were considered for use, with BiblioExpress being selected.

2.2.2 Environmental scanning

Normally a method associated with companies in their quest for gaining or maintaining competitive advantage, environmental scanning can be ad-hoc, regular,

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such as an annual study, or continuous (Fahey and Narayanan, 1986). For the purposes of this study continuous scanning was limited to monitoring the output of selected public sector news and information services. During the study period this included e-bulletins from the Improvement Service, knowledge management related content from Knowledgeboard public sector special interest group, technology and e-government related news from publictechnology.net and a subscription to Town Hall, a newsletter for ICT professionals in local government, plus research and legislative related information from IDOX. The IDOX information service weekly bulletin abstracts content relevant to local government management and a series of subject disciplines.

2.2.3 Survey

The approach to survey design involved taking a set of questions developed from existing research (4.2.1) and building on these to attempt to address the different strands of the research. The supplementary questions were developed on a set of preparatory interviews with public sector managers, before the questionnaire was piloted amongst a different group of public sector employees.

2.2.4 Case study analysis

The original intention was to use multiple case studies to be able to generalise beyond a single case and in order to provide depth as well as breadth to the research gained from survey analysis. Potential case studies were to be identified from a question in the survey of local authorities asking for nominations. In the event, one case study (4.3) is used for illustrative purposes, drawing on the perspectives of managers in one Scottish local authority.

3.0 Context and background

Before attempting to explore knowledge management in local government through survey analysis and case study, this section provides some of the context and background to local government in Scotland. It also introduces a number of the contextual agendas facing local government, suggesting them as potential influences on knowledge management. Finally, it reviews the development of knowledge management programmes within local government in the United Kingdom and the form of support available for councils in Scotland.

3.1 Development, organisation and funding of Scottish local government

This section briefly considers Scottish local government's recent history and organisation, its main service functions, where it sits in a devolved government, how it is structured and managed, to whom it is accountable and how it is funded.

3.1.1 Historical development

3.1.1.1 Ten years after local government reorganisation

Following the Local Government etc (Scotland) Act 1994 (OPSI, 1994), after a transition or shadow year, 1 April 1996 saw local government in Scotland reorganised into 29 unitary authorities and three island authorities. This replaced a two-tier system that had existed from the time of the last reorganisation of Scottish local government in 1974. Between 1974 and 1995 there were nine regional authorities and 53 district councils with functions spilt between them. Prior to 1974, Scotland was divided into counties, large burghs, small burghs, and in the case of the larger cities, city corporations. The unitary authorities that came into being in 1996 vary widely in size from those covering the equivalent of the former districts to those covering the same geographical area as the former regions.

Each of the 32 local authorities is governed by a council consisting of elected members (or councillors), who are elected every four years by registered voters in each council area. Elected members represent geographical areas called wards within each council area and, up until 2007, were elected by the plurality method, or the so-called first-past-the-post method. In 2005 there were 1222 electoral wards in Scotland (ONS, 2005) and 1222 elected members. Following reviews of these by the

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Local Government Boundary Commission for Scotland for the local government elections in 2007, the number of wards reduced to 353, yet will have a similar number of elected members as before (LGBCS, 2007), although voted for by proportional representation or single transferable vote (3.1.2.2).

3.1.1.2 Functions of local government

Local government derives its power from a variety of Acts of Parliament. Councils are required under statute to deliver the functions and services prescribed in legislation to people within their administrative area of control. They also deliver a range of non-statutory functions, which are discretionary. The main areas of responsibility for Scottish local authorities include: education, social work, housing, roads, planning and environment, arts, sports and culture. They are also involved in a variety of initiatives which are frequently delivered in partnership and are aimed at tackling disadvantage and rebuilding communities as well as those focused on community safety, crime reduction and health promotion (Figure 1), primarily through the strategic umbrella of a community plan (3.2.4). Prior to local government reorganisation these functions were split between the two tiers of local government.

Figure 1: Partnerships and joint working

- Public health
- Children's services
- Community care
- Economic development forums
- Social housing (supporting people)
- Environmental protection and improvement
- Transport
- Arts and leisure

3.1.1.3 Devolution in Scotland

Following a referendum in 1979, 74% of those who voted endorsed the UK government's proposals to establish a Scottish Parliament and Executive to administer Scottish affairs (Scottish Executive, 2007). In November 1978 the Scotland Act passed into law, following the introduction of legislation in the Westminster Parliament in December 1977. Elections to the Scottish Parliament were held in May 1979 and it met for the first time in July of that year (Scottish Parliament, 2007). The Scottish Executive, Scottish Government from September

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2007, is the administrative arm of government in Scotland with responsibility for all public bodies whose functions and services have been devolved to it, and is accountable to the Scottish Parliament for them.

In a study of the impact of devolution on Scottish local government Bennet et al (2002) concluded that in the main devolution had significantly improved matters by bringing national government closer, geographically, to local government. They also found that the Scottish Executive was perceived as more open and willing to listen to local government than the Scottish Office had been before devolution. However, at the time of their study they pointed out that devolution had not yet delivered the 'joining up' of public services originally envisioned.

3.1.2 Current organisation and management

This section reviews the current organisational structure of local government in Scotland, the differences between the roles of elected members and employees (local government officers), the nature of accountability and representation.

3.1.2.1 Organisational structure

Within the United Kingdom's representative democracy, there are four levels of government; national, regional, local and community. Broadly, national government develops new legislation, guides lower levels of government and provides national services, such as defence, foreign policy and, social security. Within the devolved administration in Scotland, the regional responsibilities include those of health, education, housing, social work, sport and the arts, tourism, economic development and, local government.

The decision making process within local government occurs within a series of committees and sub-committees ranging from full council meetings attended by all elected members down to topic or area based committees attended by representative elected members. Increasingly alternative executive models, such as a cabinet-style of decision-making where all elected members no longer have a decision-making role, are replacing this committee structure. Provision for this was outlined in the Local Government Act 2000 (OPSI, 2000). Each authority elects a Convener or Provost to chair meetings of the authority's council and act as a figurehead for the area.

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Local authorities vary in the size of their workforce and the way they are structured. This ranges from approximately 1,500 in Orkney to just over 31,000 in Glasgow City Council, the largest local authority in Scotland. In the third quarter of 2006, there were 232,500 people employed (full-time equivalent) in Scottish local government, comprising 57,000 teachers, 35,500 other education staff, 44,500 social work staff and 95,500 other staff (Scottish Executive, 2006a).

3.1.2.2 Elected member role vs. officer role

Up until 2007 the roles of officers and elected members has been quite clearly defined, with elected members taking decisions on behalf of the electorate in the various committees or cabinet structure of their local authority and representing the people within their ward on the issues presented to them through, for instance, regular surgeries. They are also responsible for the appointment and oversight of officers, who are delegated to perform the majority of tasks within a council. Each elected member was paid a part-time salary for the undertaking of his or her duties and is subject to an ethical code of conduct set out in the Ethical Standards in Public Life etc. (Scotland) Act 2000, enacted by the Standards Commission for Scotland. The role of local government officers in contrast is, and probably will remain, to provide the services decreed by statute, deliver other discretionary services agreed by elected members and, to provide professional advice and expertise to elected members to ensure that they are fully informed of the available options, resource implications (financial and human) and potential risks to be weighed in the decision making process. In certain instances there is also devolved decision making to local government managers, normally on small-scale regular issues that do not require political consideration.

However, following new electoral arrangements for councils in Scotland with the introduction of the single transferable vote (STV) method of electing local councillors in May 2007 (OPSI, 2004), there may be a number of differences in the relationship that will emerge between these two roles. There will for instance be a change to the numbers of elected members who represent a ward, rising from one to between three and four to create multi-member wards. This will also see the introduction of salaried elected members, with perhaps an expectation of a more structured approach to professional development, as occurs for local government officers. There may also be expectations that the role of elected members will over time change to reflect their full-time employed status, potentially with an altered level of input into corporate

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leadership within local authorities. Their role then in generating new knowledge for the organisations may change. However, as some 430 elected members, around a third of the total, were likely to stand-down prior to the election in May 2007, benefiting from severance packages, there perhaps might also be a loss of experience and knowledge (Gordon, 2007).

3.1.2.3 Accountability, audit and scrutiny

Local government is subject to a number of types of regulatory mechanism: accountability, external audit and scrutiny. The Scottish Executive for instance in their plans for the continuing reform of public services (2006b, pp27-28) outlined four types of accountability; democratic accountability, accountability for performance, accountability of senior managers and accountability to service users.

Democratic accountability refers to the four-yearly cycle by which councillors are elected and one of the mechanisms by which future service provision can be influenced. An underlying element in performance accountability is the role of measurement.

Performance measurement (3.2.5) in terms of costs and quality is aimed at supporting continuous improvement and through statutory performance indicators (SPIs), as directed by the Accounts Commission for Scotland (Audit Scotland, 2006a), providing benchmarks by which local authorities can be compared and assessed. The survey of local authorities seeks to determine whether knowledge management measures have formed any part of performance management as they do not form any of the reportable SPIs.

Senior managers are also accountable, having a significant impact on how their organisations perform and deliver on the objectives set in their strategic and service plans. Their duty to give professional advice to elected members and their duty of care to the staff in their organisations employ potentially also makes them key gatekeepers of knowledge and information. The survey explores whether knowledge is embodied primarily at this level within local authorities or dispersed more widely and also attempts to determine if they are the main grouping that gets to make new knowledge that is eventually used in the organisation (4.2.4).

A final type of accountability is accountability to service users. The Scottish Executive report points out that this form of accountability is perhaps the weakest of the four.

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Local government is however subject to external audit and scrutiny. As a result of its constitutional position it is open to scrutiny by the Scottish Executive and Scottish Parliament as they have ultimately prescribed the structure and functions and determined the duties and powers of local government. For service users who are not satisfied with a decision made by local authorities they have recourse to the Public Sector Ombudsman who deals with issues of misadministration and in securing any financial recompense to complainants.

Councils are also subject to annual independent external audit by Audit Scotland, whose duty it is to check that public money (3.1.3) is being spent properly, efficiently and effectively. These have taken the form of an audit of financial statements and aspects of performance management and corporate governance. The annual report on each council sets out the findings from the audit, any recommendations and the council's agreed response. Audit Scotland has also been undertaking a programme of audit focusing on the statutory duties of Best Value and Community Planning within Scottish councils (3.2.5, 3.2.4).

The function of overview and scrutiny is one prevalent in England and Wales, introduced by the Local Government Act 2000, (OPSI, 2000). In councils operating executive arrangements, such as a cabinet structure, this requires them to have separate executive and overview/scrutiny functions. An overview and scrutiny committee is one composed of those elected members who are not on the executive committee of the council. In contrast to the position in England and Wales, the Scottish Parliament has not forced councils to change their political structures, though some are adopting alternative forms of decision-making around a cabinet style of local government. One example is Edinburgh City Council which has: full council meetings, an executive, seven scrutiny panels, statutory and regulatory committees for planning, building control and licensing, joint boards for police, fire, valuation and Forth Estuary Transport Authority, plus six local development committees (Edinburgh City Council, 2007).

3.1.2.4 Representation

Scottish councils co-operate through, and are represented collectively by, the Convention of Scottish Local Authorities (COSLA). It is also the employers' association on behalf of all Scottish councils. One of its key roles is to represent the

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views of its membership to the Scottish Parliament and Scottish Executive. The key principles by which it is guided include (COSLA, 2007):

- Ensuring that work at officer level is led and prioritised by elected members;
- Promotion of the local authority role/perspective and protection against a centralising agenda;
- Working with partner organisations to deliver shared agendas, particularly on the achievement of sustainability (economic, environmental and social);
- Recognising the respective roles of central and local government and the European Union, influencing the formation of policies to ensure their implementation delivers on local priorities and policies;
- Ensuring that COSLA adds value and avoids replicating the roles of member councils in order to make the most effective use of expertise and resources to achieve outcomes for local government.

3.1.3 Funding of local government

Local government in Scotland is funded from four main sources: the Scottish Executive, through the Revenue Support Grant and other grants; non-domestic rates; council tax (which also includes rebates through council tax benefit) and fees and charges (Burt, 2006). At the UK level, there is an annually updated three-year financial plan based on the Comprehensive Spending Review, which feeds into Scottish spending reviews, matched through a mechanism which enables the allocation of money between the four kingdoms of the UK on a population share basis, called the Barnett formula. This Scottish block grant is then shared between local authorities, health boards and others.

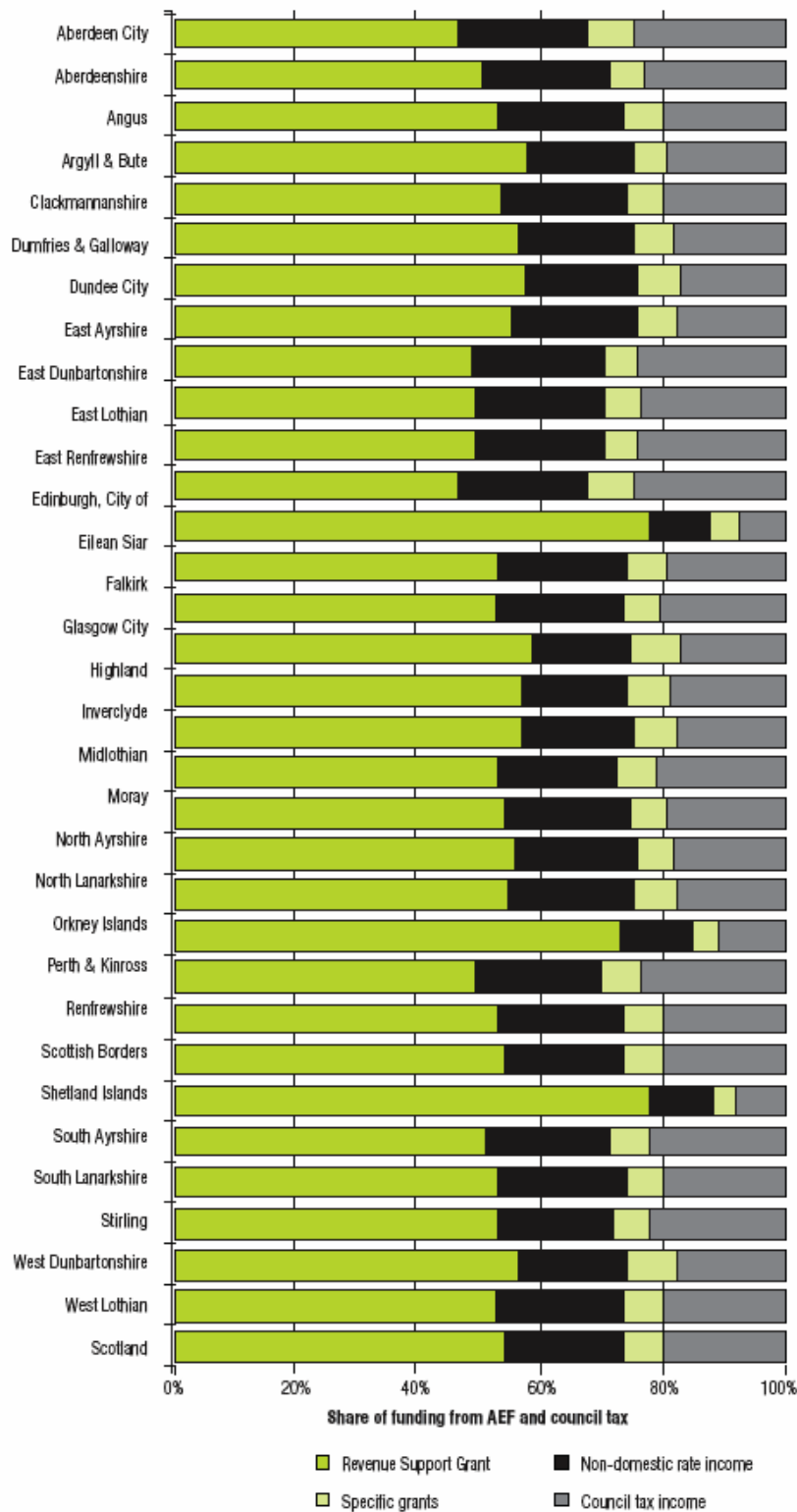
The relative spending needs of local authorities are firstly assessed by the “client group” approach, which is a systematic way of allocating a pre-determined level of expenditure amongst councils. This is referred to as Grant Aided Expenditure (GAE). According to Burt (2006), GAE is the Scottish Executive’s view of what all the local authorities need to spend on local services to meet their statutory obligations. The distribution of GAE takes into account factors which affect spending, including population levels, population dispersion, pupil numbers (for education), standardised mortality ratios, road lengths and measures of the relative deprivation in that area and crime rates. GAE is arrived at via a consultation process, involving COSLA and individual council representatives in setting the criteria for distribution amongst the 32 councils.

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The single block of funding that each local authority receives is known as Aggregate External Finance (AEF), or the 'real' monetary support as opposed to the notional GAE. AEF is distributed to local authorities to equalise the relative needs of each authority in "incurring expenditure on the provision of local services" (Burt, 2006, p.23) and on the local taxation base. AEF is made up of three elements: Revenue Support Grant, specific grants from the Scottish Executive and income from non-domestic rates. Non-domestic rates are set centrally but are collected by councils on behalf of the Scottish Executive.

The final source of local government funding, the one that each council sets locally every year, is council tax. Introduced in 1993, this replaced the Community Charge, which had been in place for four years. The current council tax system is a form of property tax that is levied according to the rateable values of homes, and (in part) the size of households. It is payable by households who rent, as well as by owner-occupiers. The funding generated for local authorities by this tax however only accounts for part, around 20% for many authorities, of their available income. The proportions of all the different forms of funding also vary, sometimes significantly, from one authority area to another, dependent on population density, the extent of an area's service needs and the ability of the tax base pay council tax (Figure 2).

Figure 2: Comparison of local authorities sources of local government income, 2004-05



Source: Burt, 2006, Figure 4.4

3.2 Current local government agendas

Most of the current agendas for local government appear to be couched in the context of modernisation, reform and improvement (Hodgson et al, 2007), attempting to build on what has already been achieved rather than advocating wholesale rationalisation. At the UK level there has been a variety of policy reviews and revisions to legislation that have aimed and aim to shape changes in local government, transforming the way it provides services to people and local communities, ultimately making it more efficient and effective. Some of these directly affect local government in Scotland, while others may only indirectly influence it.

They suggest that improvements may be required within some parts of local government, but also to the way local authorities co-operate and collaborate with each other and their partners and in the way they interact with the people and local communities they serve. In each of these areas there is perhaps a role for knowledge management in an enabling and supportive capacity (Sinclair, 2006b), but they also might be said to be shaping its emergence.

Before the role of knowledge management within the public sector is reviewed, this section introduces some of the contextual agendas facing local government:

- Transformational government
- Efficient government
- Shared services
- Community planning
- Performance management
- Information compliance

3.2.1 Transformational government

3.2.1.1 From E-government to t-government

The transformational government agenda could be seen as a development or successor to the e-government agenda in the UK that notionally was completed in December 2005. E-government or electronic government was focused very much in the use of ICT to exchange information and services between government and citizens, business and other parts of the public sector. The 'Local e-Government Programme' for England emerged from the national strategy for local e-Government (ODPM, 2002) and was officially closed in April 2006. This was a strategy which

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created a series of national projects (Figure 3) that covered key priority services provided by local authorities. The intention behind these projects was to ensure that all English councils had access to the common building blocks for electronic services and to minimise the requirement to create them themselves. These solutions were frequently developed by communities of practice from participating councils, central government and the private sector. The projects succeeded in “assisting local government to achieve 100% capability in electronic delivery of priority services by [December] 2005, in ways that customers will use” (HM Treasury, 2004).

Figure 3: Local e-Government programme for England: list of national projects

National project	Description
Acknowledge	License free consultation software
APLAWS	An open source content management system
DigiTV	A centrally hosted technology that allows local authorities to develop and maintain an interactive service on Sky, ntl: and Telewest
e-Pay	Payments Online
FAME	Multi Agency Working
ITEX	Developed through the NOMAD National Project
Knowledge Management	A comprehensive range of KM toolkits suitable for all, large or small, urban or rural, beginners or leaders, and providing local authorities practical support schemes. Developed under seven work streams (3.3.3).
LAWS	Local Authority Web Sites
LGOL Net	Provides a set of components to support integration of existing systems within an organisation and systems between multiple organisations
NePP	National e-Procurement Project
NOMAD	A centre of excellence for mobile and flexible working in local government
PARSOL	Regulatory Services
PMF	Performance Management Framework
RYOGENS	Reducing Youth Offending Generic National Solution
Smartcard	Framework for Authentication
Valuebill	Electronic exchange of information between local authority billing agencies, the Valuation Office Agency (VOA), and the National Land and Property Gazetteer
CRM	Customer Relationship Management
e-Benefits	Electronic document management system
ENCORE	Environment and Community Online Residents E-Services
Pan London School Admissions	Forms part of the e-Admissions project
Workflow	Enterprise workflow
Working with Business	Toolkit
eTrading Standards	(eTSN)
e-Admissions	Getting schools' admissions online
e-Citizen	Raising awareness and driving take-up of Local Authority e-channels
e-Democracy	Range of new and enhanced tools and techniques to implement e-democracy and encourage participation
PARSOL	Planning and Regulatory Services On-line

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This position was reflected, to an extent, in Scotland by a similar commitment to e-government by the Scottish Executive. The executive measured progress to the 2005 service delivery target against a four-stage model (European Commission, 2001):

1. Online information about public services;
2. One-way interaction (eg downloading of forms, discussion forum, e-mail)
3. Two-way interaction (eg form returned electronically, email response)
4. Full online transaction (eg full electronic interaction including order, delivery, payment and posting of transactions)

The final progress report on Scottish local authorities (Scottish Executive, 2006c) covered 10 generic service areas and 46 core areas. The generic service areas included corporate services, leisure services, economic services, environmental services, financial services, housing services, land and property services, education services, social work/health, and transportation. The report concluded that there had been progress in electronic services delivery since the initial assessment in 2003, noting for instance that information was available for 99% of services and that 77% of transactional services were provide electronically.

The emphasis on reform and efficiencies gained through technology enabled projects continued on under the UK government's 2005 transformational government strategy (Cabinet Office, 2005). This strategy consisted of three main themes: customer-centric services, shared services and professionalism. In achieving its vision the report indicates that the key transformations should be:

- That services enabled by technology need to be designed around the needs of the citizen or business and not around the provider.
- A move towards a shared services culture to release efficiencies by standardisation, simplification and sharing.
- A broadening and deepening of government's professionalism in the planning, delivery, management, skills and governance of information technology enabled change.

Under the first of these, the report identified a series of required actions including, "to increase understanding of the needs of citizens and businesses... learning from the best practice already within the public sector, from other governments and from the private sector"(p.7). The second, shared services will be explored in 3.2.3.

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In the first annual report covering 2006 which reviewed progress (HM Government, 2007), there were a number of actions reported, including the establishment of a 'Delivery Council', which through a 'Service Design Authority' developed, for example, tools and techniques for government "to use what it knows and discovers about what really matters to citizens and businesses to shape the services that affect them" (p.14). The focus of such activities was primarily on central government, although as with e-government there was the development of local t-government. Another element of reform noted in the annual report was the rationalisation of central government websites, with an initial decision to close 551 (58%) of them.

In England, this three-pronged approach to transformation was closely related to a review of public service delivery undertaken by Sir David Varney (HM Treasury, 2006). His report identified ways in which the public sector could be made more accessible, convenient and efficient to use. This review was published as part of the analysis informing the 2007 Comprehensive Spending Review (HM Treasury, 2007) which impacts directly on the levels of funding received by local government (3.1.3).

3.2.1.2 Transforming public services in Scotland

There were similar expressions of transformation in Scotland, with the publication of the Scottish Executive's approach 'Transforming public services: the next phase of reform' (Scottish Executive, 2006e). This discussion document outlined five fundamental elements for reform, including: user focus, quality and innovation, efficiency and productivity, joining up and, strengthening accountability.

User focus

The theme of user focus, with services organised around the needs and aspirations of service users and citizens, rather than the convenience of the provider is echoed here. This element is, for instance, reflected in the Scottish Executive's Customer First programme (3.2.2), which in 2006 was in the process of creating a national data-sharing infrastructure for local authorities to support customer relationship management systems and a national entitlement card system (op cit, p.10).

Quality and innovation

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Quality and innovation refers on the one hand to the framework for continuous improvement within the Scottish public sector, best value (3.2.5), and on the other a recognition of the need to spread innovative ideas and new knowledge, “sharing good practice and learning from the voluntary and private sector and internationally” (p.15). The Scottish Executive suggests that this may also require adjusting targets, performance management and reporting systems if they inhibit or restrict innovation in service delivery. They also suggest that the continuous improvement framework may need to change, reflecting moves towards public service integration, to focus on outcomes rather than mainly on internal processes within organisations.

Efficiency and productivity

Efficiency and productivity appear to be core to the Executive’s reform agenda. The efficiency savings in their programme of Efficient Government (3.2.2) aimed to achieve £1.5 billion annually recurring by 2007/08 (Scottish Executive, 2004) and reportedly have identified projects that would deliver £1.27 billion of that (Scottish Executive, 2006d). This has been reflected in the development of new arrangements, agreed with COSLA (3.1.2.4) and the Improvement Service (3.3.4), to alter council’s business planning processes to allow more accurate reporting of local government efficiency gains. There has also been a review of procurement processes to realise efficiency gains through improved practices (Scottish Executive, 2006a).

Joining up

Joining up aims to reduce or remove the barriers to joint working, minimising duplication and overlap in the delivery of public services that tackle complex, multi-dimensional problems (Scottish Executive, 2006b, p.22). While structural change is referred to as a possible solution, this is not wholly embraced due to the likely high costs of changing organisational structures. There is however recognition that cultural change would be necessary to improve joint working. The desire to effect change through reorganisation in local government was evident though in comments made by Tom McCabe the then Scottish Parliament’s Minister for Finance and Public Service Reform during the middle of 2006, about potential mergers between some councils (MacMahon, 2006). To an extent this reflects the different forces of centralisation and decentralisation in local government (Fenwick and Bailey, 1999).

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While the Scottish Executive discussion paper noted what is the formal mechanism for joint working through locally developed priorities and partnerships, the community planning process (3.2.4), there was not the same emphasis on shared services as was evident in the transformational strategy for England, perhaps because this is more fully developed elsewhere (3.2.3).

Strengthening accountability

The theme of strengthening accountability in the Scottish Executive discussion paper concerns the ways in which the general public might be made to feel that public services are demonstrably accountable. This focus is on the four forms of accountability (3.1.2); democratic accountability, accountability for performance, accountability of senior managers and accountability to service users.

3.2.2 Efficient government

The efficient government agenda in the UK was perhaps stimulated across the public sector by the Gershon Review in 2004, finding that savings could be released through reform of the back office (internal processes), procurement and transactional services, as well as rethinking how work was organised to increase employee productivity. It set efficiency targets for all public services to achieve savings of 2.5% year on year (Coats, 2004).

In Scotland, the efficient government initiative was a five-year programme starting in 2004, aimed at reducing waste, bureaucracy and duplication in the public sector, with an ambition to establish Scotland as a leader in efficiency, innovation and productivity in public services. The intention was to reinvest cost savings in the delivery of front line services, despite little evidence that biases the search for efficiencies towards the back office. It is rather, the whole system where efficiency gains might be sought (Griffiths, 2006, p.316).

The efficient government plan 'Building a better Scotland' aspired to realise aggregate efficiency gains of £1.5bn by the 2007/08 financial year (Scottish Executive, 2004). For local government this translated for example into an assumed efficiency saving of £122m in 2005/06 (Scottish Executive, 2006d). A component of these savings was to be realised by the 'Customer First' programme (Scottish Executive, 2006c). The programme attempted to provide a framework for

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collaboration in improving local service delivery, sharing development costs having received support through the Modernising Government Fund, and spreading good practice. In addition to the Executive, the programme was supported by COSLA and SOLACE (the Society of Local Government Authority Chief Executives). Recognising that business change is long-term and posed large-scale challenges for local authorities, it concentrated on seven themes (Improvement Service, 2005):

1. To deliver joined up services in a way that is seamless to the customer;
2. Supports culture change to encourage a more corporate approach to service delivery;
3. Provides a consistent approach to managing customer contact via a number of channels, ensuring that services are delivered 'first-time' wherever possible;
4. Improves the efficiency (the speed) at which customer queries are resolved, and the effectiveness (the outcome) which the customer receives;
5. Provides front line customer services staff with the technology, the training and the tools to access customer account and service information;
6. Supports the need to improve knowledge management to enable councils to learn from and improve service delivery (and share good practice) and;
7. The need to provide better management information for the setting of objectives and standards and the measurement of performance.

This drive for efficiency is also intended to extend to reducing the burden of planning and performance reporting. Over the long term the Executive envisions a radically streamlined approach, with a significant reduction in the number of plans that councils currently have to produce (from around 60 to five or six) and a simplification in performance reporting (Scottish Executive, 2006e, p.20). Councils are also required to prepare and publish an annual efficiency statement giving details of efficiency gains (Scottish Executive, 2006d).

3.2.3 Shared services

Sharing services in the public sector tends to focus on support functions such as human resources, finance, procurement, information technology, property/facilities management and legal services.

One of the central tenants of the transformational government agenda in the UK (3.2.1), shared services is presented by the Scottish Executive as a complementary

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work stream to support its range of reform objectives. In its national shared services strategy consultation paper (Scottish Executive, 2006b) this was identified as being part of its efficient government initiative, but intended to also link with the range of other components of its reform agenda.

Within this paper the Executive reviewed the financial case for shared services, highlighting that savings could be derived from three main areas: process re-engineering, standardisation and consolidation. In addition to direct financial benefits it also pointed to a number of other potential benefits including: a clearer focus on the customer, improved management information, allowing organisations to be more adaptable to change, able to establish a culture of excellence in the provision of support services and allow for the recruitment, retention and sharing of scarce specialist expertise. The Executive also recognised that shared services go beyond corporate support functions. The Customer First programme, for instance, was noted as developing a national citizens account, authentication protocol and property gazetteer, all to operate on a shared basis.

Some of the approaches to shared services have already seen internal support arrangements for functions previously distributed across a range of departments or operating units in Glasgow City Council and the City of Edinburgh Council (Scottish Executive, 2006b). In early 2007, two councils in the north-east of Scotland, Aberdeenshire Council and Aberdeen City Council, made steps towards closer integration through a framework agreement for closer joint working and as a starting point for negotiation and formal agreement (Improvement Service, 2007).

3.2.4 Community planning

3.2.4.1 Community planning, process and strategies

Community planning is the process whereby public sector organisations work together through community planning partnerships with local communities, businesses and voluntary organisations to identify and solve local problems, improve services and share resources. While corporate planning in local authorities has been in place since the 1970s (Spicker, 2004) this process of community planning is now required by statute (the Local Government in Scotland Act 2003), obliging councils to initiate and facilitate community planning and National Health Service boards, the enterprise networks, the police and fire and rescue services to participate. Community planning aims to make sure that people and communities are genuinely

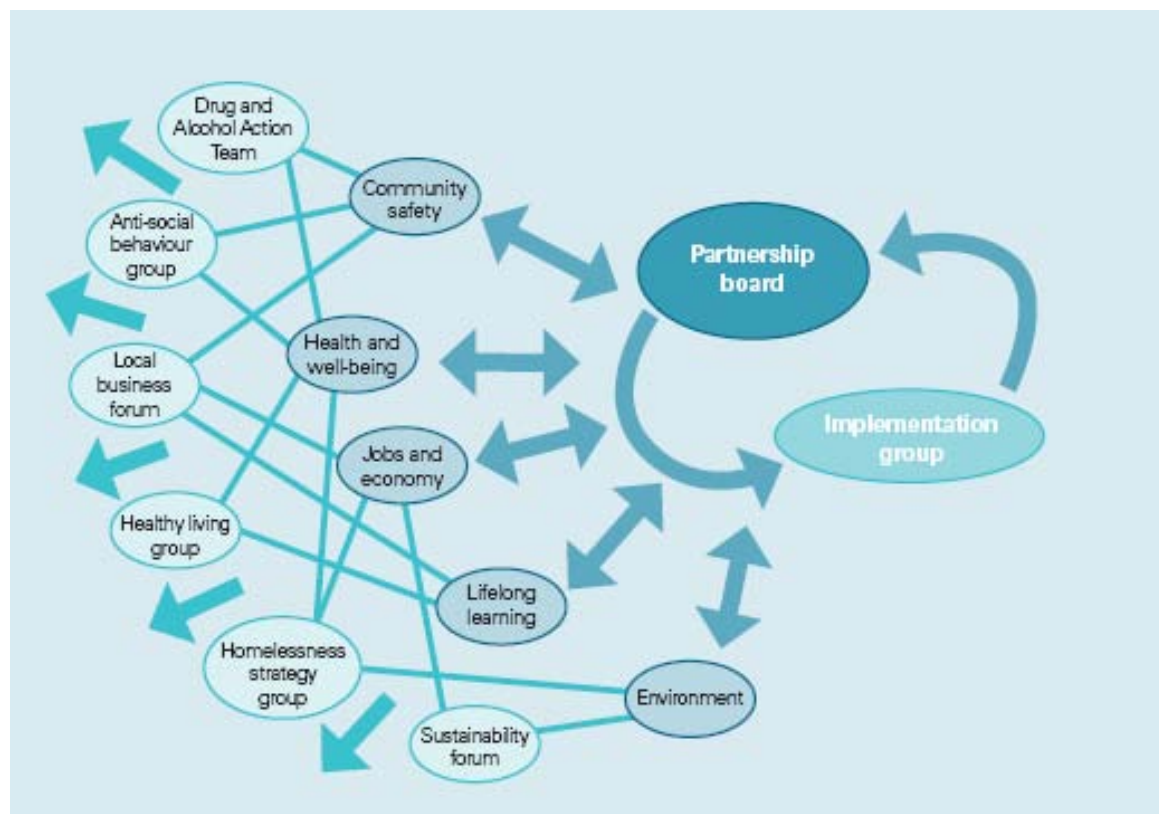
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engaged in the decisions made on public services which affect them and to a commitment from organisations to work together in providing better public services. It also acts as an overarching partnership framework or umbrella to help co-ordinate other initiatives and partnerships and as a means to improve the connection between national priorities and those at regional, local and neighbourhood levels.

The strategies these community planning partnerships develop are set out in community plans for each local authority area, each with their own sets of priorities and themes. Spicker (2004) for example has identified the principal themes in Scotland's community plans as: economic development, the environment, safety, social inclusion, communities, citizenship and participation and, caring communities.

The partnerships involved in developing and implementing community plans however, operate in a complex policy and organisational environment (Audit Scotland, 2006b, p.5). Audit Scotland points out that organisations have different geographic boundaries, accountability and financial regulations, while the partnerships have developed highly complex structures to accommodate the requirements of serving a large number of policy and service areas plus all of the many organisations and groups that need to participate (Figure 4).

Figure 4: Community planning partnerships – broadly similar, but complex structures



Source: Audit Scotland, 2006b, p.15

3.2.4.2 A social network analysis of community planning partnerships

One of the tools used to explore the complexities of informal exchange not within, but between the community planning partnerships in Scotland was social network analysis (Chan and Liebowitz, 2006) conducted by the Improvement Service (Cheuk, 2006). This snapshot reveals a picture of actors who were highly connected in the local authority network, some sub-groups and those more peripheral to the network (Figure 5). The amount of informal contact with Inverclyde in this analysis may to some extent reflect the poor review the council received from Audit Scotland in its audit of best value and community planning arrangements (Audit Scotland, 2005).

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involved in undertaking Best Value service reviews using the most appropriate organisational improvement tool available. Some of the more formal of these include the EFQM Excellence Model, Charter Mark and the Investors in People standard. (Scottish Executive, 2004).

Another tool to assist local authorities with this process of internal assessment or scrutiny is the Public Service Improvement Framework (PSIF), launched by the then Minister for Finance and Public Reform in October 2006 (IS, 2007). This is presented as an assessment framework that brings together those other organisational improvement tools under the principles of Best Value in order that organisations can identify their strengths and areas for improvement, which will in turn inform service planning.

The external assessment or scrutiny of Best Value arrangements is provided by Audit Scotland who has been undertaking a joint assessment of these alongside community planning arrangements (3.2.4). While not comprehensive reviews of service delivery, some trends in their initial findings have been identified (Shields, 2006). One of these was that, in a number of instances, there was a difficulty in forming an overall view of how services were performing (p3), despite a performance measurement and reporting framework which includes a range of statutory performance indicators (3.1.2) and local performance indicators.

3.2.6 Information compliance

'It's public knowledge' - the public's right to information under legislation

Another recent agenda affecting local government in Scotland has been the public's right to information under specific legislation, requiring councils to respond within prescribed timescales to requests for information. The intent behind it was to make councils more transparent and accountable in the decisions they make and reflect the fact that the information local government generates belongs to the public and should be made available unless there are good reasons why it should not. Findings from the Scottish Information Commissioner however point to a small decline in the public's perception that public authorities are becoming more open and accountable, from 67% in 2005 to 60% in 2006 of those who agreed (Progressive Scottish Opinion, 2006).

There are three legislative regimes under which the public can request information:

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- The Freedom of Information (Scotland) Act, 2002 (FOISA)
- The Environmental Information (Scotland) Regulations, 2004 (EISR)
- The Data Protection Act, 1998 (DPA)

Prior to FOISA the public had some rights to inspect and receive copies of information, ranging for instance from the power to inspect public registers through the right to ensure that a person's privacy had not been infringed, to accessing certain council records such as agendas, reports and minutes of committee meetings. Following the Act, which came into effect on 1 January 2005, this position did not change. What did change was that these rights were supplemented rather than replaced. The Freedom of Information legislation gives general rights to members of the public to be given access to recorded information; any explicit knowledge or information held on paper or recorded media. Tacit knowledge or information held in the heads of public sector employees however was not included in the legislation. The right to get information is also subject to some exemptions and if a council refuses to provide information they have to be able to justify their use of an exemption. The Scottish Information Commissioner is the body that enforces the rights of the public under the Act.

The EISR is in many ways similar, but relates to access to recorded information concerning the environment, though the definition of environmental information can be very wide (Scottish Parliament, 2004). Unlike FOISA and EISR the purpose of the DPA was not to give general rights to the public to see information, but to assist them in ensuring that there are no breaches of their privacy.

By necessity these information compliance requirements have resulted in councils ensuring that they can retrieve documents, both paper and electronic, in a co-ordinated fashion in order to respond to information requests. This for the most will have required information audits, basic records management and administrative procedures to be put in place to aid information retrieval. A further requirement, under FOISA, was the production of a publication scheme, listing the classes of information published, how publications can be accessed and whether any charges apply. However, these may only help satisfy a fraction of potential information requests, with many still relying in the expertise and knowledge of FOI administrators in local authorities to direct them to the most appropriate person or community of practice for a reply.

3.3 Knowledge management in local government

3.3.1 Drivers of knowledge management

There are a number of drivers of knowledge management in the public sector. Skyrme (2003) for example in his report identified a series of drivers, common to public sector organisations internationally, including the global knowledge economy, rising citizen expectations, modernising government, delivering more with less, e-government and joined up services and, flexibility and responsiveness (pp.19-23). Many of these mirror the current agendas influencing local government as outlined in the previous section (3.2). Indeed, within aspects of the Scottish local government reform agenda there are specific references to knowledge management, knowledge sharing, knowledge transfer and learning from good practice.

This section reviews some of the differences between the public and private sectors, one of the knowledge management outcomes of the UK's e-government agenda and introduces the context for knowledge management in Scottish local government.

3.3.2 Differences between the public and private sectors

The operating environments of the public and private sectors are different. Whilst the latter operates in a competitive environment with a value chain organised to provide competitively priced products and services targeted frequently at specific and even niche markets the former operates in an overtly political environment with structures organised to provide services, frequently to mass markets, which would otherwise not be provided or where there has been market failure. Thus, many public sector services are quasi-monopolistic.

As evidenced by the previous sections, the public sector faces perhaps higher levels of complexity in its operating environment (Skyrme, p.24):

1. It operates at several levels – local, regional, national and international;
2. Its activities cover many sectors – health, education, defence etc. (3.1.1);
3. Many public sector organisations are large and have offices dispersed over a wide area (3.1.2);
4. Governments deal with large numbers of 'customers' [or citizens];
5. A high degree of inter-departmental and inter-agency working [frequently characterised in the form of partnerships] is often needed to address specific policy areas or to deliver joined-up services (3.2.4);

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6. It must balance the demands for accountability and openness against the need to protect privileged and personal information (3.2.6).

Skyrme points out that these factors in combination can lead to a fundamental difference between the public and private sectors – a difference of culture and outlook. He suggests that, “often the creators of knowledge have worked within their local silos without realising the value that their knowledge might have to others” (p.24). Inter-departmental boundaries in private sector organisations may though be just as pronounced (Schütz and Bloch, 2006).

Another broad difference between the sectors is the attitude of the public sector to risk. It tends, no doubt due to the various ways in which it is accountable (3.1.2.3), to be risk adverse and may tend to view any new business concept, such as knowledge management, with a degree of caution, particularly when this may require changes in organisational culture for some or all of an organisation, away from knowledge hoarding to knowledge sharing and the promotion of a culture of learning which is not solely restricted to personal development.

3.3.3 Knowledge management in the United Kingdom’s local government

3.3.3.1 Knowledge Management National Project

The main expression of a knowledge management initiative within UK local government took the form of the government’s KM National Project, which was established by the then Office of the Depute Prime Minister (the Department for Communities and Local Government from May 2006) in conjunction with the Improvement and Development Agency (IDeA). One of a number of e-government national projects (3.2.1.1), this was launched in October 2004 and by early 2007 had reached the roll-out phase of its implementation. The aim of the project was to “foster the creation and management of an environment that encourages knowledge to be created, shared, learnt, and exploited for the benefit of the organisation and its customers” (Local t-Gov, 2005).

IDeA is owned by the Local Government Association, created by and for local government, and is independent of central government and regulatory bodies. It attempts to enable councils to share good practice and, through programmes such as the national Beacons Scheme, to disseminate best practice in service delivery,

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and regional government networks. In part its activities are supported by online communities of practice, which use a range of collaborative tools, including blogs, discussion forums, document libraries, event diaries, people finders and wikis (IDeA, 2007).

Developed for local authorities in England and Wales, the KM National Project was led by Wiltshire County Council in partnership with the London Boroughs of Camden, Tower Hamlets and Lewisham. The high level aims of the project (Sinclair, 2006b, p144) were to:

1. Carry out a national exploration of the role of knowledge management and its potential impact on public policy.
2. Identify the organisational and sectoral relationships that are necessary to underpin effective knowledge management systems.
3. Help identify a process for developing legal protocols.
4. Incorporate opportunities for developing the potential for greater learning and mutual problem solving, both with the local community and community leaders.
5. Develop technical products that offer an acceptable single point of access and can 'hold' complex layers of information.

The project attempted to address a core problem: that although some local authorities were introducing a variety of knowledge management systems, tools and techniques, they were frequently being considered or implemented in isolation. While the project recognised there was no effective and consistent knowledge management approach that could be implemented across all local authorities, it set out to develop a comprehensive range of toolkits and processes which all authorities would be able to understand and access. It sought to make these KM techniques and practices available for councils to be able to capture and more effectively re-use the knowledge contained within the organisation in order to reduce costs, improve services and enhance interaction with local communities and other agencies.

These issues were addressed by seven distinct work streams, led by different local authorities and focused on three challenges to organisations in their re-use of knowledge and effective information and data sharing (Mangham and Kodlubanski, 2004):

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- How to correctly describe the knowledge so that it will appear to have benefit to organisations and communities.
- How to develop a culture within an organisation that not only encourages the sharing of information but also encourages people to seek advice and assistance from others outside their immediate environments.
- Which systems, both electronic and human, need to be put in place in order to ensure the creation, efficient flow and distribution of knowledge.

The solutions based on these identified aims, core problem and challenges were developed through the seven work streams:

Work stream 1: Knowledge Management Road Map

Work stream 2: Local Intelligence Systems and Information Asset Register

Work stream 3: CPA Improvement Planning

Work stream 4: Customer Facing Programme

Work stream 5: Tacit Knowledge

Work stream 6: Proof of Concept – Strengthening Communities in Rural Areas

Work stream 7: Community Engagement with Policy Development

3.3.3.2 Work stream 1: Knowledge Management Road Map

This work stream was designed to develop a road map for the guidance of all organisations and partnerships embarking on KM activity, essentially being the means to effect a transition from information management to knowledge management. The road map work stream was also to incorporate all of the work coming out of the other strands of the KM National Project, including all aspects of information sharing and information management as well as creating links to other relevant national projects (Mangham and Kodlubanski, 2004). It sought to demonstrate how KM could be integrated within existing practices of the organisation and not just become another initiative. It was made up of four key components:

- Information management – To identify the role that information management plays as part of an organisational KM strategy;
- Customer focus – What lessons can be learned from the private sector and how the data collected by councils can be used effectively as part of a KM strategy;
- Communications – To identify best practices in the use of intra and inter organisational communication;

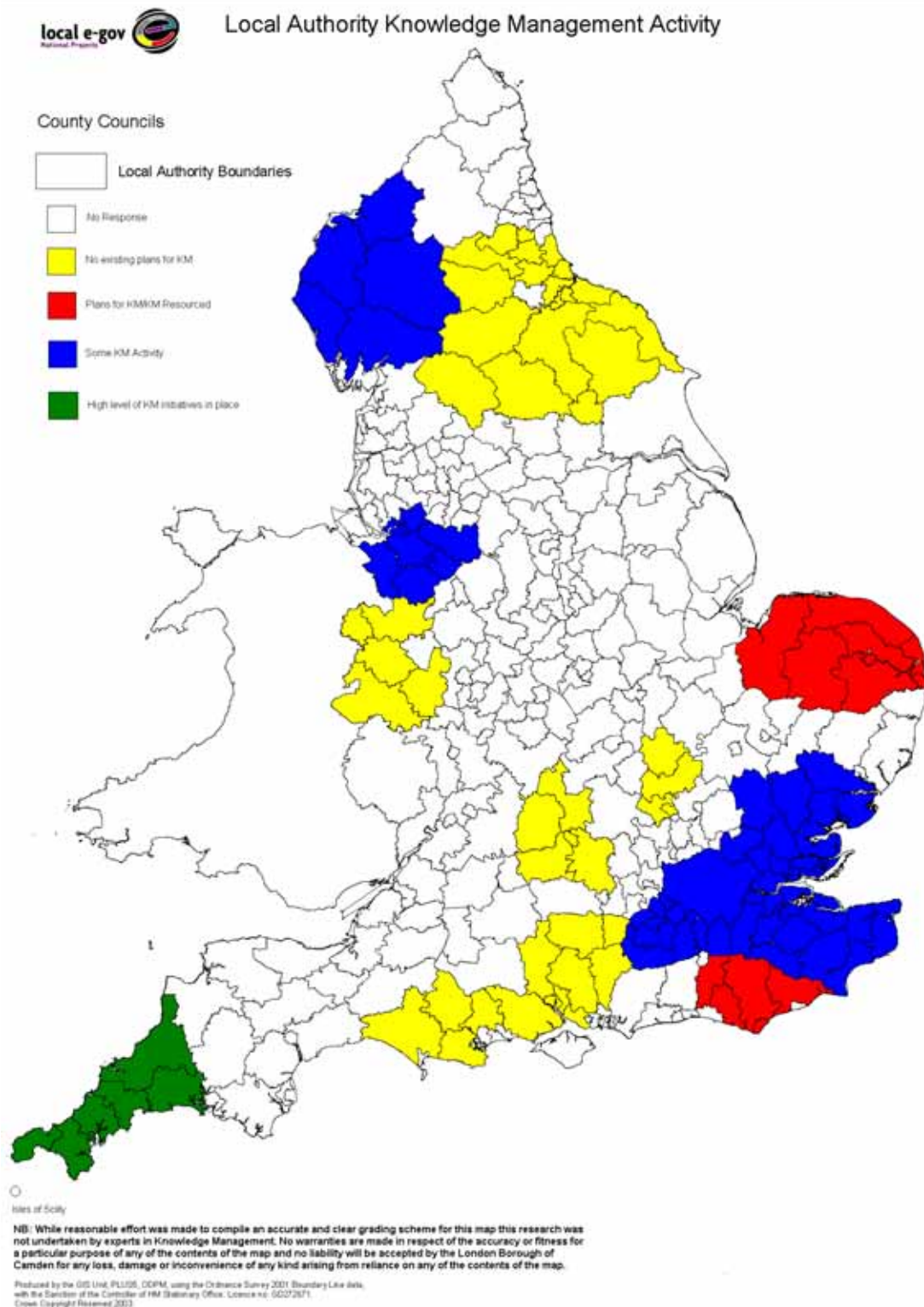
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- The learning organisation – Focused on linking organisational learning with improved performance, seeking examples of best practice and the ways in which existing initiatives, such as Investors in People and the Best Value review process (3.2.5) can be used.

The road map was intended to become an ever-evolving resource, ultimately to be owned by local authorities. Rather than being a definitive 'how to' it attempted to provide guidance on where to start, signposting KM activity, as well as creating a network where experiences, knowledge and best practices could be shared willingly. In its development, two state-of-the-nation maps of KM activity within local government were developed (Figures 5 and 6).

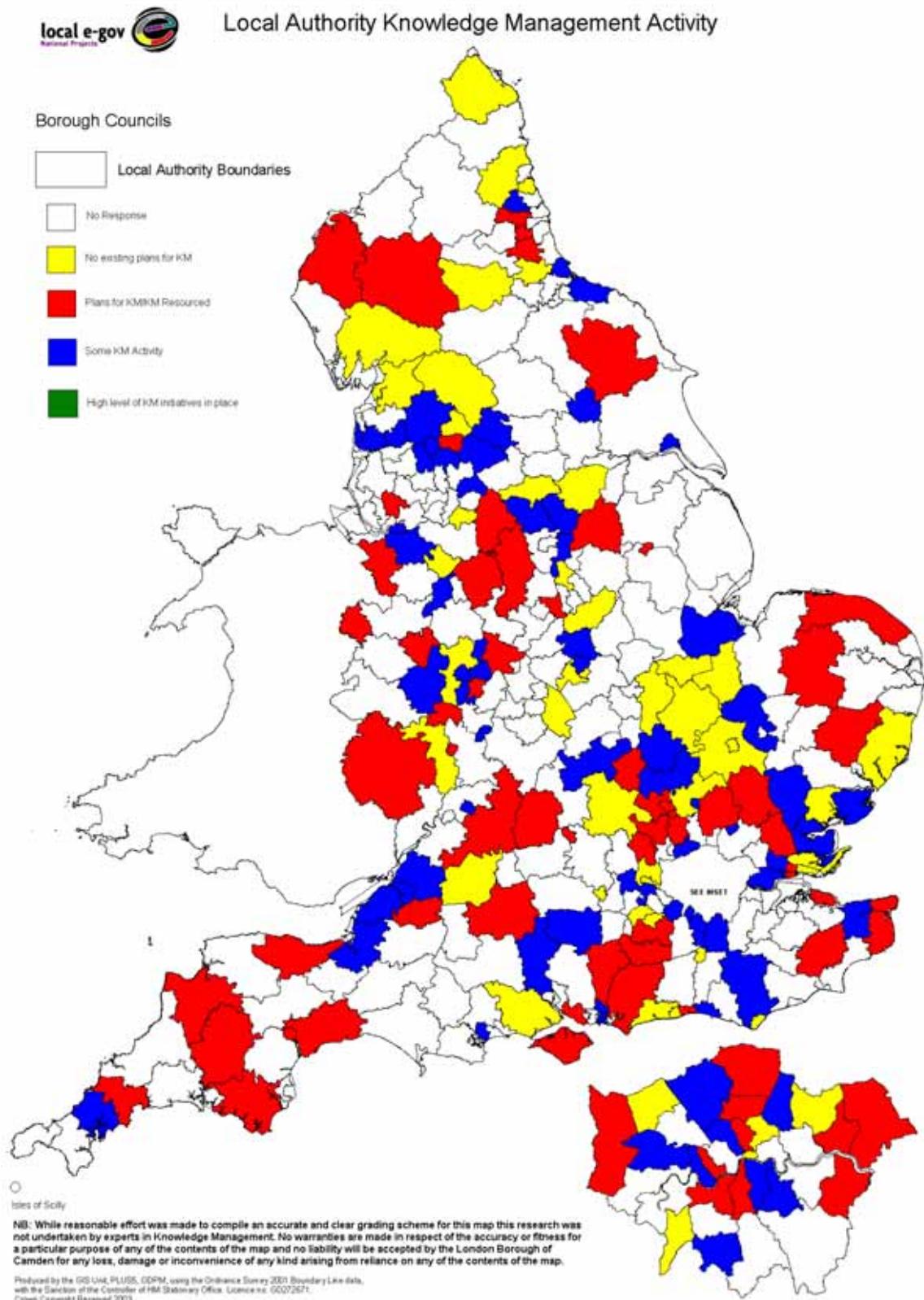
As with the output of the other work streams, a number of case studies, presentations and good practice guides developed during the course of this work stream were made available on the ProductShare website (ProductShare, 2007), which is supported by the Department of Communities and Local Government.

Figure 6: Knowledge management activity in England and Wales by County Council, 2004



Source: London Borough of Camden, 2004a

Figure 7: Knowledge management activity in England and Wales by district council, 2004



Source: London Borough of Camden, 2004b

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3.3.3.3 Work stream 2: Local Intelligence Systems and Information Asset Register

This work stream prepared toolkits to enable councils to develop local intelligence systems and information asset registers, to create local intelligence that might inform local decision-making. This was aimed at improving the flow of information within an authority and between an authority and its partners. The KM local intelligence systems and information asset register were intended to address the issues involved in the capture, storing and access of relevant information.

The local intelligence toolkit provides advice on how best to integrate current systems within a standard framework, to harness the information available and maximise its value. Where implemented, it aims to present a range of content, mostly statistical information in the form of area profiles, to assist those involved in service planning, policy making and to inform community leaders, politicians, businesses and the general public (Wiltshire County Council, 2004a). Its outputs would include demographics and key statistical indicators, but could also contain research papers, performance indicators and consultation or survey results (Figure 8).

The information asset register toolkit was developed to enable local authorities to summarise their information assets and indicate where they are held. Through an emphasis on developing sound and efficient processes, its prime focus is on information management and aimed at providing benefits in the areas of promoting openness, information sharing within authorities or partnership arrangements. For some, such as the London Borough of Lewisham (2004), it was also perceived as being of value for front line staff responding to customer enquiries and for those responding to Freedom of Information (3.2.6) requests.

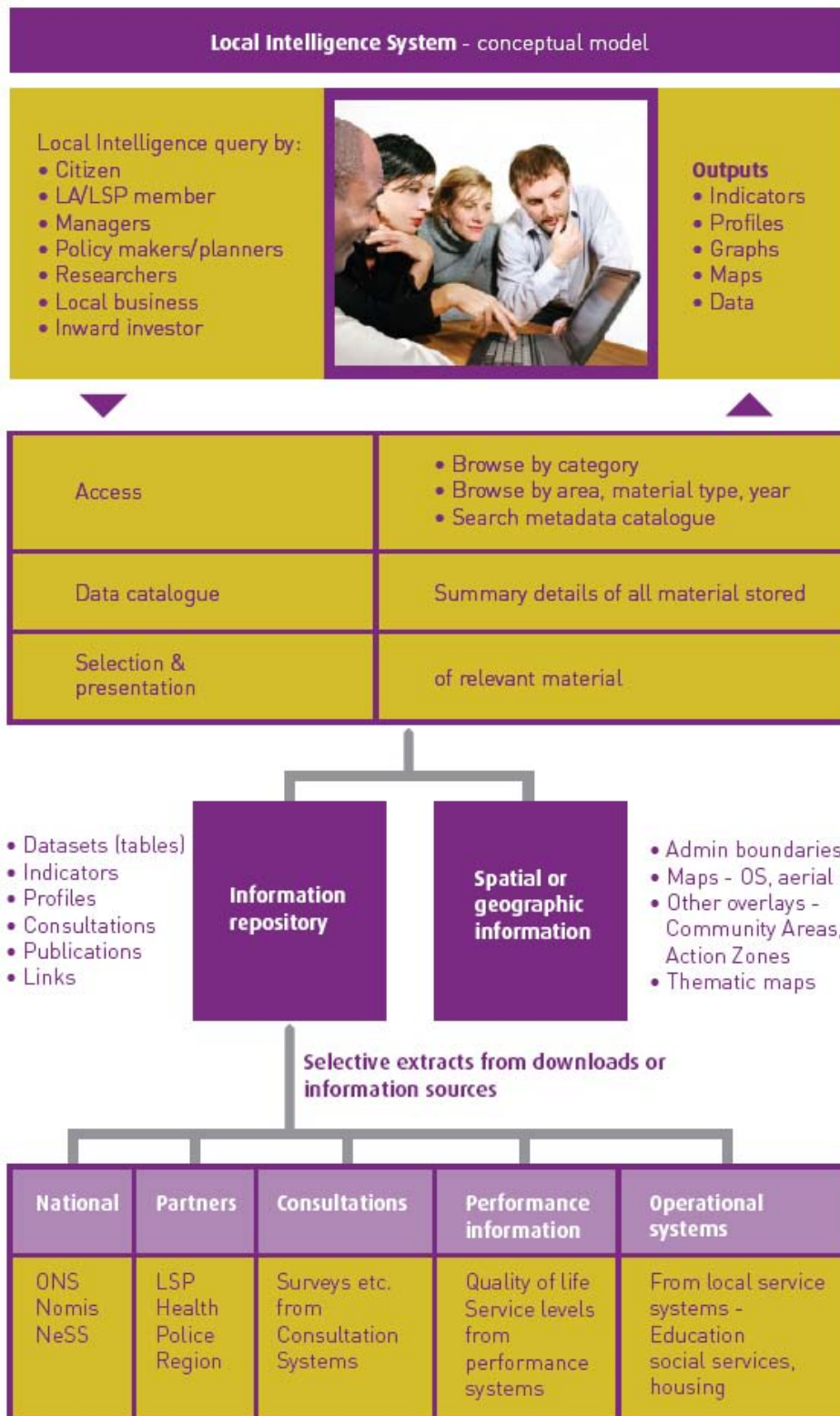
3.3.3.4 Work stream 3: CPA Improvement Planning

Introduced in 2002, Comprehensive Performance Assessments apply to English local authorities and are undertaken by the Audit Commission. The assessments evaluate the delivery of core services and the corporate strength of each council, by drawing on a range of information, including performance indicators, assessments of corporate capacity, audit and inspection reports and stakeholders opinions (Audit Commission, 2007). These are used to reach a single judgement about the performance of a council.

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The focus of this work stream was on showing how knowledge management could contribute to service improvement in local authorities. The resulting guide was presented as a 'cookbook' (Birmingham City Council, 2004), as it was recognised that the needs of individual authorities would vary greatly. Rather than being prescriptive, it was left very much to individual authorities to decide on which KM tools and techniques might be right for them. Most of the techniques are those which do not need ICT systems, the basic ones included are listed under: problem solving (exit interviews and mind mapping), organisational learning approaches (After Action Reviews, project reviews and 'baton-passing'), organisational design approaches (virtual teams, coaching and mentoring) and cultural approaches (identifying intellectual capital and building communities of practice). The more advanced techniques in the cookbook include: social network analysis, complex adaptive systems, knowledge audits, the design of space, knowledge harvesting, domain knowledge mapping and storytelling.

Figure 8: Local intelligence system – conceptual model



Source: Wiltshire County Council, 2004a

3.3.3.5 Work stream 4: Customer Facing Programme

The purpose of the customer facing work stream was to assist in bringing back office information to those employees in the front office in direct contact with customers/citizens. It focused on the creation of electronic content for mediated services using a series of templates designed to provide a flow of information to those who required it. Organised by service type, the content templates were aimed at providing users with details on how best to complete tasks applying to a specific service and hence hopefully result in faster, more efficient and consistent service delivery. These were accompanied by a style guide to ensure a consistent approach to the conventions of grammar and presentation to be applied when this generic content was customised by individual councils (Lewis, 2005). Intended for use within one-stop-shops, the templated information was developed in conjunction with the LAWS (Local Authority Web Sites) project (3.2.1.1) and made available through the ESD (Electronic Service Delivery) toolkit via an online service list viewer (ESD, 2007). A specific list for Scottish local authorities has also now been developed, the Scottish services list (3.3.4).

3.3.3.6 Work stream 5: Tacit Knowledge

The tacit knowledge part of the project focused on developing ways of making tacit knowledge explicit and on creating knowledge sharing cultures that could find and access it in the quickest and most effective way. Background reports and presentations (Archibald, 2005) clearly identify Nonaka and Takeuchi's socialisation, externalisation, combination and internalisation (SECI) model (1995) as the starting point for this work stream, concentrating on the areas of socialisation (sharing tacit knowledge) and externalisation (creating concepts).

The first part of this work stream considered current local authority information standards, such as e-GMS (e-Government Metadata Standards) in an attempt to create a generic architecture for the capture of tacit knowledge and the recording, storing and sharing of explicit knowledge through the use of defined metadata (information about information). Davis (2004) in a report from this work stream concludes that while it was unrealistic to apply metadata to something as fluid and intangible as tacit knowledge it is possible to "provide high level signposts to this knowledge by describing the type of knowledge and experience that a person has", through the use of skills matrices (op cit, p20). He points out that user profiles in expertise locators are often built around skill sets.

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The second part of the work stream, was aimed at assisting local authorities in developing knowledge sharing cultures. The outcome of this was a human resources toolkit to encourage employees to volunteer tacit knowledge (using many of the tools and techniques identified in the third work stream), focusing on cultural change, establishing communities of practice and knowledge networks within organisations and between organisations and their partners.

3.3.3.7 Work stream 6: Proof of Concept – Strengthening Communities in Rural Areas

This work stream builds on the second work stream that created a generic approach to the development of a local intelligence system. This proof of concept activity concentrated on developing a toolkit to help strengthen communities in rural areas essentially through the production of holistic profiles. It was intended as a means of dissemination of rural intelligence, but also as an evaluation tool to measure the success of local authority/partnership rural strategies. In preparing a toolkit for intelligence systems in a rural environment, it recognised that knowledge management initiatives should ideally be linked to an organisation's strategic aims and objectives (Wiltshire County Council, 2004b).

3.3.3.8 Work stream 7: Community Engagement with Policy Development

As part of the community planning (3.2.4) and best value (3.2.5) processes, local authorities have a requirement to consult with and involve their local communities and citizens in the decision making process; in order to develop appropriate policies and services that best meet the needs of people. To undertake such policy development, the first step was to identify ways in which stakeholders could be more involved, followed by a second step of developing methods of accessing the knowledge that exists within the community, to improve the relevance of policies (Sinclair, 2006b, p.156).

This work stream reviewed examples of best practice and built a common framework for community engagement with policy development. In essence, it supplied a component based citizen centric approach to policy making, with the components forming a 'super set' of what policy makers would actually use (Newcastle City Council, 2004, p3). It provided checklists of key actions, activities and pre-requisites that would allow policy makers to address any shortcomings in an authority's policy development process. Amongst a range of stated benefits, the framework promoted

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a common set of standards, toolkits and language use across partnerships and with the public, as well as knowledge sharing across all agencies at all levels within the policy making process.

The other work streams noted as informing this one were the Information Asset Register, providing a guide to the resources available and, the improvement planning 'cookbook' of knowledge management tools and techniques (Newcastle City Council, 2004, p18). The framework also recognised that the Health Service, one of the main public sector partners, had at the time a major knowledge management initiative under way and that use of the framework should be directed towards sharing common aims, ideas and facilities wherever possible (Newcastle City Council, 2004, p21).

3.3.4 Knowledge management in Scottish local government

Unlike the picture in England and Wales there has not been a similar approach in Scottish local government to develop a large-scale knowledge management programme. As previous sections have described however, there are knowledge management strands to many of the agendas potentially driving change and transformation, but the approach in Scotland has been to have a single agency, the Improvement Service in Scotland, that is involved in enabling, brokering and promoting knowledge management activity in conjunction with advice and support on a range of these agendas.

3.3.4.1 Development of an Improvement Service

A partnership between the Scottish Executive, COSLA and SOLACE, the Improvement Service was established in July 2005 as a company limited by guarantee, funded by the Scottish Executive for three years (Improvement Service, 2005). Its formation dates back to the development of the best value regime (3.2.5) and the subsequent Local Government in Scotland Act 2003, based on a need identified by local authorities to have a new service that would "work with them to bring improvements and share good practice across the local government community" (IS, 2007).

Initial consultation on the development of this service occurred through a Scottish Executive white paper 'Renewing Local Democracy' (Scottish Executive, 2002, para 83). Following a supportive joint submission from COSLA and SOLACE, in addition

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to responses received from councils and major stakeholders, the Scottish Executive made a commitment to fund the Improvement Service, establishing a project team to develop it as a joint venture. In November 2003, the project team gave way to a shadow board, a chief executive was recruited and by July 2005 was legally formed and core staff recruited. The Customer First programme (3.2.2) was also brought under the remit of the Improvement Service.

3.3.4.2 The Improvement Service and knowledge management

The Improvement Service describes its role as being involved in “improving the efficiency, quality and accountability of public services in Scotland through learning, sharing knowledge and delivering improvement solutions” (IS, 2007). The aims of the organisation are to support continuous improvement, providing advice and support in the areas of best value, Customer First, efficient government and performance management, elected members’ development, knowledge management, management development, partnership, joint working and, planning and development. The core objectives of the service are to (Improvement Service, 2006, p3):

- Promote a learning culture and support collaborative working across local authorities and partners;
- Build capacity within local government to improve the skills of officers and elected members;
- Promote good practice across Scottish local government;
- Promote the use of knowledge management within local authorities to support sharing and learning, e-governance and business re-design;
- Identify good practice and learning from outside Scotland and other areas of the public, private and voluntary sector to share with Scottish local government.

Knowledge management is recognised as forming an important element of the Improvement Service’s main aims and objectives (Mair, 2004). This is reflected not only in an identifiable budget line within the financial annex of its business plan (Improvement Service, 2006, p.10), but also in having a Head of Knowledge Management on its core staff complement. The first person to hold the post was in

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position from late 2005 until mid 2006, with the second taking up the post in late 2006.

Knowledge management is seen as a theme running across the work of the Improvement Service and being integral to the way in which it engages with and supports Scottish local government and its partners. The focus on knowledge management is considered as supporting improvement through “innovation, collaboration, increased efficiency and risk reductions by developing easy to use and quality controlled knowledge and information sharing infrastructure and encouraging a knowledge sharing and continuous learning culture” (Mackenzie, 2007).

The KM workstream for the Improvement Service is concentrated on:

- Enabling KM principles and supporting development of a KM framework across Scottish local government and its partners;
- Providing a technology platform which supports and enables knowledge sharing and collaborative working;
- Ensuring that the Improvement Service itself is adopting best KM practice.

In terms of the KM related activities and outcomes, by May 2007 the following had been achieved (Mackenzie, 2007):

Strategically

- The development of a draft KM strategy paper, the main purpose of this being “to create, capture, leverage, re-use our collective knowledge within [and beyond] Scottish local government to build capacity to deliver targeted outcomes and maximise positive impact for citizens”;
- Advising on how to mainstream knowledge sharing activities into all Improvement Service work programmes and projects;
- Conducting a series of interviews, between November 2005 and January 2006, with chief executives and council leaders. This attempted to understand their improvement priorities, how they would like a sharing and learning culture to be established and the barriers that would have to be overcome.

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Technology

- The development and launch of a pilot website in April 2006 (IS, 2007), which aimed to test some of the Improvement Service's knowledge sharing approaches, providing news and events, discussion forums, a document library and a number of online communities of practice, including community planning, a facilitator's forum, health improvement, national gazetteer, partnership and joint venture, planning for change, Scottish councils' equalities network, Scottish members' services development network and shared services. A year after launch, the site had in excess of 700 members who had provided profile details;
- Initiating a statement of requirements and options for the delivery of a long-term web-based knowledge management solution.

People based

- Identification of existing formal and informal networks operating in local government across Scotland (for example 3.2.4.2);
- Support provided to six communities of practice (CoP) via the Improvement Service CoP platform, with others under development, based on a CoP policy and set-up template.

A Scottish knowledge base

Another outcome, from the Scottish Executive's Customer First Programme (3.2.2), was the development through the Improvement Service during 2006/2007 of a knowledge base project, focused on providing classification and taxonomy elements for council websites. Based on standards developed under the electronic service delivery toolkit (ESD, 2007) this was aimed at providing a consistent approach, which if adopted might improve the structure and searchability of Scottish local authority web sites.

Through a lead authority (Renfrewshire Council), working with all 32 councils, a common services list, the Scottish Services List (SSL), was developed that detailed all public-facing services offered by Scottish councils. Also created was the framework for a common A-Z of services and a user-friendly navigation structure, the Scottish Navigation list (SNL). The other outputs from the project included an

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extensive database of Frequently Asked Questions (FAQs) (Renfrewshire Council, 2007), around 500 of which were customisable for local use, and a range of sample forms (application forms), submitted by local authorities wishing to share what they had developed. These various online tools were accompanied by case studies, templates, guidelines, training materials, presentations and, mappings between the two classification schemes (SNL/SSL), supported by quarterly meetings of the Scottish Toolkit Local Community.

Whilst these various activities may represent a useful start, the Improvement Service recognises that there is still a need to develop and agree a KM vision and gain the support and commitment from senior management teams and senior members in local authorities to adopt KM practices and contribute to a “shared knowledge base to support the improvement agenda” (Mackenzie, 2007). The methods by which these are to be achieved include amongst others: the establishment of a local government KM champions network (supporting them to operate as change agents) and developing a KM toolkit for local government use (identifying what the best KM practices are). This final element could perhaps consider the breadth of material available from the KM National Project (3.3.3).

4.0 Knowledge management within Scottish local authorities

This section explores, through survey and case study analysis, the degree to which the promotion of knowledge management and the provision of support and advice (3.3.4.2) have had an influence on awareness levels, emergence of the discipline, progress toward knowledge management maturity and measurement of impact within, primarily, Scottish local government.

4.1 Theoretical context and models

The theoretical context for the study is based on the notion of organisational learning and whether knowledge creation is a technical or social process (4.1.1). It also recognises the dual paradigm nature of knowledge management, with both the existence of an IT paradigm and a humanist paradigm (4.2.1). The 'awareness' theme within the study adopts an essentially socially constructed model of knowledge management (4.2.1.1), while elements of the IT paradigm are explored in the 'emergence theme', though this is still grounded in an organisational learning approach. The 'progress' theme, in its attempt to chart knowledge management maturity, is developed from a review of potential KM maturity models (4.1.3).

4.1.1 Organisational learning

Organisational learning can be divided depending on the extent to which either it is viewed as a technical or social process (Easterby-Smith and Araujo, 1992, p.3-5). The former assumes that organisational learning is about the effective processing, interpretation of and response to, information both inside and outside the organisation and is generally explicit in nature. The latter perspective concentrates on the way people make sense of their experiences at work. These experiences may be derived from both explicit and tacit sources. So learning can emerge from social interactions which in the instance of 'explicit information' involves a joint process in making sense of data, while tacit and embodied forms of learning involve situated practices, observation, emulation of skilled practices and socialisation into a community of practice.

It is this difference between a technical view and a social view of organisational learning which has most resonance with learning as knowledge creation. The

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technical perspective is expressed particularly through the positivist theories of single and double loop learning (Argyris, 2005, p67), while the social perspective can be seen clearly in studies of communities of practice (Wenger, 1998). Single loop learning has its emphasis on the detection and correction of errors within a given set of governing variables and is linked to incremental change in organisations. Double loop learning involves interrogating the governing variables themselves and can involve radical change to systems and strategy.

4.1.2 Dual paradigm nature of knowledge management

Empiricist and rationalist theoretical perspectives support a view of knowledge management that is largely grounded in information management and approaches to the storage, manipulation and dissemination of increasingly complex forms of explicit information or what some might suggest is knowledge. This has seen the emergence of a variety of information technology tools and techniques that aim to provide technological solutions to support, primarily, information retrieval and information sharing.

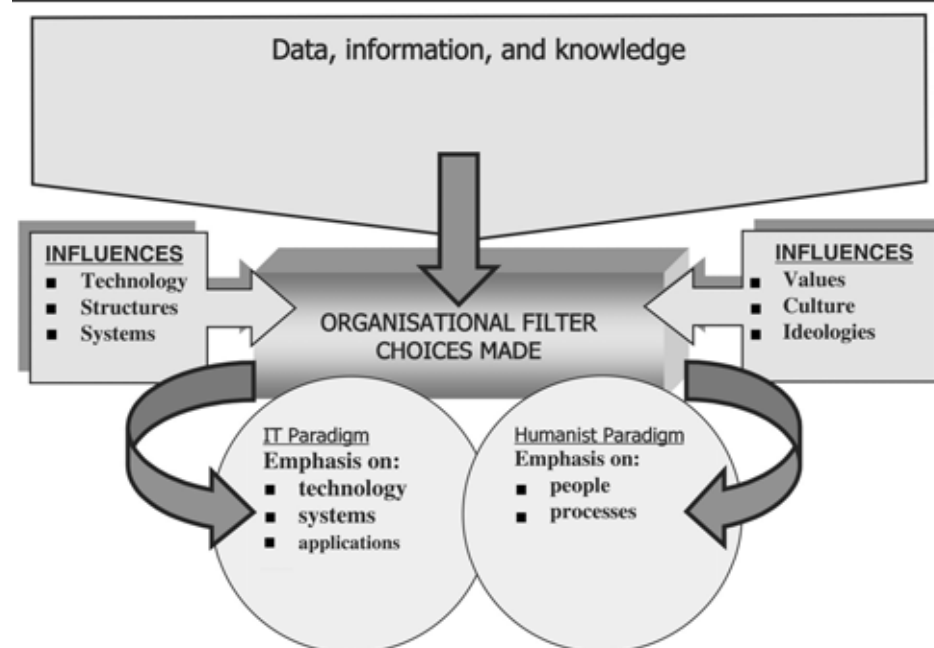
It has however been suggested that what this approach to knowledge management represents is first generation knowledge management or largely IT based and mostly about knowledge capture, delivery and use (McElroy, 2000; Firestone and McElroy, 2004). If first generation knowledge management relates to organisational learning, it is identified only in relation to single loop learning or the re-use of existing knowledge, or more precisely, complex information. Second-generation knowledge management on the other hand with its basis in organisational learning and complexity theory considers how “knowledge is produced, tested, evaluated and integrated as a precursor to use” (Firestone and McElroy, p.183) taking it into the realm of double loop learning.

An alternative to distinguishing between first and second-generation knowledge management is to see these as a dual paradigm (Gloet and Berrell, 2003) as they currently co-exist. The difference is described as an IT paradigm orientation and a humanist paradigm orientation developed out of organisational learning. The IT paradigm orientation focuses on the tangible features of knowledge management covering technology, technical applications, the collection of data and the manipulation of information. The humanist paradigm orientation is concerned more with the “nature of learning, the organisational processes of knowledge management

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and harnessing tacit forms of knowledge as an organisational resource” (p.81). These paradigm orientations result from very different epistemological and philosophical assumptions about the very nature of knowledge management and Gloet and Berrell argue that in most cases within organisations outcomes will tend to be skewed in favour of those consistent with thinking in the IT paradigm, as people feel more at ease in dealing with explicit information rather than tacit knowledge. They also point out that in dealing with information and knowledge, organisations continually have to make choices between competing solutions and systems of knowledge management, essentially filtering data, information and knowledge of all types. A series of influences, from the values of the organisation to its community of practitioners and its wider stakeholders have been identified in a generic model of the dual paradigm nature of knowledge management (Figure 9).

Figure 9: Influences on knowledge management within an organisation



Source: Gloet and Berrell, 2003, p82

4.1.3 Knowledge management maturity models

Paulzen and Perc (2002) identify 10 models used for measuring KM within organisations, noting that some systematically derive multiple performance measures, while others use only one indicator to assess KM for a whole organisation. They point out, however, that maturity models differ in being based on a defined range of stages that “serve to measure the maturity or capability of the object of analysis” (p2). Many of these are based on capability maturity models and four in particular were reviewed by Pee et al (2006), KM Capability Assessment Model,

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Siemens' Knowledge Management Maturity Model, the Knowledge Process Quality Model and the Infosys Knowledge Management Maturity Model (Figure 10), along with their identification of five non-capability models, namely KPMG Consultancy's Knowledge Journey, Klimko's KMMM, VISION KMMM, TATA Consultancy Services 5iKM3 KMMM and WisdomSource's K3M (p.10). Following an analysis of both types of maturity model they propose a descriptive model or general KMMM that describes the essential attributes of an organisation at a particular KM maturity level, as well as a potential assessment tool. While this has the potential as a diagnostic tool for self-assessment it would necessitate a range of data collection techniques not appropriate to the requirements of one question area within the survey of local authorities. As such, the model adopted, the Infosys Knowledge Management Maturity Model, was based primarily around the relative ease with which the descriptions of the various levels (Figure 11) could be summarised for use within a questionnaire, yet also retaining enough meaning from which to draw broad conclusions.

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Figure 10: Knowledge management maturity models (capability based)

Model	Stages/ levels	Summary	Source
KM Capability Assessment Model	0 – difficult/not possible 1 – possible 2 - encouraged 3 – enabled/practical 4 – managed 5 – optimising	Key process areas include lessons learned, experience, data, and structured knowledge.	Kulkami and Freeze, 2004
Siemens KM Maturity Model	1 – initial 2 – repeated 3 – defined 4 – managed 5 – optimising	Key process areas are people, processes and technology.	Pee et al, 2006
Knowledge Process Quality Model	1 – initial 2 – aware 3 – established 4 – quantitatively managed 5 – optimising	Combines ideas from process engineering with KM principles. Its basis is the assessment of KM structures. Elements include: maturity stage dimension, knowledge activity dimension, management area dimension and, assessment structure. Process attributes in the second two of these included organisational, people and technology factors.	Paulzen and Perc, 2002
Infosys KM Maturity Model	1 – default 2 – reactive 3 – aware 4 – convinced 5 – sharing	Key process areas include people, process and technology.	Kochikar, 2000

Figure 11: Infosys knowledge management maturity model

Level	Name	Description
1	Default	Complete dependency on individual skills/abilities. Organisation's knowledge is fragmented in isolated pockets and stays in people's heads. Belief in formal training as sole mechanism for learning.
2	Reactive	The organisation shares knowledge purely on a need basis. Routine and procedural knowledge is shared. Able to repeat basic business tasks of the organisation.
3	Aware	Beginnings of an integrated approach to managing knowledge life cycle. Enterprise wide knowledge propagation systems are in existence (awareness and maintenance are moderate). The organisation collects and understands metrics for knowledge management. Managers recognise the role of and encourage knowledge sharing
4	Convinced	Enterprise wide knowledge systems are in place – quality, currency, utility, usage is high. Organisational boundaries breakdown as knowledge barriers. High ability to leverage internal and external sources of expertise. The organisation realises measurable benefits through knowledge sharing.
5	Sharing	Culture of sharing institutionalised, sharing becomes second nature to all. Organisational boundaries are irrelevant. Streamlined process for leveraging new ideas for business advantage. Knowledge return on investment is integral to decision-making.

Source: after Kochikar, 2000

4.2. Survey of Scottish local authorities

4.2.1 Survey method

4.2.1.1 Draft questionnaire

The design of the draft questionnaire was based primarily on the research of McAdam and Reid (2000), forming the questions for the 'awareness' section. The 'emergence' section was developed around notions of organisational learning as outlined by McElroy (2000) in his description of a 'new' approach to knowledge management. The 'progress' section of the questionnaire was developed from the review of a number of knowledge management maturity models (4.1.3). It also sought to identify the barriers to successful knowledge management, asking respondents to group their responses into one of three types of KM barrier (Riege, 2005). The 'measurement' section was developed partly from Sinclair's emphasis (2006b) that any KM measurement activity should be closely aligned with business objectives. The measurement systems listed were also based in part on what is currently in use within local authorities within their performance management regimes (3.2.5).

In terms of questions types, the questionnaire design aimed for a high level of closed multiple-choice questions, with some questions using a Likert scale (to gauge opinion) and only a few open questions, to minimise any potential coding requirements.

Input from preparatory interviews

Preparatory interviews to test and develop some of the general question areas were conducted during October 2006, with individuals from one local authority, selected from the roles of information management, information technology and human resource management, in order to obtain a cross-section of perspectives on knowledge management. The results of semi-structured interviews with these managers provided some of the options for the multiple choice list of potential influences on public sector knowledge management and confirmed others within the 'emergence' part of the questionnaire (Appendix 1). It was also an opportunity to test the approach to be used when collecting qualitative information in the case study.

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4.2.1.2 Piloting and redesign

A small sample of individuals, again from the different roles of information management, information technology and human resource management, were asked to comment on the draft questionnaire working their way through it to determine how easy it was to complete. This suggested a series of alterations: the inclusion of additional open questions, a fuller introduction, the provision of further options for one of the multiple choice questions and re-ordering the question flow to introduce KM via the awareness section. One concern expressed by some in the pilot was that the questionnaire might have been too lengthy. Others suggested that some form of incentive might be required in order to ensure an adequate response rate. On exploring potential incentives it was decided that it would not be feasible or necessarily appropriate to offer an inducement to complete the questionnaire other than making summary results available to respondents.

Following amendments to the questionnaire, the team in a local authority who conduct consultation exercises were then asked for comment. This resulted in some minor adjustments and alteration to the options for questions, to run from positive to negative. They then agreed to convert this into a web version using Snap survey software and provide the resulting web pages for use on any available web server. In addition to this, using another survey software package, a PDF version of the finalised questionnaire (Appendix 2) was prepared. Both the web version (Appendix 3) and PDF versions were then loaded onto a web server. The resulting website was then used during the implementation phase of the survey.

4.2.1.3 Survey sample and implementation

The main survey population for the survey was the 32 local authorities in Scotland. Two delivery methods were adopted for this - email and postal. The first delivery method was aimed at those communities of practice who might have a view on the questions posed and the second was aimed at the chief executive officers of these organisations.

The first survey method was to attempt to target three communities of practice and included SPiN (the Society of Public Information Networks), which is a UK public sector association interested in information management and knowledge management issues, subscribers to the Improvement Service e-bulletin and members of Socitm (the Society of IT Managers) in the UK. The SPiN board agreed

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to promote the questionnaire to their members both on their website and via an email to their members (around 170) during November 2006, the Improvement Service had details of the questionnaire on their website between 25 October and early December 2006 and Socitm did not indicate that they would like to become involved. Details of the questionnaire on the SPiN and Improvement Service websites were linked from their respective homepages. SPiN emailed their members specifically about the survey on 27 November 2006 and the Improvement Service included details of the survey in their monthly e-bulletins to their subscribers on 9 November 2006 (over 400). In total, an estimated 570 people will have received an email referring to the survey and an associated weblink. It is recognised that this survey delivery method is reliant on a self-selecting sample population and may be deficient as a result. It does however attempt to target those individuals who should be capable of providing an informed view on their organisation.

To coincide with the first, the second delivery method was to send postal questionnaires personalised to each of the 32 chief executives of Scottish local authorities. The mailing list for this was obtained from the COSLA while the names of chief executives were confirmed by visiting each council website. From the initial interviews most of those questioned had indicated that they felt that senior management would most probably be aware of knowledge management and as such the questionnaire might generate appropriate informed responses. In addition to the questionnaire, the letter to chief executives (Appendix 4) indicated that the survey could also be completed online, providing the website address. The postal survey ran from 20 November to 22 December 2006, while responses on the website were closed on 15 December 2006.

4.2.2 Survey results from local authorities

Response levels

While the response to the postal version of the questionnaire was not high, with only 38% of Scottish local authorities responding, only three responses to the web version of the questionnaire were received. Given that they were targeted at those communities of practice who might have been interested and able to respond, this was disappointing. It may however reflect that this was a self-selecting sample, plus the length and overall complexity of the questionnaire, as some of the respondents to the postal version noted that they found it 'challenging'. Both sets of responses were

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aggregated for analysis, so responses are not only from Scottish local authorities. As the overall number of responses was low, a basic percentage analysis was undertaken using Snap survey and Microsoft Excel software applications.

Figure 12: Survey response rates

Questionnaire type	Date circulated/sent	Delivery method	Population	Totals received by 22/12/2006	Response rate
Web based	Various	Email bulletins from SPiN and Improvement Service	Actual population not available, but estimated at around 570	3	
Hard copy	21 November 2006	Postal	32 Scottish local authorities	12	37.5%
				15	

4.2.3 Awareness

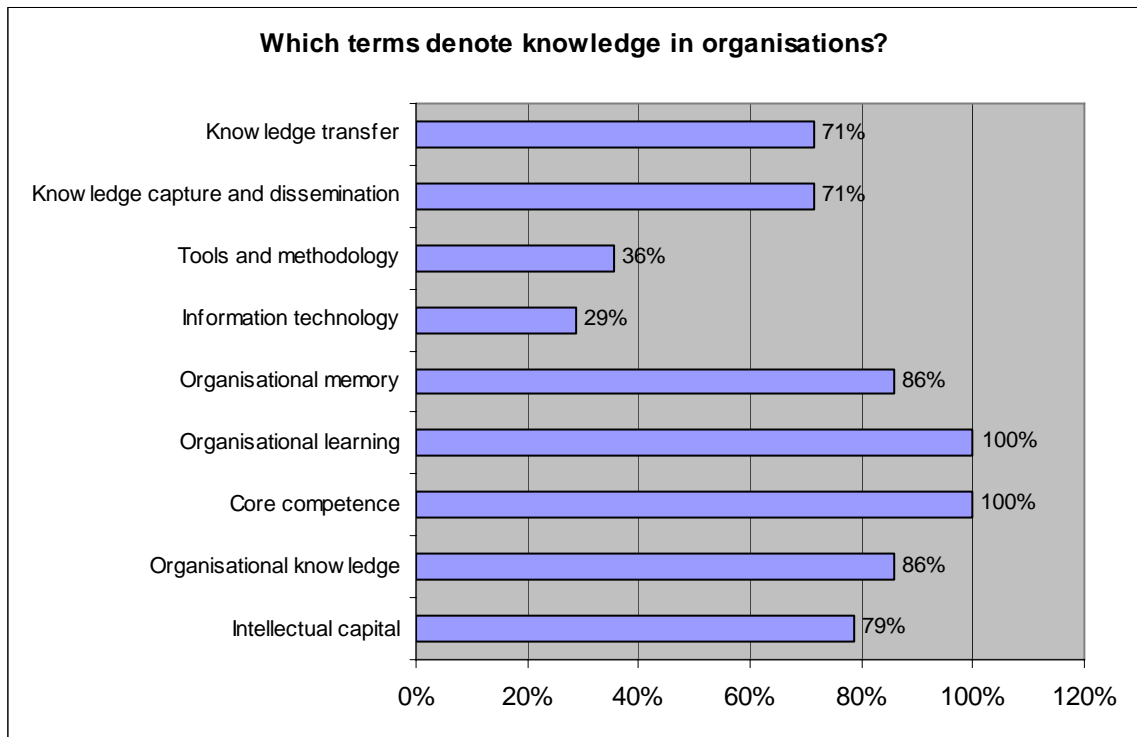
The awareness strand explores four areas examined by McAdam and Reid (2000): the construction/definition of knowledge, knowledge embodiment, knowledge dissemination and, the use/benefits of knowledge management.

4.2.3.1 Construction/definition of knowledge

Which terms denote knowledge in organisations?

The results indicate that respondents had a relatively high level of awareness of what constitutes both knowledge within organisations and knowledge management, but the response rate suggests that awareness of knowledge management overall may be still developing. Interestingly, all respondents indicated that 'organisational learning' and 'core competence' were terms that denote knowledge within organisations. There were also high proportions (86%) who indicated that 'organisational memory' and 'organisational knowledge' were part of definitions of knowledge. Knowledge management processes of 'knowledge transfer' and 'knowledge capture and dissemination' were also revealed as terms that had resonance amongst 71% of respondents. At the other end of the scale those terms that refer to enabling aspects of knowledge management, 'tools and methodology' and 'information technology' were only regarded by 36% and 29% of respondents as denoting knowledge in organisations.

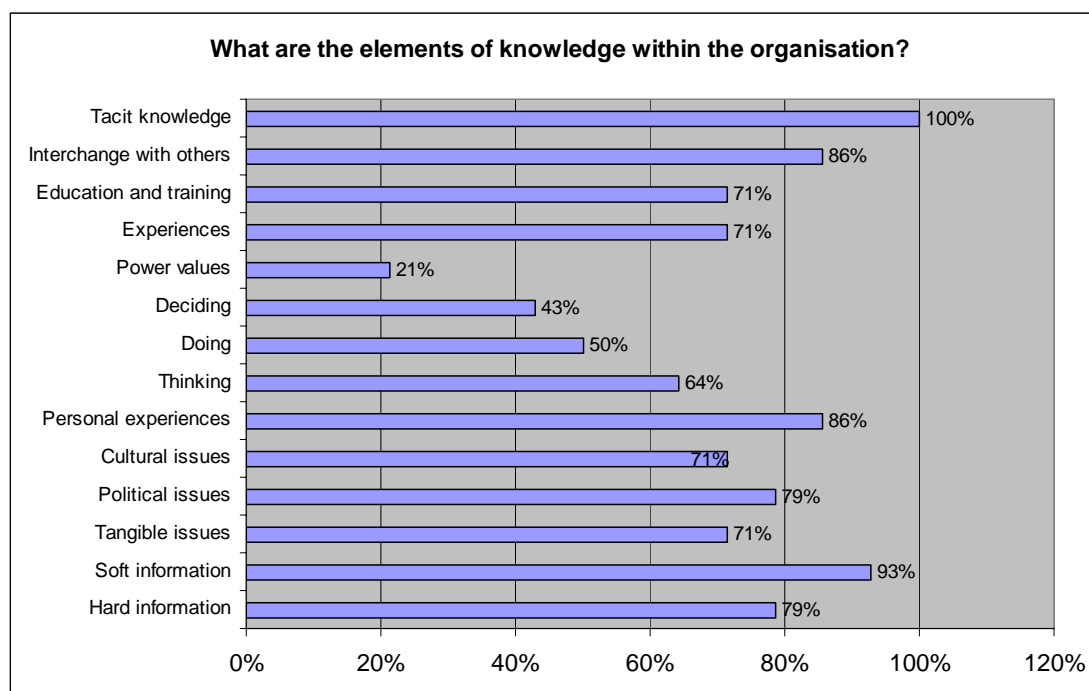
Figure 13: Terms denoting knowledge in organisations



What are the elements of knowledge within the organisation?

Turning to what the elements of knowledge are within the organisation, most of the options scored highly amongst respondents, indicating that they considered knowledge to be multidimensional, rather than limited to a single element. Those scoring highly were: 1. 'tacit knowledge' (100%), 2. 'soft information' (93%), 3. 'interchange with others' (86%), 3. 'personal experiences' (86%). Those where half of respondents or less scored elements of knowledge within their organisation, were 'doing' (50%) 'deciding' (43%) and 'power values' (21%).

Figure 14: Elements of knowledge within the organisation



4.2.3.2 Embodiment of knowledge

Where is knowledge systematically captured in the organisation?

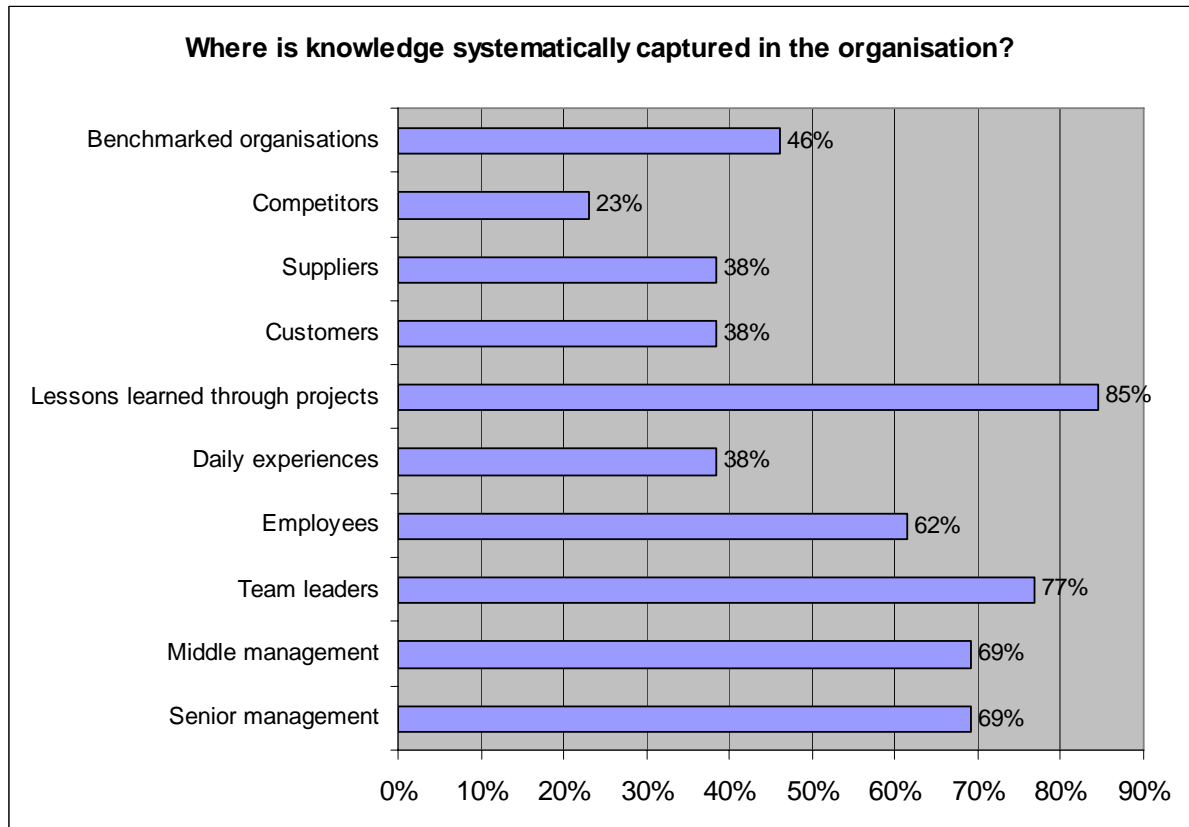
This question attempted to see both at what level in the organisation knowledge was systematically being captured and whether it was occurring through tacit elements, such as daily experiences. Perhaps not surprisingly, respondents indicated that knowledge was being systematically captured at both middle and senior management levels within their organisations (both 69%). However, a higher proportion (77%) indicated that this was occurring lower down the organisational hierarchy at team leader level. Employees were at the bottom of this at 62%. Interestingly, the highest score for where knowledge was systematically being captured was 'lessons learned through projects' (85%). This would suggest that lessons learned are an important and potentially significant element of knowledge management within local government. Indeed, even if not made explicit as knowledge management it may reflect a recognition that this is accepted good practice within the sector. It may be instructive to assess whether and how such lessons learned have been made available within local authorities.

The results do however indicate that knowledge is less likely to be captured through the tacit elements of daily experiences, from customers and from suppliers (all 38%).

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Given the increasing importance of feedback through practices such as consultation (3.2.4) and a user-centric approach (3.2.1) it is likely that this finding will be subject to change.

Figure 15: Systematic capture of knowledge

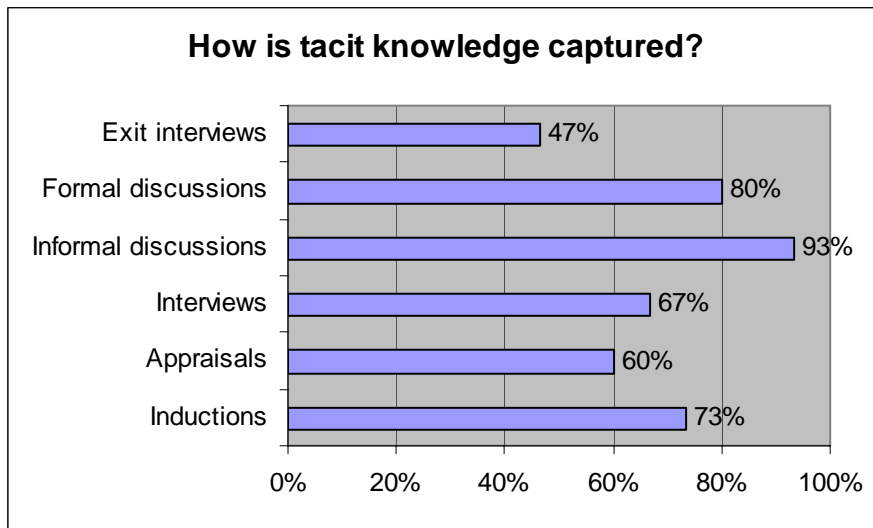


How is tacit knowledge captured?

A core element of socially constructed knowledge (Nonaka and Takeuchi, 1995), tacit knowledge appears to be captured primarily through 'informal discussion' (93%). Nearly as significant are 'formal discussions' (80%), while various human resources processes are 'inductions' (73%), 'interviews' (67%), 'appraisals' (60%) and 'exit interviews' (47%).

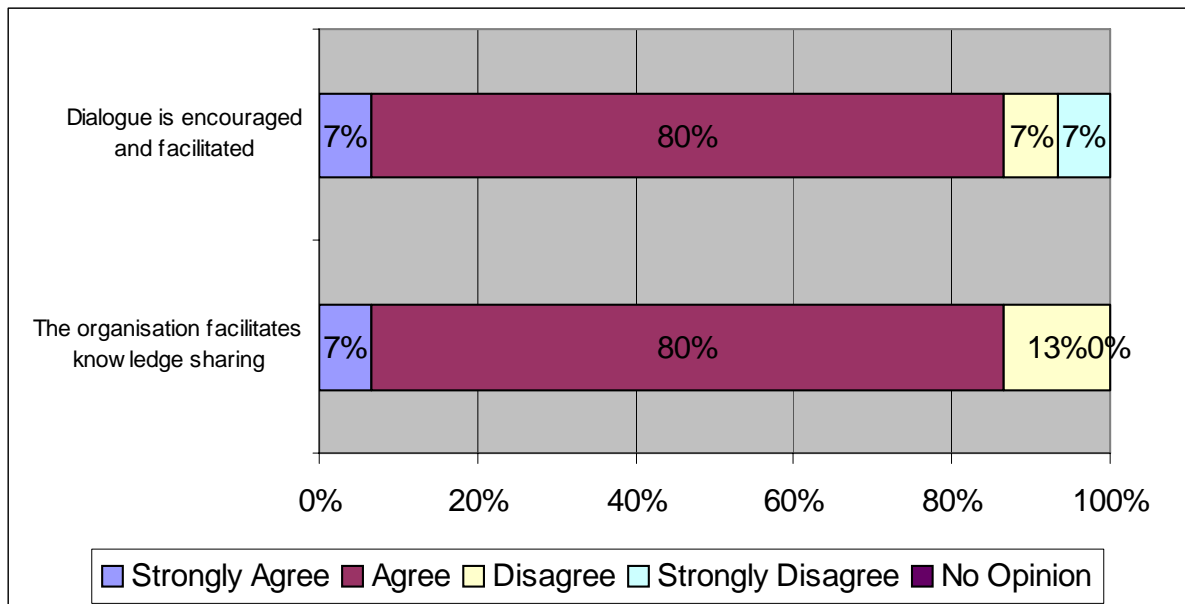
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Figure 16: Tacit knowledge capture



Knowledge embodiment appears to be relatively well developed, given that there is a high proportion of respondents who agreed that dialogue is encouraged and facilitated. A high proportion also indicated that their organisation facilitated knowledge sharing. This finding may reflect approaches to performance management within local government (3.2.5), particularly the role which the best value regime plays.

Figure 17: Knowledge sharing facilitation and encouragement of dialogue



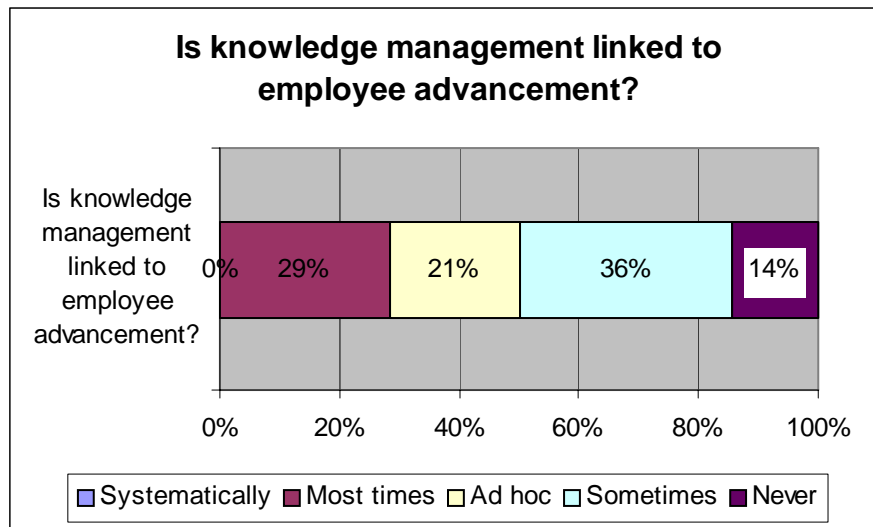
Is knowledge management linked to employee advancement?

Reflecting the finding on knowledge management maturity in the section on Progress (4.2.5), it is clear that KM does not appear to be systematically linked yet with

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employee advancement, though 29% of respondents indicated that it was most of the time.

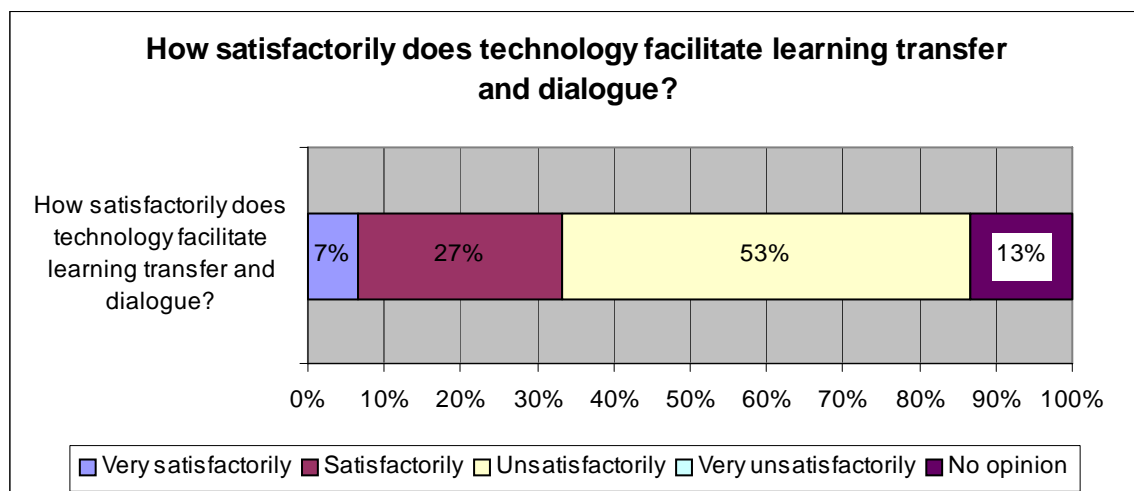
Figure 18: Knowledge management link to employee advancement



How satisfactorily does technology facilitate learning transfer and dialogue?

While the section on Emergence (4.2.4) seeks to assess how effective ICT was, a question here considered how satisfactorily technology was in facilitating learning transfer and dialogue within organisations. The results show that 34% of respondents thought this was very satisfactorily or satisfactorily being facilitated. Leaving aside those who did not have an opinion, over half (53%) considered technology to be unsatisfactory in facilitating learning transfer and dialogue.

Figure 19: Satisfaction with technology facilitating learning transfer and dialogue

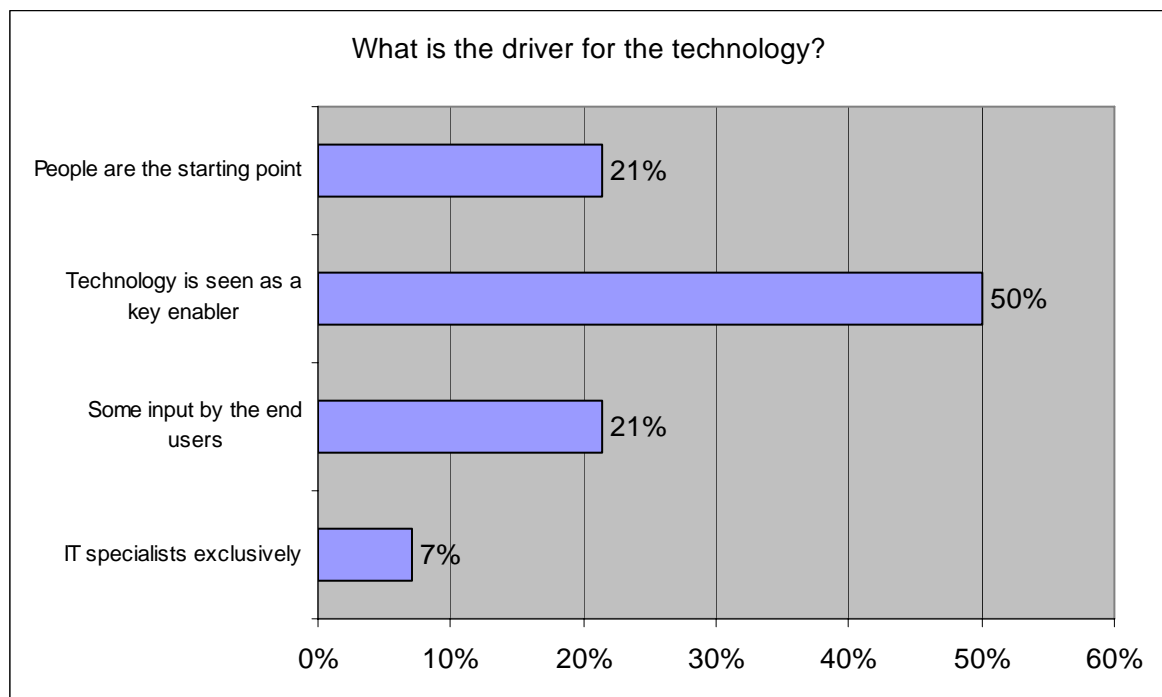


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What is the driver for the technology?

Despite the fact that over half of respondents were unsatisfied with technology as a facilitator of learning transfer and dialogue, it appears that for technology drivers half of respondents considered that 'technology is seen as a key enabler'. Given that levels of awareness about what constitutes knowledge appear to be relatively high in this population it might have been expected that a higher proportion of respondents may have considered that 'people are the starting point'.

Figure 20: Technology drivers



4.2.3.3 Dissemination of knowledge

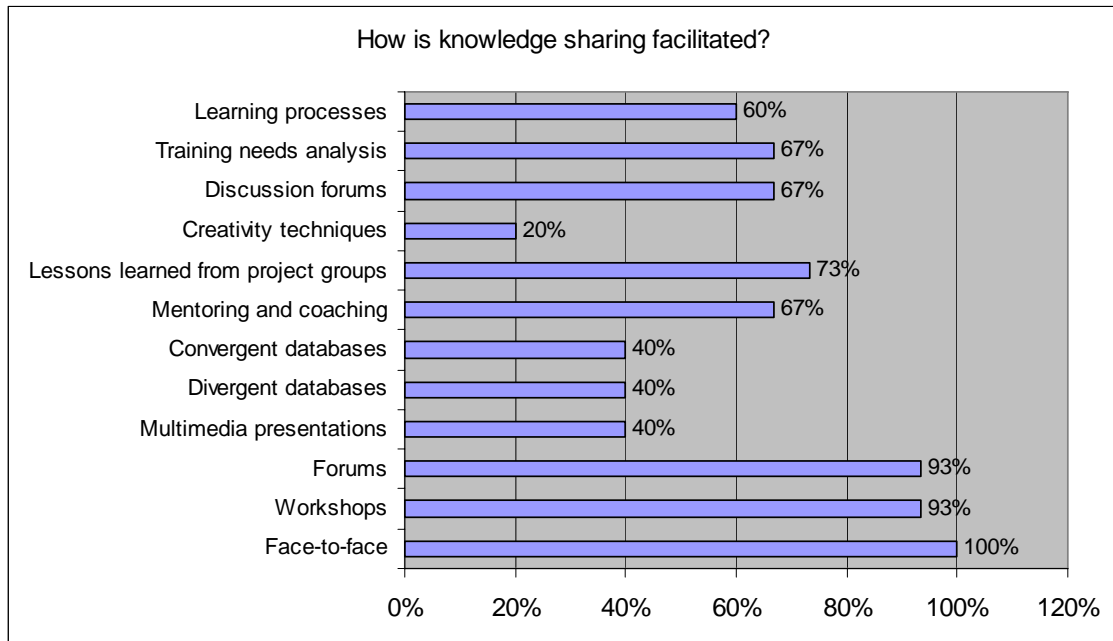
How is knowledge sharing facilitated?

On how knowledge was being disseminated throughout respondent's organisations it is clear that the methods used to facilitate knowledge sharing are those which are primarily people orientated. All respondents indicated that 'face-to-face' sharing occurred, followed closely by the use of 'forums' and 'workshops' (93%). Again, lessons learned from project groups was apparently a popular method with 73% of respondents identifying this. Important but apparently marginally less significant methods were 'training needs analysis', 'discussion forums' and 'mentoring and coaching', all 67%. How systematically these methods are used however is difficult to determine, though it is possible that they are not high, reflecting the overall levels

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of KM maturity (4.2.5.1), and the low use of more refined methods such as divergent databases, multimedia and creativity techniques.

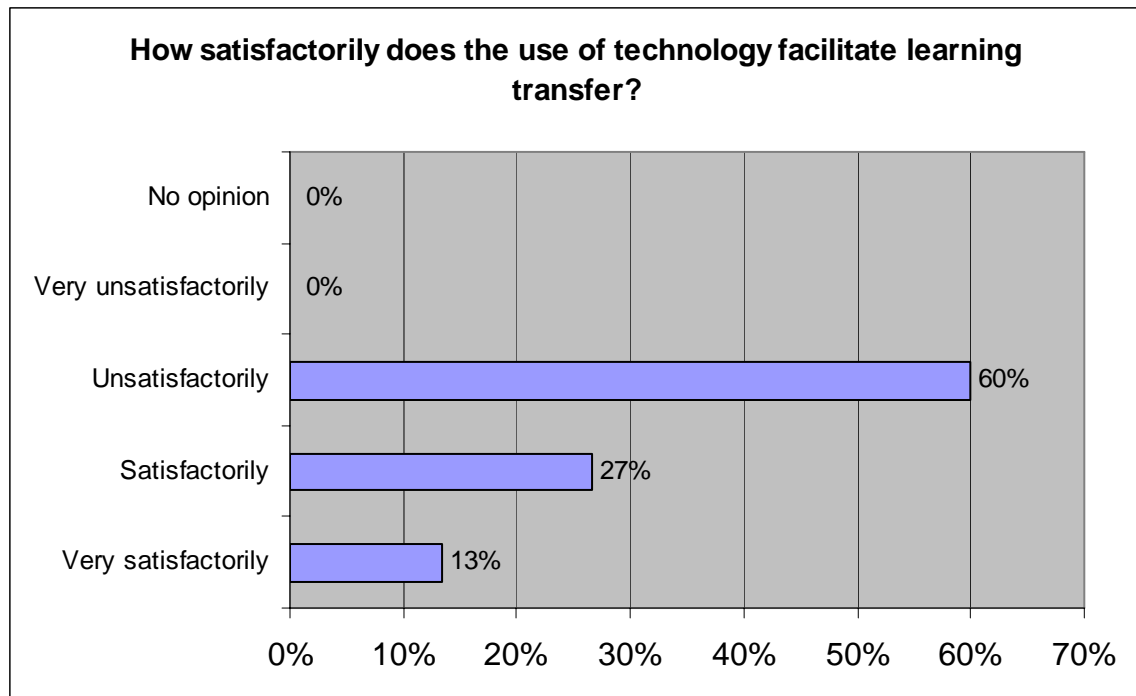
Figure 21: Knowledge sharing methods used



How satisfactorily does the use of technology facilitate learning transfer?

It would appear that the majority of respondents (60%) considered that learning transfer was being unsatisfactorily facilitated by technology. This would tend to reinforce the finding that technology is unsatisfactory in facilitating learning transfer (Figure 19).

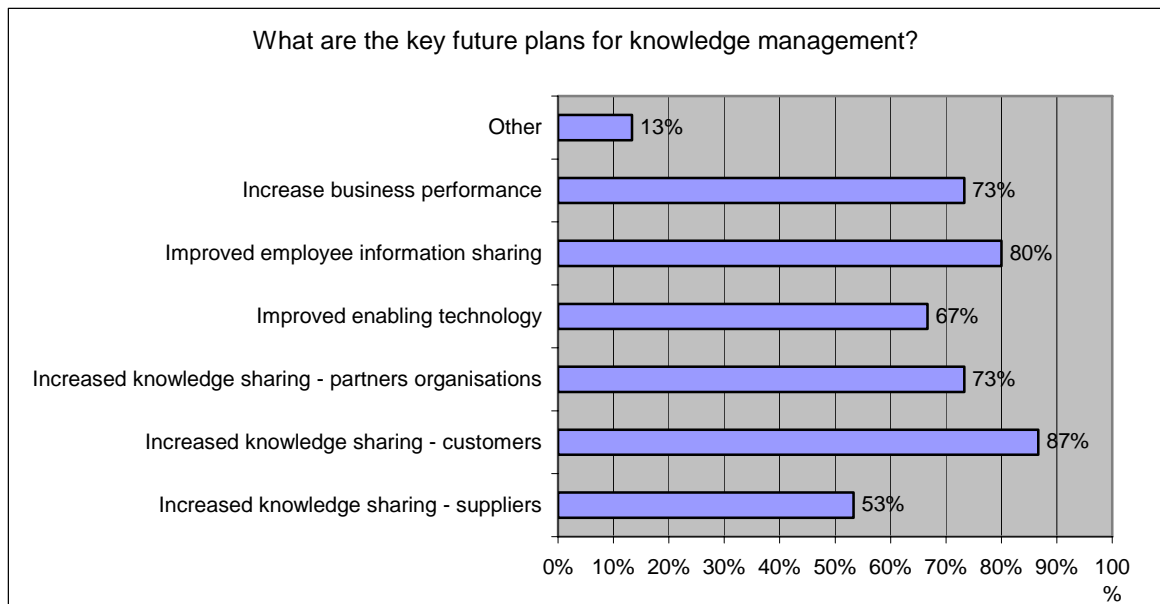
Figure 22: Satisfaction with the use of technology in learning transfer



What are the key future plans for knowledge management?

On the key future plans for knowledge management within local authorities, the general finding that any implicit knowledge management tends to be people orientated is reinforced by 80% of respondents considering that 'improved employee information sharing' would form part of this. However, a marginally higher proportion (87%) indicated that there were plans for increased knowledge sharing with customers. This may be a reflection on the emphasis within the public sector to become more customer focused (3.2.1).

Figure 23: Future plans for knowledge management

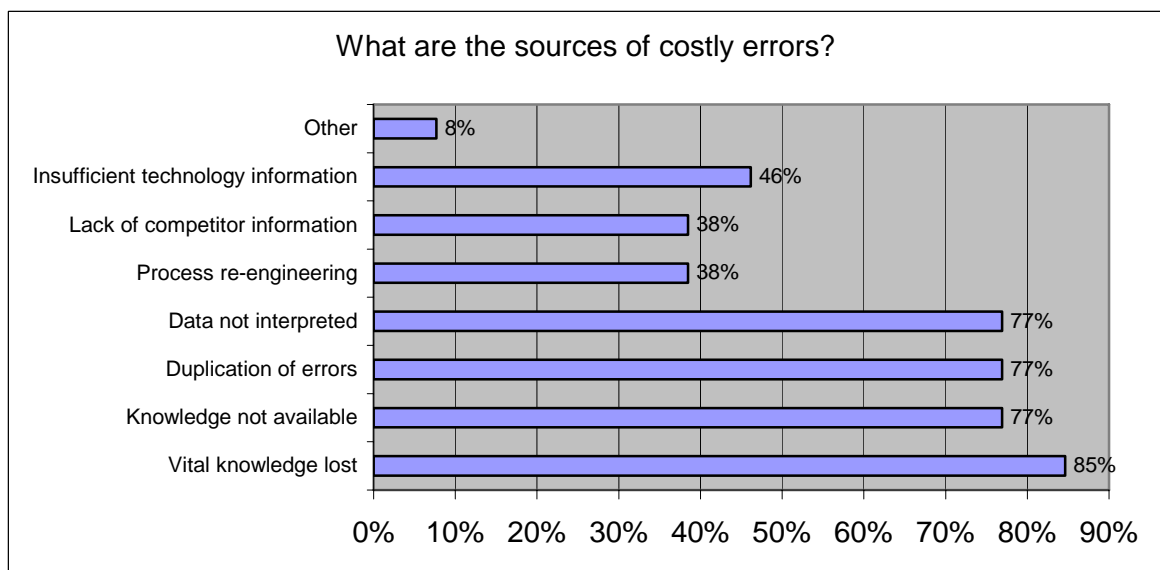


4.2.3.4 Use/benefits of knowledge management

What are the sources of costly errors?

A number of potential improvement areas were identified related to the use and benefits of knowledge management within respondents' organisations. The prime source of costly errors was identified by the majority of respondents (85%) as 'vital knowledge lost'. Of almost equal importance, where knowledge management could have a role, were 'data not interpreted', 'duplication of errors' and 'knowledge not available' (all 77%).

Figure 24: Sources of costly errors

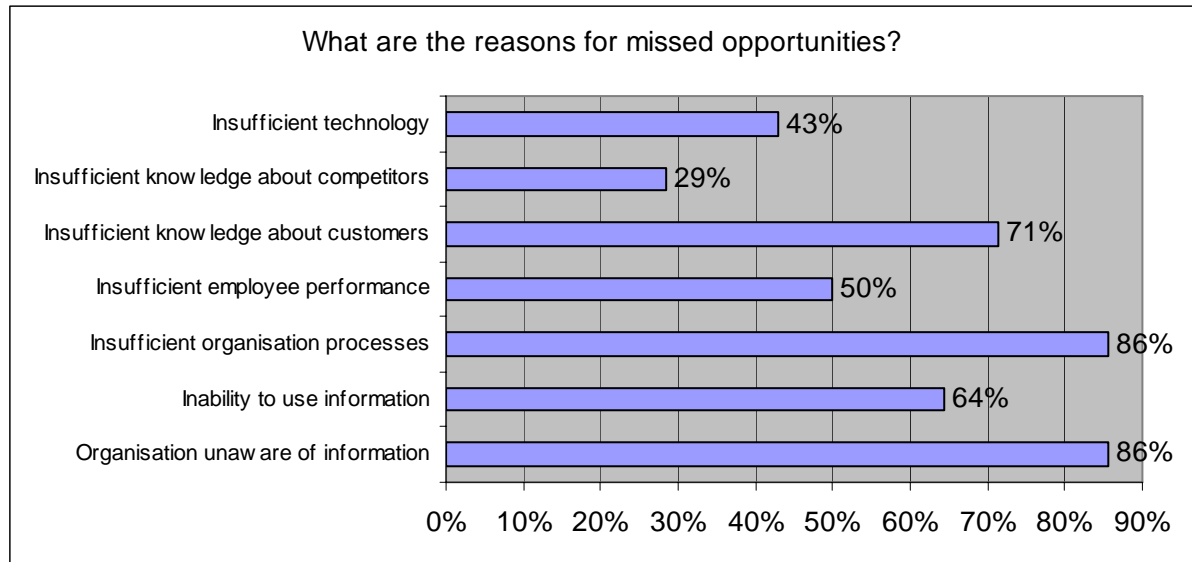


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What are the reasons for missed opportunities?

The reasons for missed opportunities are focused on three areas: 'insufficient organisation processes' (86%), 'organisation unaware of information' (86%) and 'insufficient knowledge about customers' (71%).

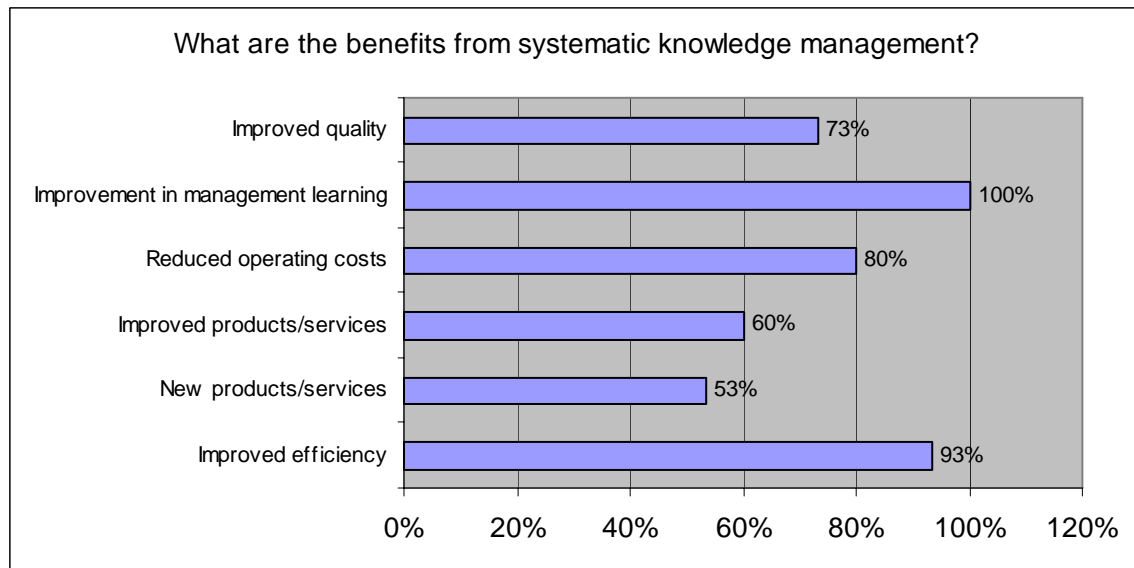
Figure 25: Reasons for missed opportunities



What are the benefits of systematic knowledge management?

The last question in this section on knowledge management awareness within local government explored the perceived benefits of systematic knowledge management. The benefit identified by all respondents was 'improvement in management learning'. There was also an emphasis on increased business efficiency being a key benefit, with 93% of respondents choosing 'improved efficiency'. This finding reflects the focus on efficiency within the best value regime and drives towards shared services provision (3.2.3). One concomitant benefit is 'reduced operating costs', identified by 80% of respondents and closely followed by 'improved quality' (73%).

Figure 26: Benefits from systematic knowledge management



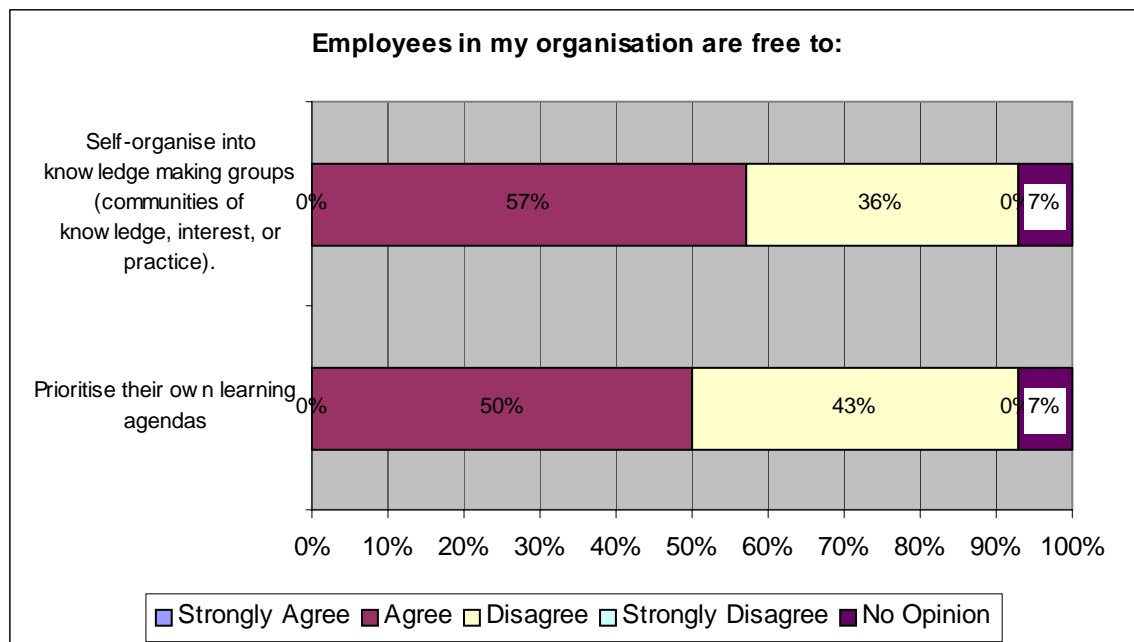
4.2.4 Emergence

The questions in this section sought to identify how knowledge management has emerged within local government, concentrating on what the trends in organisational learning have been, following McElroy's (2000) concept of an embryology of knowledge, what the emergent politics of knowledge within these organisations are, the degree to which connectivity tools have been used to support any communities of practice or communities of interest, how effective current information communication technologies have been in supporting the transfer of knowledge and what have been the influences on the emergence of knowledge management within local authorities.

4.2.4.1 Embryology of knowledge

In terms of employees' ability to prioritise their own learning agendas and self organise into knowledge making groups there was some agreement on both of these issues (50% and 57%) respectively, but perhaps no true consensus either way, given the size of the respondent population.

Figure 27: Formation of knowledge making groups and prioritisation of learning agendas



4.2.4.2 Politics of knowledge

The questions on the politics of knowledge attempted to determine whether useful knowledge, that which was generated and eventually formed part of the organisation’s knowledge base, was considered to emerge from within all parts of the organisation or was limited to just a number of groups of individuals. They also were aimed at seeing whether the existing politics of knowledge was being reinforced through recruitment processes or being given the opportunity to diverge.

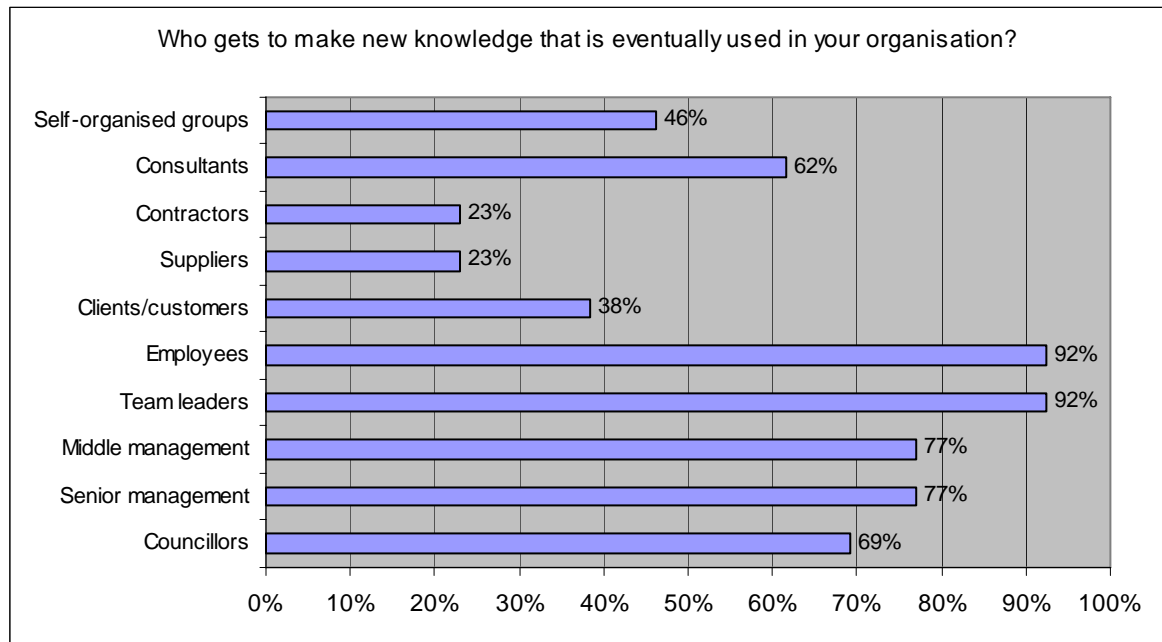
Who gets to make new knowledge that is eventually used in your organisation?

The results indicate that the majority of respondents considered that ‘team leaders’ and ‘employees’ were those who get to make new knowledge that is eventually used in the organisation (both 92%), followed by middle and senior management (77%). Also considered to be important in generating useful knowledge were councillors (69%), which potentially reflects the relationship between council members and local authority officers (3.1.2.2). Of less significance, though still represented, were ‘consultants’ (62%). The new knowledge brought to an organisation from this external source through a contractual relationship will perhaps be different from that formed internally, possibly less tacit in nature.

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New knowledge formation was also considered to emerge from 'self-organised groups' (46%), 'clients/customers' (38%) and 'contractors' and 'suppliers' (23%). That self-organised groups have been identified does tend to suggest some limited evidence for the emergence of organisational learning within these organisations.

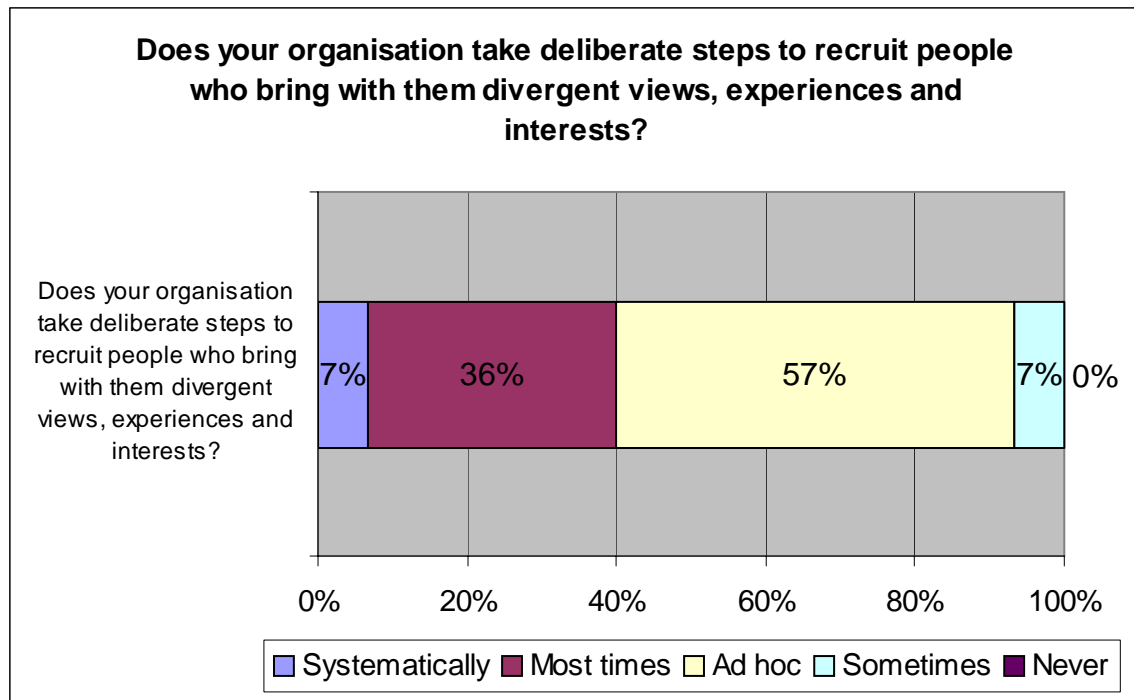
Figure 28: Sources of new organisational knowledge



Does your organisation take deliberate steps to recruit people who bring with them divergent views, experiences and interests?

In order to ensure that an organisation is not merely perpetuating its existing politics of knowledge, recruiting like-minded individuals, this question sought to determine whether there were any active attempts made to recruit people with divergent views, experiences and interests. The response to this question found that the majority of respondents (57%) indicated that this occurred in an ad-hoc way and the bulk of the remainder (36%), considered that it was happening 'most times' within their organisation. This suggests some recognition of the value in bringing differing viewpoints, backgrounds and interests to local authorities.

Figure 29: Recruitment of those with divergent views, experiences and interests



4.2.4.3 Connectivity

This section explores whether existing knowledge groups were being supported by technology tools, which tools were being used within organisations and how effective current information communication technologies (ICTs) were in supporting knowledge transfer. On the first of these points, most respondents (80%) agreed that existing knowledge groups (communities of practice or interest) were currently supported by technology tools.

The three main tools identified by respondents from a list derived from Sinclair (2006b) were e-mail, web or intranet portals and project management software. Of some importance appears to be ‘web-based learning’ tools (67%) and ‘workgroup software’ (50%). However, none of the remaining tools listed appears to be widely used within the responding organisations. ‘Lessons learned databases’, ‘best practice catalogues’, ‘knowledge repositories’ and ‘virtual-learning classrooms’ were all identified by only a third of respondents. Few noted the existence of what might be seen as other specific knowledge management technology tools, ‘expertise locators’ and ‘knowledge maps/directories’, while newer forms of communication technologies, such as ‘wikis’, ‘blogs’ and ‘instant messaging’ appear to be very limited in use.

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On the effectiveness of current ICTs in supporting the transfer of knowledge there was almost an even split between those who considered it to be effective and those who considered it to be ineffective within their organisation and between their organisation and their clients/customers. A broadly similar picture emerged when considering the effectiveness of ICTs in supporting the transfer of knowledge between local authorities or their partner organisations, but with a higher proportion considering it to be ineffective/very ineffective (57%) over those who considered it to be effective/very effective (36%).

Figure 30: Technology tools used

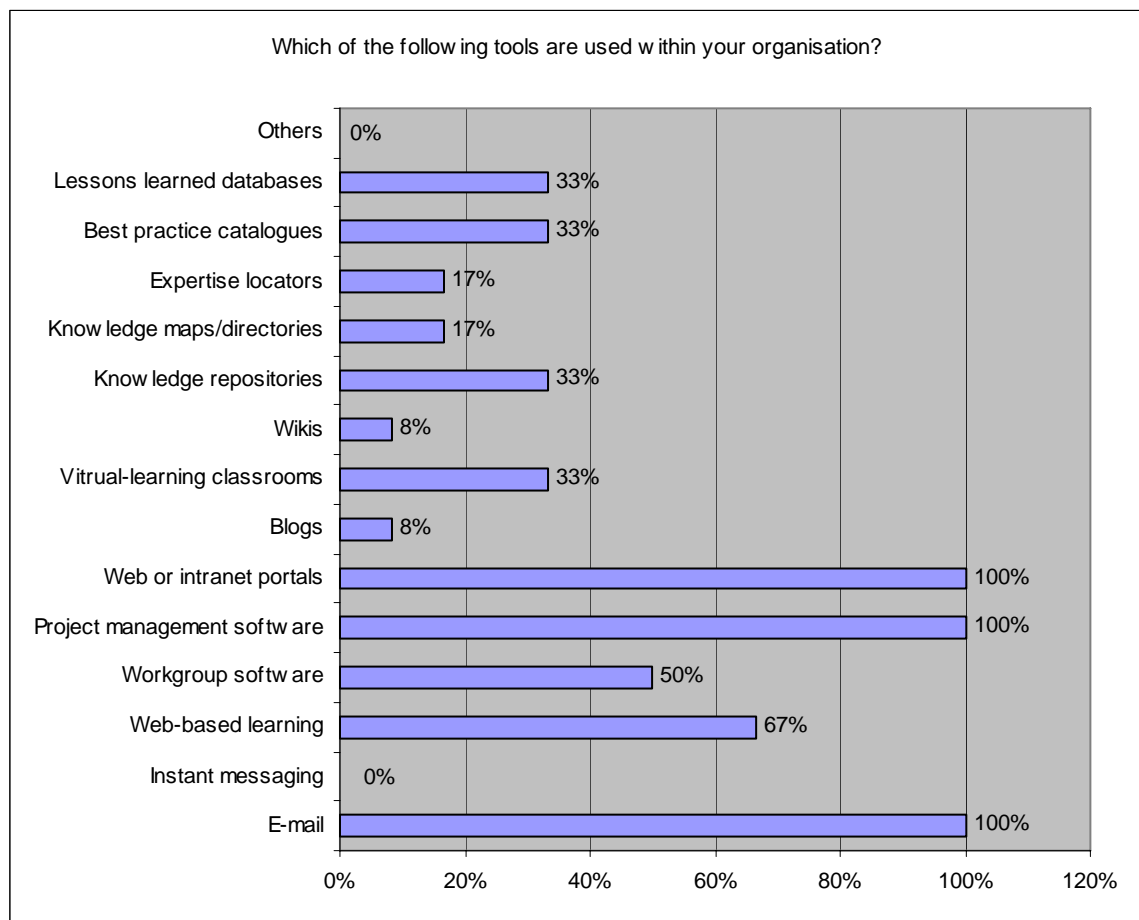
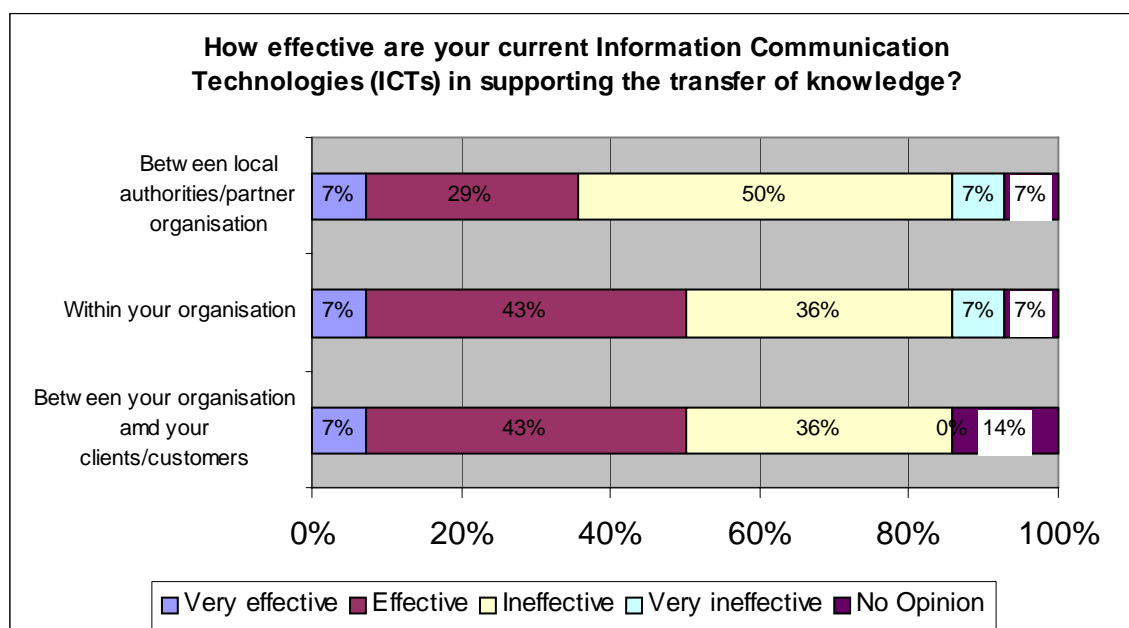


Figure 31: Effectiveness of information communication technologies in supporting the transfer of knowledge



4.2.4.4 Influences

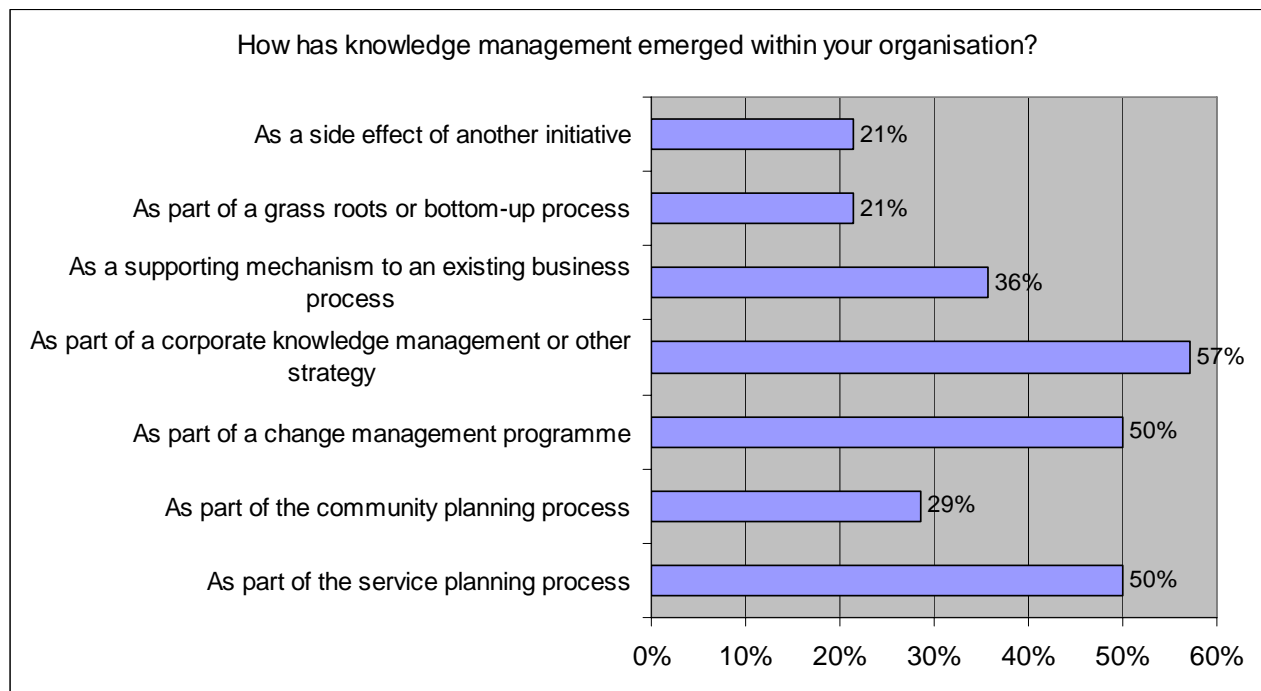
Building on comments made during the preparatory interviews (4.2.1) and on an examination of what some of the current agendas are in local government (3.2), this section attempts to determine how knowledge management has emerged or is emerging within local authorities and what the main influences on this emergence might be, considering factors both external and internal to these organisations.

How has knowledge management emerged within your organisation?

The three main ways in which respondents considered knowledge management to be emerging were, 'as part of a corporate knowledge management or other strategy' (57%), 'as part of a change management programme' (50%) and 'as part of the service planning process' (50%). However, only one Scottish local authority volunteered evidence that knowledge management had been considered by their corporate management team.

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Figure 32: Knowledge management emergence within organisations

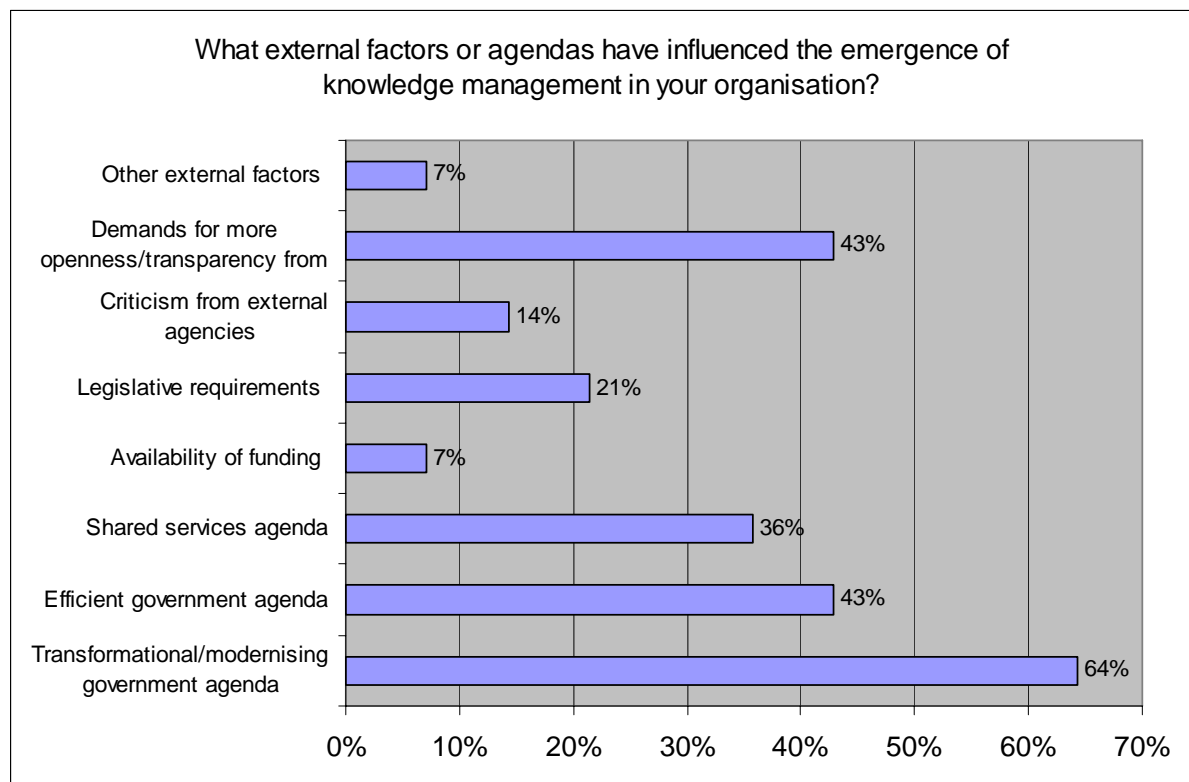


What external factors or agendas have influenced the emergence of knowledge management in your organisation?

The main external influence on the emergence of knowledge management was identified by respondents as 'transformational/modernising government' agenda (64%), followed equally by 'demands for more openness/transparency from stakeholders' and the 'efficient government agenda' (43%) and, the 'shared services agenda' (36%). While not a significant factor for most respondents, 'criticism from external agencies' (14%), such as Audit Scotland, was certainly an important factor to those authorities where external criticism had been levelled against them (3.2.4.2), as revealed in free text additions to respondents' replies. This only confirms to a limited extent the finding of Morton and Lacey (2006) that KM had emerged in local government primarily in response to the external factor of criticism from the Audit Commission (2.1.2).

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Figure 33: External factors influencing knowledge management emergence



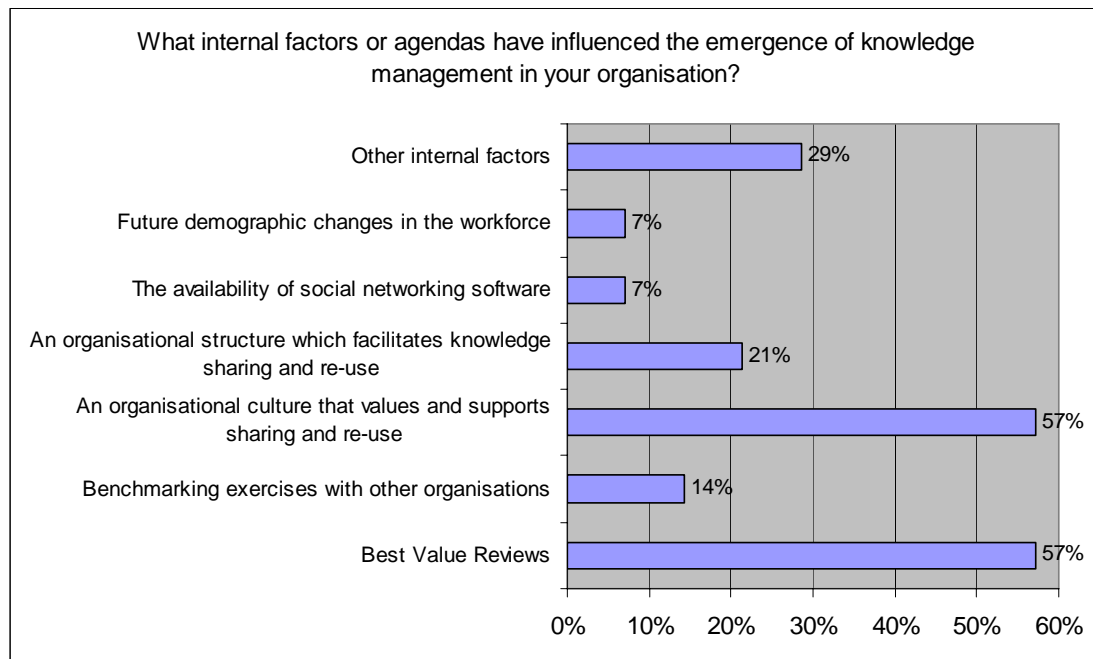
What internal factors or agendas have influenced the emergence of knowledge management in your organisation?

Turning to internal influences on the emergence of knowledge management within local government, the main factors identified by respondents were 'an organisational culture that values and supports [knowledge] sharing and reuse' and 'best value reviews' (both 57%). The second of these factors, the approach taken to performance management, stresses continuous improvement (3.2.5), while the first is interesting in so much that in the initial interviews with a cross-section of local authority managers, a number of interviewees suggested that despite the steady march of external initiatives and internal programmes aimed at improving the efficiency and effectiveness of local government, there was still a tendency for silos to exist that created barriers to knowledge sharing and information reuse within local authorities. This finding may suggest that organisational cultures are slowly changing. However, only 21% indicated that there was 'an organisational structure which facilitates knowledge sharing and reuse', so perhaps while the culture may be improving the structures are not being altered to support them yet.

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The workforce in developed countries such as the UK is aging, with the potential of knowledge being lost from organisations as particular cohorts of the workforce retire at or around the same time (Turner and Williams, 2005) placing requirements on organisations for succession planning. This however does not as yet appear to be supported by the responses, with only 7% considering 'future demographic changes in the workforce' a factor influencing the emergence of knowledge management.

Figure 34: Internal factors influencing knowledge management emergence



4.2.5 Progress

In exploring whether progress has been made within organisations, this section asked respondents to suggest which knowledge management maturity level their organisation was at and what the main barriers to successful knowledge management were within their organisation.

4.2.5.1 Knowledge management maturity

Which of the following knowledge management maturity levels best describes your organisation?

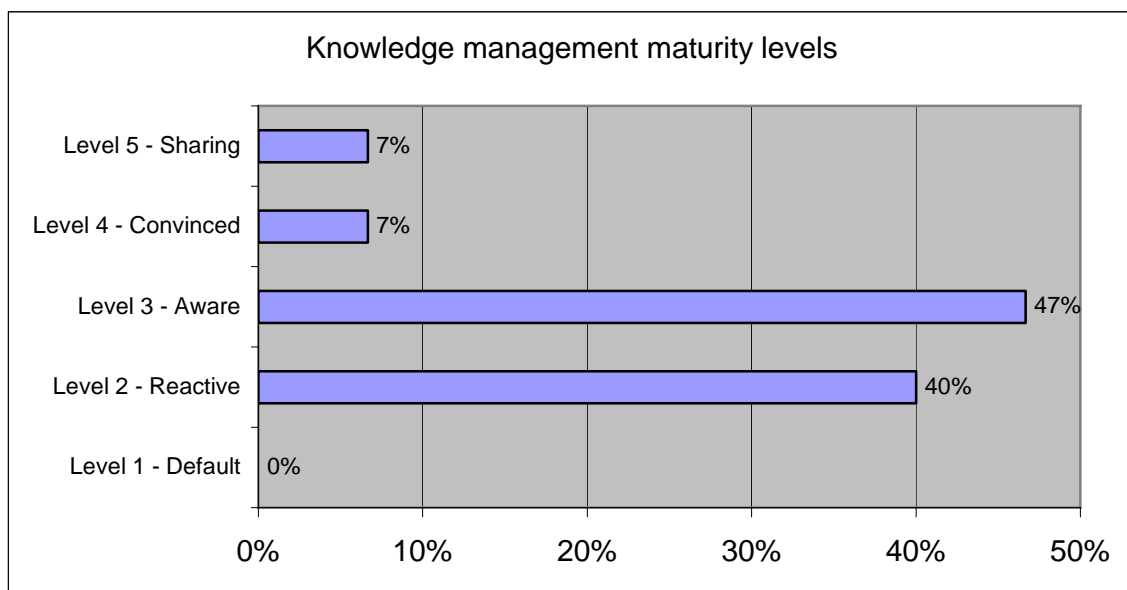
In the KM maturity model selected for use (4.1.3) which attempts to identify how systematically various aspects of knowledge management are integrated into an organisation, most respondents considered that their organisation was either at the stage of being 'reactive' (40%) or 'aware' (47%). So, all respondents considered that

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their organisation had progressed beyond a dependency on individual skills and abilities, with organisational knowledge fragmented into isolated pockets, much like the silos discussed earlier, (the 'default' level). However, for most they considered their organisation to be at a stage where knowledge was shared on purely a need basis, with a sharing of routine and procedural knowledge (the 'reactive' level) or where systems were in place to propagate/disseminate knowledge, that there was a recognition by managers of the role and encouragement of knowledge sharing and measurement of knowledge management (the 'aware' level).

The descriptions of these levels may not exactly accord perfectly with the position of individual organisations, but are perhaps a general guide as to what approximate level they are at. That there are measurement systems in place, for instance, which are specifically used to report KM metrics may however be called into question by the results of the section on Measurement (4.2.6). Nevertheless, this broad self-assessment by respondents provides an indication of where they consider their organisations to be in terms of knowledge management maturity.

Figure 35: Knowledge management maturity levels in local authorities



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4.2.5.2 Barriers encountered

What are the main barriers to successful knowledge management in your organisation?

There are potentially a large number of barriers to making progress in knowledge management within organisations. Riege (2005), for instance, identified 36 knowledge sharing barriers, grouped into three categories; individual, organisational and technology. Respondents in the survey were asked to provide what they thought were the main barriers to successful knowledge management in their organisations, under each of these headings (Figure 35).

Individual barriers

The main individual barrier highlighted by a number of respondents was time, or as one put it “time to reflect and share learning”. Other individual barriers included a perceived inability of some individuals to see the benefits of sharing knowledge and the problem of staff turnover, specifically amongst senior management who had been championing knowledge management within their organisation.

Organisational barriers

There was not as clear a single organisational barrier identified by respondents, though aspects of culture and cultural barriers were referred to. One respondent, for instance, stated, “Corporate culture is weak. Departmental and professional is strong.” Others pointed to the absence of a guiding policy within their organisation on knowledge management practice and a lack of encouragement to share knowledge systematically. The difficulty in obtaining senior management buy-in “against core service priorities and government targets” perhaps also refers to what one of the initial interviewees mentioned when they highlighted the issue of initiative fatigue within local government (Appendix 1, 3.0).

Technology barriers

There was a range of technology barriers to successful knowledge management identified by respondents from having limited access to information technology to a

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reluctance amongst employees to use technology tools. Others pointed to the lack of an integrated system to facilitate knowledge capture, dissemination and exchange.

Figure 36: Knowledge management barriers

Individual barriers
<ul style="list-style-type: none">• Turnover of senior management in last two years has meant that senior staff who were championing KM have now left• Available time• Not being open and trusting in communication with others• Don't know, but awareness and time• People keen to keep the knowledge to themselves• Time to reflect and share learning• Inability of individual users to see the benefits of sharing knowledge, they may see this as a risk rather than a benefit
Organisational barriers
<ul style="list-style-type: none">• Difficult to obtain senior management buy-in against core service priorities and government targets• Size of organisation• Absence of policy on knowledge management practice.• Inertia• Corporate culture is weak. Department and professional is strong• Employees are not encouraged to share knowledge systematically• Some cultural barriers perhaps• Lack of cohesive drive and prioritisation to make knowledge more widely available
Technology barriers
<ul style="list-style-type: none">• Staff are scared of using technology and more support is needed to overcome this reluctance to use the tools• Many systems in use• Limited accessibility to IT facilities• Sourcing a cost effective performance management IT system that will allow us to control qualitative and quantitative information• User interface to suit everyone• No integrated system in place to deal with the capture, dissemination and share of knowledge• Some systems more mature than others• Inappropriate or non-existent systems in place to facilitate knowledge exchange and availability

4.2.6 Measurement

This section on measurement asked whether there were any systems in place to measure the impact of knowledge management within local government and, if there were, which measurement system it was based on (Appendix 2, Section 4). It further attempted to determine whether the measures used were those which supported

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organisational objectives, as Sinclair (2006b) suggests – that to be of any value there should be a close alignment between these. Finally, it asked whether any form of knowledge management audit had been undertaken, frequently the starting point by which any baseline for measurement is achieved (Allen, 2005).

The responses to these questions reveal that there is little evidence for the measurement of knowledge management within local government. No respondents indicated that there was a system in place to measure its impact, while some noted the use of measurement systems from a performance management perspective these were not being identified in the context of monitoring or reporting on knowledge management activity.

Only two organisations indicated that they had undertaken a knowledge management audit, both were English local authorities.

4.3 Knowledge management perspectives within a Scottish local authority

4.3.1 Case study method

The original intention (2.1) was to use multiple case studies to be able to generalise beyond a single case and in order to provide depth as well as breadth to the research gained from survey analysis. These were to be identified through the responses to the survey of local authorities. However, given that there were insufficient Scottish local authorities that wished to nominate themselves for further study, a single case will be used for illustrative purposes. While it may not be always be possible to generalise from a single case, Flyvberg (2006) in an examination of five misunderstandings about case study research concludes that,

‘One can often generalize on the basis of a single case, and the case study may be central to scientific development via generalization as supplement or alternative to other methods. But formal generalization is overvalued as a source of scientific development, whereas “the force of example” is underestimated.’ (p10)

The approach to the case study was to identify and engage managers from a variety of backgrounds (information technology, policy development, information and records

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management, research and intelligence, human resources and customer services development) in one Scottish local authority who were involved in different capacities in some or many of the local government agendas outlined in section 3.2. Semi-structured interviews were used to explore each of the four strands (1.3), refining the approach used in the preparatory interviews (4.2.1). This approach permitted discussions with these different actors, allowing them to express their opinions and views on the general and specific questions put to them. The semi-structured interview takes the form of a directed conversation (Burgess, 1984; Bull, 2003). The question areas covered the four strands of emergence, awareness, progress and measurement. Each interviewee was provided with a copy of the questions prior to the interview as a framework for discussion, with the freedom to pursue and explore other issues as they arose during the interview. The questions used were derived from those in the preparatory interviews, the survey and the survey results. The interviews were conducted at the offices of each manager and a general overview of the study was provided verbally to them at the start of each interview.

The council selected for case study analysis was one of the responding organisations in the survey. South Lanarkshire Council was chosen not because the results indicated a particular level of knowledge management maturity, but because of the relative ease with which case study interviews could be established. Interviews were conducted during April 2007.

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Figure 37: Close involvement in local authority agendas by case study interviewees

Job title of interviewee	Function	Transformational/modernising government (3.2.1)	Efficient government (3.2.2)	Shared services (3.2.3)	Community planning (3.2.4)	Performance management (3.2.5)	Information compliance (3.2.6)	Other
Business Systems Manager	IT manager for one Resource (department)	Yes	Yes			Yes		
Policy Advisor	Community planning partnership coordination				Yes			
Administration Advisor	Information management, principal archivist	Yes					Yes	
Research Manager	Research and intelligence	Yes	Yes	Yes	Yes			Research and intelligence
Employee Development and Diversity Manager	Human resources, consultation	Yes		Yes		Yes		
Customer Services Development Manager	Development/implementation of customer services; one-stop-shops (QandA network), and call centre (customer services centre).	Yes		Yes		Yes		
Modernising Government Manager	IT manager (Customer Relationship Management, intranet, internet, integration, infrastructure)	Yes	Yes	Yes				

4.3.2 Background on the local authority

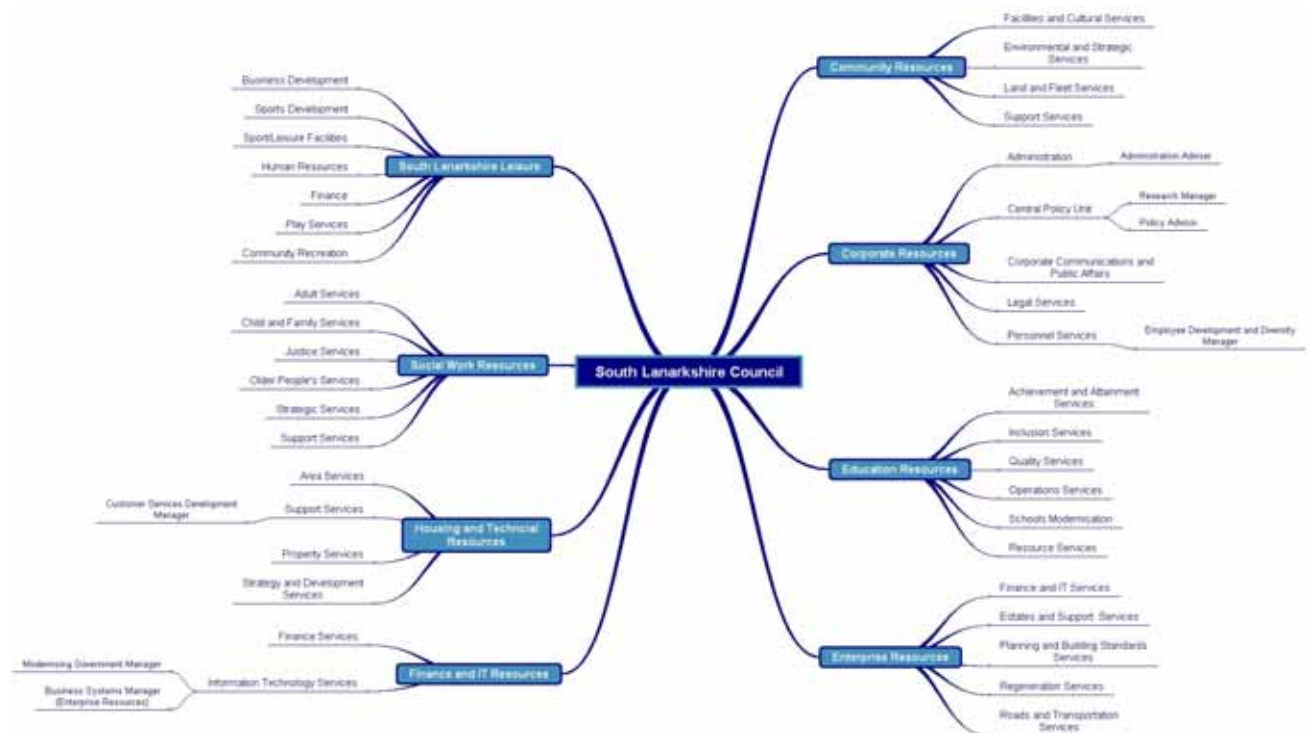
South Lanarkshire Council has its headquarters in Hamilton in west central Scotland. It has over 16,595 employees (full time equivalent) and an annual budget of £569 million. The council area borders on the south east of the city of Glasgow, covers much of former county of Lanarkshire and includes both a mixture of predominately urban areas in its north and west and rural and upland areas to the south and east, extending to the Southern Uplands. The fifth largest of Scotland's council areas, it has a population of over 305,000 people living within an estimated area of 700 square miles (South Lanarkshire Council, 2007).

The council has undergone a series of internal reorganisations and restructuring exercises following its formation during local government reorganisation in April 1996 (3.1.1.1). The last major restructuring came in to effect in October 1997 when the current departmental or 'Resource' structure was formed (Figure 38).

The services it delivers (3.1.1.2) to people within its boundaries are guided at the strategic level by its four-year plan, FourCast, supported by the community plan (3.2.4), Stronger Together, and a range of topic based plans, such as those for land use (South Lanarkshire Local Plan), transportation (South Lanarkshire Local Transport Strategy), learning (Community Learning and Development Strategy) and sustainability (Sustainable Development Strategy). These priorities, which reflect national policy areas, have had the opportunity of undergoing various forms of public consultation through a process of policy development (Riege and Lindsay, 2006) and are ultimately ratified by the council at committee. They are in turn translated through the service planning process into operational plans for each Resource.

As with other Scottish councils, South Lanarkshire Council faces a similar range of competing local government agendas and this case study draws on the perspectives of seven managers (Appendix 6) involved in one or a number of the those agendas (3.2) that may be influencing knowledge management within the sector.

Figure 38: South Lanarkshire Council – organisational structure/location of interviewees



4.3.3 Awareness

What do you understand by the term knowledge management (KM)?

Most interviewees were familiar with the term knowledge management and were able to explain what their understanding of the term is. Many considered that it involved the sharing of information and good practice or the harvesting of individual tacit knowledge, while others mentioned information storage and retrieval as important elements. Some of the interviewees pointed out that sharing knowledge and information raised issues of quality assurance and that the link between having a sharing culture and tangible outcomes may not be evident to many in the organisation yet.

What is the current level of awareness of knowledge management within the council?

The majority of interviewees considered that the current level of awareness of knowledge management within the council was overall, low. Pockets of high levels of awareness were however noted in certain sections, such as the Modernising Government team, involved in the development and management of technology tools, within corporate personnel, involved in encouraging the continuous

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professional development of employees or amongst those involved in business process re-engineering, process mapping and documentation. One interviewee speculated that this was perhaps because people in the organisation did not yet recognise the term, while another felt that time spent with partner organisations, focusing on specific projects/programmes, acted as a greater stimulus to sharing knowledge and information.

At what level and where has it found expression?

There was a mixed response to this question. As there is currently no holistic approach to KM within the organisation, some considered that it had not found expression explicitly or if it had, KM principles were employed without being stated. Others however suggested that if it has found expression it may be within the areas of:

- Customer services and improvement
- External partnerships/collaboration with other councils
- Modernising government
- Transformation projects (such as business process re-engineering exercises)
- Community planning partnerships (such as an approach to shared assessments within Social Work and the operation of a problem solving unit in the community safety partnership) (Appendix 6, 2.2)
- Validation in the form of various external awards received

Who needs to know about KM in the council?

Many of the interviewees considered that all employees should know about KM, though with some caveats. One suggested that while there should be general awareness of KM, it should be deconstructed for different audiences in order that different levels within the organisation could get the appropriate introduction to it. Another pointed out that while employees should be encouraged to use KM tools, they do not necessarily need to know the theory behind it. An alternative view however was that if KM was allocated as a function to one department then it might be perceived that KM was 'done' by that department and other parts of the organisation may not concern themselves with it.

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Can there be a one-size-fits-all approach to KM or has it to be defined to meet or suit individual organisational (or departmental) needs?

A one-size-fits-all approach to KM was not considered feasible by most interviewees, who suggested that any approach would need to be tailored to individual departmental needs and cultures. There should, it was noted, be a lead from the centre of the organisation at a strategic level, forming the high level aspirations for KM that recognises good practice. Any such approach however was considered to need a commitment articulated by the corporate management team. Other views noted were that any approach would have to be designed to recognise external relationships and the needs of partner organisations as well. More pessimistically, another view was that there is little scope for KM in local authorities due to budgetary constraints and the influence on structures and systems from external bodies, such as the Scottish Executive or HM Inspectorate of Education.

Are there any parts of the council with strong sharing cultures?

A number of interviewees indicated that there are some parts of the council with strong sharing cultures, but that a few organisational silos still exist. These may persist for a number of potential reasons, partly due to demands for non-interference in technical areas, partly as a result of professional boundaries and demarcations, partly due to legal barriers over the release of certain types of information and partly as a result of the legacy systems inherited following the last reorganisation of local government.

There was however a number of examples provided on places where there are strong sharing cultures:

- Social Work Resources and Housing and Technical Resources
- IT project teams
- Equal opportunities working group
- Personnel managers group
- Leadership development group
- Community planning officers network

Where is knowledge systematically captured?

Some considered that knowledge is systematically captured at all levels within the organisation, though one felt this may be mainly at middle-management/team leader level and from lessons learned through projects. It was also noted to be captured

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through formal methods, including best value service reviews (3.2.5) and benchmarking exercises with other councils, as well as through formal networks such as the equal opportunities network, heads of personnel and a writing group used to support the writing of Charter Mark (Herdan, 2006) applications.

Two issues were however raised, those of succession planning and the potential loss of intellectual capital. One interviewee noted that a very specific knowledge base, built up over decades of experience, was threatened by the retirement of key staff in the council archive unit. Prior to this occurring they were being encouraged to make some of this tacit knowledge explicit by documenting in detail the locations of archive material not captured on their database system, to prevent the loss of this know-where to the organisation. In a related observation, another interviewee considered that the council could face a potential decline in its policy development capacity. It was suggested that as employees were promoted, retired or left the organisation that the knowledge base may be slowly eroding in this area.

How is tacit knowledge captured?

Various forms of tacit knowledge capture were identified by interviewees, ranging from informal to formal. Informal discussions were a dominant form of capture but all the example forms were referred to (inductions, appraisals, interviews, informal discussion, formal discussion and exit interviews). Doubts though were expressed by two interviewees over how effective exit interviews were in capturing tacit knowledge as they were not apparently designed with this in mind.

Other forms of tacit knowledge capture mentioned were: internal secondments, team meetings, mentoring, work shadowing, employee suggestion schemes, feedback from training courses through learning level evaluations and post implementation reviews, where formal project management is applied.

How is knowledge sharing and re-use facilitated?

Knowledge sharing and re-use appears to be facilitated by all of the example methods (face-to-face, workshops, forums, multimedia presentations, divergent or convergent databases, mentoring or coaching, lessons learned from project groups, creativity techniques, discussion forums, training needs analysis and learning processes), though many interviewees considered it was most effectively facilitated by face-to-face meetings, workshops and forums. Mentoring and coaching were noted in one Resource area, where a buddy system for new staff exists, though

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overall it does not appear to be used extensively. Lessons learned from projects was noted by a number of interviewees, although one felt this could be better used and as such was exploring the use of action learning sets (Lawson et al, 1997) with Education Resources. Indeed, in a response to a different question it was noted that it was frequently those stages at the end of a project that might be ignored, such as a after action review, and it might be advisable for this to become a key objective for projects. Another interviewee considered that there could be better use made of technology tools to support knowledge sharing and re-use, potentially developing discussion forums, for example, on the corporate intranet.

4.3.4 Emergence

How is KM emerging within this council? What factors have influenced the emergence of KM in this council?

Most interviewees considered that KM was not yet emerging within the council, though it was perhaps recognised as a term by managers. The factors considered to influence its emergence were primarily external, coming for instance from the Improvement Service and the Scottish Executive, and there was a suggestion that its emergence could be more middle-out than top-down.

What managerial support is there for KM?

This is supported by the view that while there may be little formal managerial support for KM there could be support from parts of middle-management depending on individual viewpoints. One observation though was that support for it might conceivably be possible through the PDR (Professional Development Review) process, which attempts to tie individual learning requirements with the higher level objectives of the organisation as expressed in the council plan.

Are employees in the council free to:

- 1. Prioritise their own learning agendas?**
- 2. Self-organise into knowledge making groups (communities of knowledge, interest or practice)?**

There was mixed response to whether employees are free to prioritise their own learning agendas and self-organise into knowledge making groups. While most

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agreed that employees are free to prioritise their own learning agendas, as corporately both professional and personal development is encouraged, some felt that this was dependant on the level of the employee within the organisation, which department they were in and the balance that needed to be struck between personal and organisational learning objectives.

While many considered that employees were free to self-organise into knowledge making groups, some felt that this was relatively limited or not necessarily encouraged and may be predominant in some areas more than others. One of the areas where it does appear to occur is within the community planning partnership.

Who gets to make new knowledge that is eventually used in the council?

Those identified as getting to make new knowledge that is eventually used in the council were, specifically, senior councillors, senior management and middle management, and team leaders within the community planning partnership. Notably, consultants were also mentioned by three interviewees as influencing the creation of new knowledge that was eventually circulated within the organisation. All those listed as options were thought to influence the creation of new knowledge at different points in time, including:

- clients/customers, through consultation exercises
- contractors/suppliers, with this being transferred through team leaders and middle management
- new employees, with a trend towards the recruitment of specialists.

One interviewee reiterated the importance of external factors in influencing the creation of new knowledge. It was suggested that new knowledge is frequently made when councils are given new duties or powers through statute, or otherwise, providing the opportunity for managers who are tasked with implementing new policies to develop and learn how to produce an appropriate service delivery model.

Which tools are currently in use for knowledge sharing and re-use?

The tools currently in use for knowledge sharing and re-use mentioned included:

Information technology based: email, web-based learning, project management software, web or intranet portals, best practice catalogues and shared folders. None

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of the interviewees identified blogs, virtual learning classrooms, wikis, knowledge repositories, knowledge maps/directories, expertise locators or lessons learned databases as tools currently in use.

People/learning based: Problem-solving approaches included exit interviews and to a lesser extent mind mapping techniques, while organisational learning approaches included after action reviews (part of the standard framework of delivery of IT projects, for instance, incorporates a post implementation review). Other approaches, from organisational design, included coaching, mentoring and peer-review. One interviewee felt that the evaluation of lessons learned from after action reviews was weak, while another suggested that coaching and mentoring could be used more often.

Of less importance appeared to be cultural approaches to learning, though the development of communities of practice was noted in relation to the professional bodies and the community planning partnership.

There was a mixed response to how satisfactorily the use of technology tools facilitated learning transfer, from problematic to very satisfactorily. However, some noted that it was only satisfactorily achieved when related to specific sets of information and not when applied to 'soft' information. Indeed, it was also suggested to be very dependent on personal perspective and the learning style of the individual.

Many of the interviewees considered that people based approaches to facilitating learning transfer were more satisfactory than those facilitated by technology, though a few considered the reverse to be the case.

Is knowledge management linked to employee advancement? (Optional question)

Only one interviewee suggested that knowledge management might be linked with employee advancement, though only implicitly through the personal development review process.

Is there a KM strategy or does it form part of another strategic approach? (Optional question)

All interviewees agreed that there was no knowledge management strategy within the organisation; however it was pointed out that some of its principles were probably already encapsulated within pockets of good practice. The closest strategy is a corporate information management strategy, currently being introduced. In its early versions this made explicit references to knowledge as an organisational asset. However, later versions restricted the strategy more to addressing issues of information compliance and standards, focusing on policies dealing with information, records management and enquiries under the Freedom of Information (Scotland) Act (3.2.6).

4.3.5 Progress

Is it important for this council to understand at what level of KM maturity it is at? Why?

Most interviewees considered that it was important to understand at what level of KM maturity the council was, both strategically and also as a potential prompt to further action.

What have been the main barriers to successful KM in this council?

The main barriers to successful KM in the council were identified as being both external and internal to the organisation. One interviewee suggested that there may be a lack of central government focus and funding to support it, while internal barriers include both cultural and political factors. Some for instance again referred to the existence of 'silos', within some operational areas perhaps more focused on service delivery and not on future pressures or drivers of change. Other factors mentioned included a lack of awareness and a lack of an obvious lead as being a potential barrier. Overall, the barriers appear to be more organisational and people based than overtly technological, despite one identifying an information technology constraint in the delivery of just-in-time training.

4.3.6 Measurement

What measurement systems are currently used to monitor and report improvements in organisational efficiency?

There is a range of ways in which improvements in organisational efficiency are currently measured, some using measures or indicators and others which may be more monitoring rather than actual measurement. The consensus was that there is a range of performance indicators, including key performance indicators (KPIs), statutory performance indicators (SPIs) and local indicators, budgetary targets, improvement plans developed from best value service reviews, customer satisfaction survey results and employee performance, revealed through the personal development review process.

Should this council attempt to measure the impact of KM? Why?

On considering whether the council should attempt to measure the impact of KM, some noted that there would need to be a KM baseline/maturity level assessment established before it could undertake any measurement. This however relates to what is understood as KM by the organisation and whether it wants to measure the impact of any 'solutions' introduced. Some suggested that rather than measuring the impact of a system there should be a focus on how existing learning opportunities are used (such as exit interviews, mentoring and lessons learned through after action reviews) and the extent to which these support knowledge transfer and organisational learning.

What measurement systems might be/are used to monitor/report on it?

There was some support for the view that the measurement of KM should be tied to existing business processes and use currently collected indicators as much as possible. In this context that would be the current key performance indicators and those other quality/performance management tools such as Charter Mark and Investors in People. One potential measurement system that might be used to monitor KM was identified as the Balanced Scorecard (Kaplan and Norton, 1992), while it was noted that a new performance management information system was currently being tested.

5.0 Discussion

This section attempts to draw together the findings from the survey of knowledge management in local authorities and the case study focusing on one local authority using the four strands or themes originally outlined as awareness, emergence, progress and measurement.

5.1 Awareness

The awareness theme considers perceptions of knowledge within organisations and of knowledge management, using McAdam and Reid's (2000) modified version of Demarest's (1997) knowledge management model. This concentrates on the construction of knowledge (and knowledge management), knowledge embodiment, knowledge dissemination and the use or benefits of knowledge management.

5.1.1 Construction/definition of knowledge and KM

In general, the results of the survey indicate that those in local government may consider knowledge to be more socially than technically or scientifically constructed as respondents considered the terms 'organisational learning', 'core competence', 'organisational memory' and 'organisational knowledge' to denote knowledge within organisations. This accords broadly with the findings of McAdam and Reid (2000), supporting a social constructionist perspective. The survey also found that knowledge within organisations appears to have a variety of elements rather than being limited to a single dimension, again reflecting the findings of McAdam and Reid in their comparative study of public and private sectors.

In considering what constitutes awareness of knowledge management amongst those involved in a number of the current local government reform agendas (3.2), while there is familiarity with the term, the consensus amongst interviewees was that current levels of awareness throughout one local authority may be low, with pockets of awareness in certain sections/areas (4.3.3). This may reflect a definitional issue (Fahey and Prusak, 1998), with the term knowledge management not explicit enough for many organisations and suggesting the need for alternatives such as 'knowledge mobilisation' (Sinclair, 2006b, p.31) when promoting or discussing it.

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So, while there is a recognition that knowledge in organisations is more socially constructed and is multi-faceted, there may not be a wide appreciation (within one local authority) of what KM is. This is not to say that the tools, technology and techniques which accompany it were absent. Indeed, interviewees suggested that while not necessarily explicit, KM principles were perhaps being employed within certain areas without being stated.

5.1.2 Embodiment of knowledge

The survey results indicated that knowledge was considered to be systematically captured most prominently at team leader level and then at both middle and senior management levels. This is the reverse of the situation found by McAdam and Ried (2000). It may however reflect the crucial position of team leaders, potentially acting as knowledge gatekeepers (Cross and Prusak, 2002) between employees and management. The main method by which knowledge is being systematically captured was 'lessons learned through projects'. Both these findings are supported by the case study, though interviewees also suggested that knowledge capture occurred through such formal methods as best value reviews (3.2.5) and benchmarking as well as through formal networks.

On how tacit knowledge was captured, both the survey and case study supported McAdam and Reid's finding that this was primarily through informal discussion, or socialisation in the SECI model (Nonaka and Takeuchi, 1995). The survey also found that formal discussions were nearly as significant, again reflecting the findings of McAdam and Reid when they considered the public sector. One of the least significant forms of tacit knowledge capture was found to be exit interviews. Some interviewees in the case study also expressed doubts over how effective these were in capturing tacit knowledge, despite their potential (Kransdorff, 1995).

Findings from the survey suggest that knowledge embodiment is relatively well developed given that high proportions of respondents agreed that 'the organisation facilitates knowledge sharing' and that 'dialogue is encouraged and facilitated', broadly mirroring McAdam and Reid's findings on the second of these statements. However, the survey also found that generally technology is not considered to be a satisfactory way of facilitating learning transfer and dialogue within organisations. Despite this 'technology [was] seen as a key enabler' in driving the technology, which

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tends to conflict with findings that people and staff importance are key to public sector success in knowledge management (Mueller and Dyerson, 1999).

Knowledge management does not yet appear to be linked to employee advancement, reflecting McAdam and Reid's findings. The case study found that it was noted that it may do so implicitly through a process of continuing professional development for employees (Marchington and Wilkinson, 2005).

5.1.3 Dissemination of knowledge

In facilitating knowledge dissemination, knowledge needs to be shared within organisations. The survey and the case study again concurred with the findings of McAdam and Reid as most considered that knowledge sharing and re-use was being facilitated by face-to-face meetings, workshops and forums – all people orientated methods. The survey though found that more refined methods of knowledge sharing were not very evident, reflecting the current overall levels of KM maturity (4.2.3.4). A popular method of knowledge sharing facilitation noted in the survey and by a number of interviewees in the case study was 'lessons learned from project groups', as was also evident for knowledge capture (5.1.2). However, there were some who questioned whether these could be better utilised or even more formally integrated into project management. The drivers behind improved knowledge sharing and dissemination for local government are evident in many of the reform agendas (3.2), though in some there is an emphasis on technology orientated methods and perhaps less emphasis on the people orientated methods identified here. Indeed, the survey found that the majority of respondents considered that learning transfer was being unsatisfactorily facilitated by technology (4.2.3.2). On the key future plans within local authorities, increased knowledge sharing with customers was the highest scoring response followed by improved employee information sharing, the reverse of the position in McAdam and Reid's study, possibly reflecting an increasing importance of customer or user focus within the public sector (3.2.1.2).

5.1.4 Use/benefits of knowledge management

Potential improvement areas for local authorities that might be addressed by knowledge management techniques were identified through those factors which may be the sources of costly errors, the reasons for missed opportunities and the benefit from systematic knowledge management.

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The survey shows that the main source of costly errors was that of 'vital knowledge [being] lost' to organisations, followed by other potential improvement areas of 'data not interpreted', 'duplication of errors' and 'knowledge not available'. It also highlights that the reasons for missed opportunities are concentrated in the area of 'insufficient organisation processes', 'organisation unaware of information' and 'insufficient knowledge about customers'. So despite local authorities being subject to a continuous improvement regime which emerges from a number of the current local government agendas (3.2) there appears to be a perception that there were insufficient organisational processes to capitalise on opportunities and that organisations were unaware of information suggests potential issues with knowledge transfer and sharing of information. The finding that there was insufficient knowledge about customers also potentially suggests that approaches to consultation and customer centric service delivery remain to be more widely or fully developed.

On the benefits to be derived from systematic knowledge management, the survey concurred with McAdam and Reid's findings, with the main elements being identified as an 'improvement in management learning', 'improved efficiency', 'reduced operating costs' and 'improved quality'. These, relating primarily to internal efficiency, might reflect the focus on best value (3.2.5) and the developing shared services agenda (3.2.3).

5.2 Emergence

Emergence focuses on how knowledge management may be emerging within, primarily, Scottish local authorities, concentrating on aspects of organisational learning using McElroy's (2000) concepts of an embryology of knowledge, a consideration of the politics of knowledge, the degree to which connectivity tools are being used to support communities of practice or interest and how effective current ICTs are in supporting knowledge transfer. This theme also considers some of the factors that may be influencing the emergence of knowledge management.

5.2.1 Embryology of knowledge

In both the survey and the case study there was a mixed response as to whether employees are free to prioritise their own learning agendas and self-organise into knowledge making groups, with no clear consensus on either. The case study

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suggests however that there is some freedom for employees to prioritise their learning agendas, but within certain boundaries. The main area where people are free to self-organise into knowledge making groups appears, from the case study, to be within the community planning (3.2.4) partnership.

5.2.2 Politics of knowledge

The politics of knowledge explores whether useful knowledge is emerging from within all parts of the organisations or is limited to particular sets of individuals. The survey indicates that team leaders and employees are the two main groups who get to make new knowledge that is eventually used within the organisation, followed by middle and senior management and councillors. The emphasis within the case study however was that knowledge creation was more towards councillors (specifically senior councillors) and senior and middle management. Consultants were also identified in both the survey and case study as contributing to knowledge creation. This accords with Sturdy et al (2006) who conclude that management consultants act as knowledge brokers, though are not as innovative or different from their clients as is often thought.

The politics of knowledge also relates to organisational recruitment policies. The survey finds that there is some evidence to suggest that existing politics of knowledge is not always being perpetuated and there are attempts to recruit people with divergent views, experiences and interests.

5.2.3 Knowledge sharing tools

The survey indicates that there was broad agreement that existing knowledge groups (communities of practice or interest) were currently supported by technology tools, despite the limited evidence for the free formation of these groups.

Both the survey and case study generally concurred on the information and communication technology tools currently in use for knowledge sharing and re-use. Those that are ICT based included: email, web and intranet portals and project management software, and to a lesser extent web-based learning tools. Few in either the survey or case study noted the use of more specific knowledge management technology tools such as lessons learned database, knowledge repositories, expertise locators and knowledge maps/directories.

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The case study also explored which people/learning based tools were in use for knowledge sharing. It suggests those in use may include, from problem solving approaches, exit interviews and mind mapping techniques and, from organisational learning (4.1.1), after action reviews. Other approaches, from organisational design include coaching, mentoring and peer-review. Many of those interviewed in the case study consider that people-based approaches to facilitating knowledge transfer were more satisfactory than those facilitated by technology tools.

As to how effective current ICTs are in supporting the transfer of knowledge this was considered in terms of transfer within organisations, between the organisations and their clients/customers and between local authorities and their partner organisations. The results from the survey indicate that there was an even split between being effective and ineffective within organisations and between organisations and their clients/customers. However, the majority considered that ICTs were either ineffective or very ineffective in supporting the transfer of knowledge between local authorities and partner organisations. Potentially, the developments being proposed by the Improvement Service to encourage and support communities of practice (3.3.4.2) may go some way to improve this situation.

5.2.4 Influences on KM emergence

Influences on the emergence of knowledge management in local authorities are both external and internal to the organisations. The main ways in which the survey respondents considered to be emerging were, as part of a corporate knowledge management or other strategy, as part of a change management programme and as part of the service planning process. Despite this most interviewees in the case study considered that it was not yet emerging within their organisation, or if it was it was limited to those involved in some of the local authority agendas described (3.3) or areas such as project management.

The factors thought to influence its emergence were mainly external, coming from the Scottish Executive or the Improvement Service, which reflects the survey finding that the main external influences on its emergence is the transformational/modernising government agenda (3.2.1) and demands for more openness and transparency from stakeholders. It only provided some support for the finding of Morton and Lacey (2006) that KM had emerged in local government primarily in response to the

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external factor of criticism from the Audit Commission. Those internal factors identified in the survey considered to be having an influence are an organisational culture that values and supports knowledge sharing and reuse and, best value service reviews (3.2.5).

Although the survey respondents identified a strategic driver for the emergence of KM, there was little emphasis on this forming part of a formal knowledge management strategy, with only one indicating that they were developing one. In discussing this issue in the preparatory interviews (Appendix 1) and case study, there was some tenuous support given to the notion that its emergence may be more by stealth (Sinclair, 2006a,b).

5.3 Progress

Progress in knowledge management is revealed through an indication of where local authorities may be in terms of knowledge management maturity and the barriers that have been encountered.

5.3.1 Knowledge management maturity

Knowledge management maturity can be viewed in terms of a five-stage maturity model (4.1.3) which focuses on the systematic integration of knowledge management practices within an organisation surrounding the key process attributes of people, process and technology, starting at level one or the 'default' level moving through the successively higher levels, 'reactive', 'aware', 'convinced' to level five, 'sharing' (Figure 11). The survey indicates that maturity within the responding organisations is likely to be higher than the 'default' level, which is a basic dependency on individual skills and abilities, where organisational knowledge is fragmented into isolated pockets (or silos). Most organisations considered that their maturity level was either 'reactive', where knowledge is being shared on a purely need basis, concentrated on routine or procedural knowledge, or 'aware', where systems to disseminate knowledge and managerial support for knowledge management is in place. In the case study, while there was little formal managerial support noted for KM, it was observed that support may be achieved through tying it to existing human resources processes, such as the professional development review process that attempts to link individual learning requirements with the higher level aims of the organisation.

5.3.2 Barriers encountered

Barriers to making progress in knowledge management within local authorities were explored under three broad categories of knowledge sharing barriers identified by Riege (2005), individual, organisational and technology. The survey shows that the main individual barrier was that of time, as well as a perceived inability in some to see the benefits of sharing knowledge. Though not as clear cut, the organisational barriers identified are aspects of organisational culture, organisation design and an absence or lack of policy or prioritisation of knowledge management. This last point and the cultural issue of the existence of 'silos' within a few operational areas are referred to as potential barriers within the case study. For those organisations potentially attempting to implement knowledge management programmes, the survey indicates at least one organisation finding it difficult to obtain senior management buy-in, reflecting the potential issue of initiative fatigue (Owen, 2004; DETR, 1999; Appendix 1, 3.0). While there are some technology barriers highlighted by the survey, such as the lack of an integrated system to facilitate knowledge capture, dissemination and exchange, the case study does not identify technology barriers to knowledge sharing as an important restriction.

5.4 Measurement

There is little evidence from the survey of local authorities that reveals the measurement of knowledge management. None of the survey respondents indicated that there was a system or systems in place to measure its impact, potentially a reflection of the current levels of knowledge management maturity. There are however a number of performance measurement systems in use to monitor and report on organisational efficiency, as confirmed by the case study. It is perhaps this range of performance indicators which are already being collected that might be adopted or modified as proxy measures of knowledge management activity, making it more relevant to the business objectives of the organisations, echoing Sinclair's view (2006b) on linking measurement to existing business processes.

An alternative to attempting to measure the impact of knowledge management, as suggested in the case study, is to focus on the ways that current learning opportunities are being used, including for example exit interviews, mentoring and the lessons learned following after action reviews. This might also consider the extent to which these may be supporting knowledge transfer and organisational learning.

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This reflects a recognition that performance and learning are interconnected and to achieve performance through learning organisations can benefit from the use of knowledge management practices to achieve organisational learning (Gorelick and Tantawy-Monsou, 2005).

6.0 Conclusions

6.1 *Summary of findings*

This study set out to investigate four strands, considering the awareness of knowledge attributes and of knowledge management, the emergence of knowledge management and progress being made in terms of KM maturity and barriers encountered and, evidence of any approaches to measuring the impact of KM, all within the context of Scottish local government. Through the use of quantitative and qualitative methods, both survey and case study analysis, each of these four strands was explored.

The main findings were:

Awareness

Construction/definition of knowledge and KM

- The results support a socially constructionist perspective of knowledge, as opposed to a technical/scientific view;
- They also support a multi-faceted view of what constitutes knowledge within organisations;
- Overall levels of awareness of knowledge management in Scottish local government are low, outside those areas involved in local government reform agendas;
- KM principles however are not entirely absent, perhaps just not made explicit.

Embodiment of knowledge

- Systematic capture of knowledge was identified at team leader level, then middle and senior management levels;
- Tacit knowledge was found to be primarily through informal discussion, or socialisation;
- Generally, technology was not considered to be a satisfactory way of facilitating knowledge transfer and dialogue.

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Dissemination

- Knowledge sharing and re-use was facilitated most by face-to-face meetings, workshops and forums – all people oriented methods;
- One popular knowledge sharing method was using lessons learned from project groups;
- Key future plans included increasing knowledge sharing with customers, followed by improved employee information sharing.

Use/benefits of knowledge management

- One of the main benefits of KM identified by organisations was in reducing areas of costly errors, primarily that of vital knowledge being lost to the organisations;
- The reasons for missed opportunities were identified in the areas of insufficient organisational processes, being unaware of information and insufficient knowledge about customers.

Emergence

Embryology of knowledge

- It was not clear whether employees are free to prioritise their own learning agendas or self organise into knowledge making groups, such as communities or practice or interest.

Politics of knowledge

- Both team leaders and employees were identified in the survey as the two main groups who get to make new knowledge that is eventually used within the organisations. The case study however identified senior councillors and senior and middle management as significant in new knowledge creation;
- There was some evidence to suggest that the existing politics of knowledge is not always being perpetuated, though recruitment policies which enable those with divergent views, experiences and interests to be recruited.

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Connectivity

- Existing knowledge groups (communities of practice or interest) are supported by technology tools;
- There was little apparent use of more specifically KM orientated technology tools, such as lessons learned databases, expertise locators or knowledge maps/directories;
- ICTs were considered ineffective in supporting the transfer of knowledge between local authorities and partner organisations. There was no clear indication of how effective they were within organisations.

Influences

- External influences were considered to be potentially more important than internal influences on the emergence of knowledge management;
- The main external influence was the transformational government agenda and demands for more openness and transparency from stakeholders;
- The internal influences were organisational cultures which value knowledge sharing and best value service reviews;
- If it can be said to be emerging, then KM is emerging more by stealth than via formal knowledge management strategies.

Progress

- Levels of knowledge management maturity appear to be either 'reactive', with knowledge shared on a need basis, or 'aware', with some systems to disseminate knowledge and managerial support for KM in place, with the latter not fully being supported by the case study;
- The main barriers to making progress in knowledge management are:
 - Individual: finding enough time and an inability of some to see the benefits;
 - Organisational: aspects of organisational culture, such as the existence of 'silos', a lack of priority given to KM and initiative fatigue;
 - Technology: not identified as significant a category as the other two.

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Measurement

- There was little or no evidence for the measurement of knowledge management within Scottish local government in general. While there were apparently no systems in place to measure its impact, there is a range of performance management measurement indicators used to monitor and report on organisational efficiency. These could potentially be adopted to act as proxy measures, tying KM to existing business objectives. The feasibility of this however might require further investigation;
- Instead of attempting to measure the impact of KM, an alternative approach may be to focus on how effectively learning opportunities are being used to support knowledge transfer and organisational learning.

6.2 Relationship with theoretical context

The survey findings broadly concurred with McAdam and Reid's study (2000) of awareness of knowledge attributes and knowledge management, supporting a social constructionist perspective, indicating that respondents in local government considered knowledge to be more socially than technically or scientifically constructed. However, while there is awareness of what constitutes knowledge and, to an extent knowledge management as organisational learning, the survey and case study demonstrate that the tools and approaches in use and the KM maturity levels attained reflect the dual paradigm nature of knowledge management (4.1.2), with aspirations towards a humanist paradigm, but still being firmly grounded in an IT paradigm. This perhaps has been reflected in the approach to transformational government (3.2.1), only recently recognising IT/ICT as an enabler and not a driver. It also supports Gloet and Berrell's suggestion (2003) that this occurs because people may be more comfortable when dealing with explicit information rather than tacit knowledge.

6.3 Knowledge management and local government reform

While the reform agenda in Scotland has within it a number of potential external drivers for knowledge management in Scottish local government, these are not necessarily being brought together to make a coherent case for further adoption, potentially under aspects of performance management or efficiency savings. The main advocate engaged in raising awareness of knowledge management is the

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Improvement Service, which has concentrated on developing a knowledge brokering role. It has though recognised the need to develop and agree a KM vision and further enhance the ways in which it can support KM emergence within this part of the public sector. Despite its activities, the levels of awareness are still generally low, though higher amongst those involved in the various reform agendas and partnership working. One of its intentions was to develop a KM toolkit for Scottish local government that would identify good KM practice. There may be some value in considering the material already available from the KM national project (3.3.3) as a starting point.

6.4 Limitations and further work suggested

This study has a series of limitations, in terms of scope and the analysis techniques adopted. In attempting to situate knowledge management it reviews a number of contextual elements and local government agendas. These may not however fully reflect all the main external influences on Scottish local government.

There are also limitations within both the design of the survey and case study. The multiple methods of questionnaire delivery did not provide sufficient returns to enable any comparisons to be made between the picture in Scotland and that in England and Wales. Given the availability of guidance and advice developed from the KM national project, this might have revealed differences in, for instance, the overall levels of KM maturity. The questionnaire design could also be further tested and refined, as some respondents found it 'challenging', which in part may have been due to its length.

While it was possible to get some idea of overall levels of KM maturity from the survey, this was by its nature a self assessment by respondents and could benefit from independent observation or a consideration of the use of one of the alternative maturity models reviewed, in order to chart the KM landscape in Scottish local government more accurately.

A deficiency in the approach to case study design may be that it can only be used as an illustrative example. Reliability and validity may be improved here by the use of multiple case studies. A further improvement to case study design would be to extend the range of interviewees beyond a focus on management to other employees, perhaps by survey or group discussion, and include councillors or others

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involved in knowledge creation, such as customers/clients and consultants, or in knowledge sharing, such as partners in service delivery.

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8.0 Appendices

Appendix 1: Results of preparatory interviews

1.0 Awareness

What is the current level of awareness of KM within local government in Scotland?

Most interviewees commented that the current level of awareness was probably low overall, but that it is growing and there are probably pockets of high levels of awareness. Some pointed out that perhaps as yet it is not yet understood well and as a result probably undervalued.

1. At what level and where is it most likely to find expression?

Some felt that KM was most likely to find expression at middle management level, particularly in change areas such as information technology. Others thought that areas where project management is used might be a likely area where it might be found. One also noted that COSLA (the Convention of Scottish Local Authorities) had formerly maintained a number of subject based best practice forums, but that some of these communities of practice may now have either declined or been taken over by their respective professional institutes or associations.

2. Who needs to know about KM?

Most agreed that senior management within Scottish local government need to know about knowledge management. Others added councillors to this, because of their scrutiny role, while it was also suggested that initially only pilot groups within an organisation need to know and be able to spread the word out to similar groups. In addition human resource management was thought to be an area that needs to know about KM because of succession planning requirements within local government. One interviewee noted that organisational learning issues appeared to sit better there than elsewhere.

3. What are the best ways to communicate/market the potential benefits of KM?

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Some suggested that the best ways to communicate or market internally the benefits of KM is largely dependent on the audience being addressed. As such a mixture of both formal and informal methods could be used, selecting the most appropriate channel depending on the audience and where an organisation is in its level of KM development. Others suggested that the best method would be by example, by concentrating on the successes achieved in each KM project or initiative, using existing employee development groups to do this.

4. Can there be a one-size-fits-all approach to KM or has it to be defined to meet or suit individual organisational (or departmental) needs?

Most interviewees indicated that a one-size-fits-all approach was not appropriate in a large/diverse organisation. It was noted however that eventually KM could be pulled under a flexible strategy that enables different approaches to co-exist, with one department taking the lead role. This lead might develop appropriate KM guidelines, but providing scope for local expression and application. This was suggested based on previous experience of centrally mandated approaches that do not always work or work in the way expected.

One interviewee commented on the need to take a holistic approach, expressing the linkages between data, information and knowledge.

5. Are there any local authorities with strong sharing cultures?

Only one interviewee suggested a local authority that possibly has a strong sharing culture: Manchester. It was however recognised that there are probably strong sharing cultures within individual business lines in some local authorities.

2.0 Emergence

1. What factors or agendas have influenced the emergence of KM in local authorities?

A variety of potential factors were cited as having an influence on the emergence of knowledge management. The main one referred to by those interviewed was the improvement agenda and the role of the Improvement Service in raising the profile of KM. Another external influence noted by interviewees was that of Audit Scotland.

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Starting in 2005 this body has been assessing the performance of all Scottish local authorities' best value review and community planning processes. It currently comments on information management within authorities as recommendations can be made on information issues. However, as one interviewee noted, this remit does not yet appear to extend to knowledge management. Another added stimulus for local authorities is that the final reports prepared by Audit Scotland are published on their website. Other factors cited included the influence on authorities to improve how they manage information requests from the public. These issues of information compliance are a result of the legislative requirements of primarily the Freedom of Information (Scotland) Act 2002, but also the Data Protection Act 1998 and Environmental Information (Scotland) Regulations 2004.

2. How is KM emerging within local government?

While some interviewees felt that if it was emerging, then it was emerging as a result of national initiatives, others considered that it was emerging by stealth or from an information management and information technology perspective.

The later consideration is based on a view that IT may be seen as having the software tools and by implication the relevant background to implement KM initiatives. The former view that it is emerging by stealth, the term used unprompted by the interviewee, supports the view of Sinclair (2006a,b). The interviewee suggested that its emergence might be more middle-out than top-down or bottom-up and that if it is to find fuller expression then it should be about edging forward incrementally rather than in great leaps.

There was however a consensus that to emerge more fully there needs to be ownership of the concept and what it entails. Those interviewed pointed out that it currently does not sit comfortably in current local authority structures. A related point is the definitional issue, as there is perhaps a current lack of awareness of what knowledge management might mean to a local government organisation.

3.0 Progress

1. Is it important for local authorities to understand at what level of KM maturity they are at? Why?

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Most interviewees pointed out that it was not important for everyone in an organisation to know at what level of KM maturity the local authority was. It was suggested that it is however important for the KM owner to know as should management, but from an organisational perspective others only need to know what is to be achieved next in order to get to the next step. One interviewee pointed out that the answer to this also depends on whether the organisation values KM in the first place and the appreciation that the leader (chief executive) of the organisation has of it.

2. What have been the main barriers to successful KM in local government?

Interviewees identified a variety of barriers to successful KM in local government. One consistent theme was the silo mentality still evident in local authorities with in some instances certain departments having developed cultures where Chinese walls (information barriers) may have existed and to an extent may still exist. A related barrier noted was the diversity of functions and activities delivered by local authorities.

Others pointed to the possibility that KM may be viewed as yet another initiative in an arena beset with initiatives on a range of issues, coming from higher levels of government. So for some the barrier of initiative overload may be real, particularly when decision makers are faced with a series of initiatives competing for their attention and the choice of which ones to concentrate on, given limited resources. This also suggests a resource allocation issue or barrier.

More generally, others felt there was currently a lack of understanding of the topic, that little value was placed on it and frequently there was a lack of a corporate approach or evident strategy.

4.0 Measurement

1. Should local authorities attempt to measure the impact of KM? Why?

Most agreed that local authorities should attempt to measure the impact of knowledge management, particularly to be able to highlight the benefits it brings to the organisation. However, it was noted that councils were requested to measure a wide variety of activities, by for instance the Improvement Service and the Scottish

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Executive. In certain instances it was suggested that some of the metrics were similar, but slightly different. It was therefore suggested that any attempt to measure KM should be as straightforward as possible, but effective and preferably the by-product of what the organisation already does.

2. Have any authorities incorporated measures into their reporting procedures?

All interviewees indicated that they were unaware of any councils who had incorporate measures of KM into their reporting procedures. It was considered that unless they were actively pursuing a KM or related strategy then there was no reason for them to do so. However, some pointed out that there would already be parts of HR, project management and other areas that will record their performance in terms not unlike those used in KM. Others suggested that proxy measures that might contribute to KM, such as usage of discussion forums, might be an indicator of the need for fewer formal meetings and a hence time saving measure.

3. Are there any particular examples of KM programmes or projects worth considering as case studies?

The following potential general areas were suggested for further investigation:

- Discussion forums
- Corporate intranets
- Improvement Service
 - Attempting to improve knowledge sharing between Scottish local authorities, but what about improvements within?
 - ESD Scotland project: about information architecture to support technology tools used in KM. This has three strands primarily targeted at council websites (the Scottish Navigation List, a standard set of FAQs, and a common A-Z)
- E-learning
- The link with performance management

Within one local authority the more specific suggestions included:

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- A management development programme – were individuals from across the organisation gain from the opportunity to network with each other. Being divided into small groups and given the task of preparing a presentation for the corporate management team has lead some groups to continue to meet long after the original task was completed.
- Preparation of Charter Mark submissions. Charter Mark is an award given by the Cabinet Office for providing an excellent service to the public. A writing team which has already been through the process provides help by coaching the service (department) about to be assessed.
- Consultation finder – a database of ongoing consultations that the council is running. This provides details on associated or related consultations that the public may be interested in.
- Personnel managers meeting – a well established discussion forum which emerged from a defined need to provide a consistent approach to personnel issues across the organisation in order to prevent criticism from the unions. The meetings are more about sharing of best practice than briefing and now inform policy and decision-making, feeding the council's HR strategy.

Appendix 2: Finalised questionnaire for survey of local authorities

Knowledge management survey of local authorities, 2006

Introduction

Knowledge management may not necessarily be used as a term within your organisation, but it probably forms part of what your organisation already does. While there are various definitions of knowledge management it is perhaps about having an organisational environment that supports the creation, sharing and reuse of knowledge to enable the organisation to make better decisions together (Sinclair, 2006).

This survey is part of an initial investigation into knowledge management within local government for an MSc dissertation at Robert Gordon University in Aberdeen. Its prime focus will be on the Scottish context, but it is hoped that useful comparisons can be made between local authorities throughout the UK. The study is divided into four main strands looking at, levels of awareness, the emergence of knowledge management, what progress has been made and barriers encountered and whether measurement systems are in place to monitor and evaluate its impact.

It is intended that the results of this survey are made available to all those who participate in it. You may also want to put forward your organisation to take part in a case study analysis, which will build on the results of this survey and provide a more detailed picture of knowledge management within your organisation.

Section 1: Awareness

1.1 Construction/ definition of knowledge

Q1. Which terms denote knowledge in organisations? (please tick all that apply)

- | | | | | | | | |
|-----------------------|--------------------------|--------------------------|--------------------------|-----------------------|--------------------------|-------------------------------------|--------------------------|
| Intellectual capital | <input type="checkbox"/> | Organisational knowledge | <input type="checkbox"/> | Core competence | <input type="checkbox"/> | Organisational learning | <input type="checkbox"/> |
| Organisational memory | <input type="checkbox"/> | Information technology | <input type="checkbox"/> | Tools and methodology | <input type="checkbox"/> | Knowledge capture and dissemination | <input type="checkbox"/> |
| Knowledge transfer | <input type="checkbox"/> | | | | | | |

Q2. What are the elements of knowledge within the organisation? (please tick all that apply)

- | | | | | | | | |
|------------------|--------------------------|------------------------|--------------------------|-------------------------|--------------------------|----------------------|--------------------------|
| Hard information | <input type="checkbox"/> | Soft information | <input type="checkbox"/> | Political issues | <input type="checkbox"/> | Personal experiences | <input type="checkbox"/> |
| Tangible issues | <input type="checkbox"/> | Cultural issues | <input type="checkbox"/> | Power values | <input type="checkbox"/> | Thinking | <input type="checkbox"/> |
| Deciding | <input type="checkbox"/> | Education and training | <input type="checkbox"/> | Interchange with others | <input type="checkbox"/> | Experiences | <input type="checkbox"/> |
| Tacit knowledge | <input type="checkbox"/> | | | | | | |

1.2 Embodiment of knowledge

Q3. Where is knowledge systematically captured in the organisation?(please tick all that apply)

- | | | | | | | | | | |
|----------------------------------|--------------------------|-------------------|--------------------------|--------------|--------------------------|-------------|--------------------------|---------------------------|--------------------------|
| Senior management | <input type="checkbox"/> | Middle management | <input type="checkbox"/> | Team leaders | <input type="checkbox"/> | Employees | <input type="checkbox"/> | Daily experiences | <input type="checkbox"/> |
| Lessons learned through projects | <input type="checkbox"/> | Customers | <input type="checkbox"/> | Suppliers | <input type="checkbox"/> | Competitors | <input type="checkbox"/> | Benchmarked organisations | <input type="checkbox"/> |

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Q4. How is tacit know ledge captured? (please tick all that apply)

Tacit knowledge is more know-how than know-what. It is the knowledge developed over time by an individual in the form of expertise, requiring little thought or time to bring it into play.

- Inductions Appraisals Interview s
Informal discussions Formal discussions Exit interview s

How strongly do you agree or disagree with the following statements.

Q5. The organisation facilitates know ledge sharing.

- Strongly agree Agree Disagree Strongly disagree No opinion

Q6. Dialogue is encouraged and facilitated.

- Strongly disagree Agree Disagree Strongly agree No opinion

Q7. Is know ledge management linked to employee advancement?

- Systematically Most times Ad hoc Sometimes Never

Q8. How satisfactorily does technology facilitate learning transfer and dialogue?

- Very satisfactory Satisfactory Unsatisfactorily Very unsatisfactorily No opinion

Q9. What is the driver for the technology?

- IT specialists exclusively Some input by the end users
Technology is seen as a key enabler People are the starting point

1.3 Dissemination of know ledge

Q10. How is know ledge sharing facilitated? (please tick all that apply)

- Face to face Workshops Forums Multimedia presentations
Divergent databases Convergent databases Mentoring and coaching Lessons learned from project groups
Creativity techniques Discussion forums Training needs analysis Learning processes

Q11. How satisfactorily does the use of technology facilitate learning transfer?

- Very satisfactorily Satisfactorily Unsatisfactorily Very unsatisfactorily No opinion

Knowledge management in the Scottish local government context

1.4 Use/benefits of knowledge management

Q12. What are the key future plans for know ledge management? (please tick all that apply)

- Increased know ledge sharing - suppliers Increased know ledge sharing - customers/clients Increased know ledge sharing - partner organisations
- Improved enabling technology Improved employee information sharing Increase business performance
- Other (please specify)

Q13. What are the sources of costly errors? (please tick all that apply)

- Vital know ledge lost Know ledge not available Duplication of errors Data not interpreted
- Process re-engineered Lack of competitor information Insufficient technology information
- Other (please specify)

Q14. What are the reasons for missed opportunities? (please tick all that apply)

- Organisation unaw are of information Inability to use information Insufficient organisation processes
- Insufficient employee performance Insufficient know ledge about customers/clients Insufficient know ledge about competitors
- Insufficient technology

Q15. What are the benefits from systematic know ledge management? (please tick all that apply)

- Improved efficiency New products/services Reduced operating costs Improved management learning
- Improved quality

Section 2: Emergence

2.1 Embryology of knowledge

Can you say how strongly you agree or disagree with the following statements.

Q16. Employees in my organisation are free to prioritise their own learning agendas.

- Strongly agree Agree Disagree Strongly disagree No opinion

Q17. Which parts of the organisation are engaging in this type of activity more than others?

Knowledge management in the Scottish local government context

Q18. Employees in my organisation are free to self-organise into knowledge making groups (communities of knowledge, interest or practice).

Strongly agree Agree Disagree Strongly disagree No opinion

Q19. Which parts of the organisation are engaging in this type of activity more than others?

2.2 Politics of knowledge

Q20. Who gets to make new knowledge that is eventually used in your organisation? (please tick all that apply)

Councillors Senior management Middle management Team leaders Employees
Clients/customers Suppliers Contractors Consultants Self-organised groups

Q21. Does your organisation take deliberate steps to recruit people who bring with them divergent views, experiences and interests?

Systematically Most times Ad hoc/ occasionally Sometimes Never

2.3 Connectivity

Q22. Are existing knowledge groups (communities of practice or interest) currently supported by technology tools? Yes No

Q23. Which of the following tools are used within your organisation? (please tick all that apply)

Email Instant messaging Web-based learning Workgroup software Project management software
Web or intranet portals Blogs Virtual-learning classrooms Wikis Knowledge repositories
Knowledge maps/directories Expertise locators Best practice catalogues Lessons learned databases
Others (please specify)

Knowledge management in the Scottish local government context

Q24. How effective are your current Information Communication Technologies (ICTs) in supporting the transfer of knowledge:

Q24a. Between your organisation and your clients/customers? Very effective Effective Ineffective Very ineffective No opinion

Q24b. Within your organisation? Very effective Effective Ineffective Very ineffective No opinion

Q24c. Between local authorities/partner organisations? Very effective Effective Ineffective Very ineffective No opinion

2.4 Influences

Q25. How has knowledge management emerged within your organisation? (please tick all that apply)

- As part of the community planning process
- As part of a change management programme
- As part of the service planning process
- As part of a corporate knowledge management or other strategy
- As part of a grass roots or bottom-up process
- As a side effect of another initiative (name)
- As a supporting mechanism to an existing business process
- Other (please specify)

Q26. What external factors or agendas have influenced the emergence of knowledge management in your organisation? (please give any details below)

- Transformational/modernising government
- Efficient government agenda
- Shared services agenda
- Availability of funding
- Legislative requirements
- Criticism from external agencies
- Demands for more openness/transparency from stakeholders
- Other external factors

Q27. Please provide any additional details on specific external factors here.

Q28. What internal factors or agendas have influenced the emergence of knowledge management in your organisation? (please give any details below)

- Best Value Reviews
- Benchmarking exercises with other organisations
- An organisational culture that values and supports sharing and re-use
- An organisational structure which facilitates knowledge sharing and re-use
- The availability of social networking software
- Future demographic changes in the workforce
- Other internal factors

Knowledge management in the Scottish local government context

Q29. Please provide any additional details on specific internal factors here.

Q30. Please describe any particular examples of knowledge management programmes or initiatives in your organisation.

Section 3: Progress

3.1 Knowledge management maturity

Q31. Which of the following knowledge management maturity levels best describes your organisation?

- | | |
|-----------|--|
| Default | <input type="checkbox"/> 1. Complete dependency on individual skills/abilities.
Organisation's knowledge is fragmented in isolated pockets and stays in people's heads.
Belief in formal training as sole mechanism for learning. |
| Aware | <input type="checkbox"/> 2. The organisation shares knowledge purely on a need basis.
Routine and procedural knowledge is shared.
Able to repeat basic business tasks of the organisation. |
| Reactive | <input type="checkbox"/> 3. Beginnings of an integrated approach to managing knowledge life cycle.
Enterprise wide knowledge propagation systems are in existence (awareness and maintenance are moderate).
The organisation collects and understands metrics for knowledge management.
Managers recognise the role of and encourage knowledge sharing. |
| Convinced | <input type="checkbox"/> 4. Enterprise wide knowledge systems are in place - quality, currency, utility, usage are high.
Organisational boundaries breakdown as knowledge barriers.
High ability to leverage internal and external sources of expertise.
The organisation realises measurable benefits through knowledge sharing. |
| Sharing | <input type="checkbox"/> 5. Culture of sharing institutionalised, sharing becomes second nature to all.
Organisational boundaries are irrelevant.
Streamlined process for leveraging new ideas for business advantage.
Knowledge return on investment is integral to decision-making. |

Knowledge management in the Scottish local government context

3.2 Barriers encountered

What are the main barriers to successful knowledge management in your organisation?
Please list them under the following headings.

Q32. Individual barriers

Q33. Organisational barriers

Q34. Technology barriers

Section 4: Measurement

Q35. Does your organisation have a system in place to measure the impact of knowledge management?

Yes No

Q36. If your organisation does have a measurement system in place, is it based on any of the following?

Balanced scorecard

EFQM Excellence Model

Six Sigma

Intellectual asset monitor

Skandia navigator

Return On Investment

Locally derived performance indicators

Other (please specify)

Q37. Are they measures that support organisational objectives?

Systematically

Most times

Ad hoc

Sometimes

Never

Q38. Is it used as management information?

Systematically

Most times

Ad hoc

Sometimes

Never

Q39. Has your organisation undertaken any form of knowledge management audit?

Yes No

Knowledge management in the Scottish local government context

Your details

Q40. Name

Q41. Job title

Q42. Organisation name

Q43. Department

Q44. Phone

Q45. Email

Case study nomination

Q46. Would you be willing for your organisation to be used as a case study? Yes No

Q47. Can you suggest people in your organisation who may be interested in taking part?

Thank you for taking the time to complete this survey.

Please return your questionnaire to:

**Mr. John Mitchell
1 Davidson Gardens
Stonehouse
ML9 3HF**

Phone 01698 455138

Email john.mitchell@ecosse.net or john.mitchell@southlanarkshire.gov.uk

November 2006

Appendix 3: Online version of questionnaire

Knowledge management survey of local authorities, 2006

The [online version of this survey](#) starts here with a short introduction.

Alternatively, you may if you prefer download and print off the [PDF version of the questionnaire \(54KB\)](#)

For further information please don't hesitate to contact me.

John Mitchell
john.mitchell@ecosse.net

Closes: 15 December 2006

Introduction

Knowledge management may not necessarily be used as a term within your organisation, but it probably forms part of what your organisation already does. While there are various definitions of knowledge management it is perhaps about having an organisational environment that supports the creation, sharing and reuse of knowledge to enable the organisation to make better decisions together (Sinclair, 2006).

This survey is part of an initial investigation into knowledge management within local government for an MSc dissertation at Robert Gordon University in Aberdeen. Its prime focus will be on the Scottish context, but it is hoped that useful comparisons can be made between local authorities throughout the UK. The study is divided into four main strands looking at, levels of awareness, the emergence of knowledge management, what progress has been made and barriers encountered and whether measurement systems are in place to monitor and evaluate its impact.

It is intended that the results of this survey are made available to all those who participate in it. You may also want to put forward your organisation to take part in a case study analysis, which will build on the results of this survey and provide a more detailed picture of knowledge management within your organisation.

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Awareness

Q1 Which terms denote knowledge in organisations? (please tick all that apply)

- Intellectual capital
- Organisational knowledge
- Core competence
- Organisational learning
- Organisational memory
- Information technology
- Tools and methodology
- Knowledge capture and dissemination
- Knowledge transfer

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Q2 What are the elements of knowledge within the organisation? (please tick all that apply)

- Hard information
- Soft information
- Tangible issues
- Political issues
- Cultural issues
- Personal experiences
- Thinking
- Doing
- Deciding
- Power values
- Experiences
- Education and training
- Interchange with others
- Tacit knowledge - more know-how than know-what. It is the knowledge developed over time by an individual in the form of expertise, requiring little though for time to bring it into play.

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Embodiment of knowledge

Q3 Where is knowledge systematically captured in the organisation? (please tick all that apply)

- Senior management
- Middle management
- Team leaders
- Employees
- Daily experiences
- Lessons learned through projects
- Customers
- Suppliers
- Competitors
- Benchmarked organisations

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Knowledge management in the Scottish local government context

Tacit knowledge is more know-how than know-what. It is the knowledge developed over time by an individual in the form of expertise, requiring little though for time to bring it into play.

Q4 How is tacit knowledge captured? (please tick all that apply)

- Inductions
- Appraisals
- Interviews
- Informal discussions
- Formal discussions
- Exit interviews

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Q5 How strongly do you agree or disagree with the following statements : "

	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion
The organisation facilitates knowledge sharing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dialogue is encouraged and facilitated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q6 Is knowledge management linked to employee advancement?

- Systematically
- Most times
- Ad hoc
- Sometimes
- Never

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Q7 How satisfactorily does technology facilitate learning transfer and dialogue?

- Very satisfactorily
- Satisfactorily
- Unsatisfactorily
- Very unsatisfactorily
- No opinion

Q8 What is the driver for the technology?

- IT specialists exclusively
- Some input by the end users
- Technology is seen as a key enabler
- People are the starting point

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Dissemination of knowledge

Q9 **How is knowledge sharing facilitated?** (please tick all that apply)

- Face-to-face
- Workshops
- Forums
- Multimedia presentations
- Divergent databases
- Convergent databases
- Mentoring and coaching
- Lessons learned from project groups
- Creativity techniques
- Discussion forums
- Training needs analysis
- Learning processes

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Q10 **How satisfactorily does the use of technology facilitate learning transfer?**

- Very satisfactorily
- Satisfactorily
- Unsatisfactorily
- Very unsatisfactorily
- No Opinion

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Use/benefits of knowledge management

Q11 **What are the key future plans for knowledge management?** (please tick all that apply)

- Increased knowledge sharing - suppliers
- Increased knowledge sharing - customers
- Increased knowledge sharing - partners organisations
- Improved enabling technology
- Improved employee information sharing
- Increase business performance
- Other

Other, please specify

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Knowledge management in the Scottish local government context

Q12 **What are the sources of costly errors?** (please tick all that apply)

- Vital knowledge lost
- Knowledge not available
- Duplication of errors
- Data not interpreted
- Process re-engineering
- Lack of competitor information
- Insufficient technology information
- Other

Other, please specify

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Q13 **What are the reasons for missed opportunities?** (please tick all that apply)

- Organisation unaware of information
- Inability to use information
- Insufficient organisation processes
- Insufficient employee performance
- Insufficient knowledge about customers
- Insufficient knowledge about competitors
- Insufficient technology

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Q14 **What are the benefits from systematic knowledge management?** (please tick all that apply)

- Improved efficiency
- New products/services
- Improved products/services
- Reduced operating costs
- Improvement management learning
- Improved quality

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Emergence

Q15 **Can you say how strongly you agree or disagree with the following statements:**

Employees in my organisation are free to prioritise their own learning agendas

Strongly Agree Agree Disagree Strongly Disagree No Opinion

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Knowledge management in the Scottish local government context

Q16 Can you say how strongly you agree or disagree with the following statements:
Employees in my organisation are free to self-organise into knowledge making groups (communities of knowledge, interest, or practice).

Strongly Agree Agree Disagree Strongly Disagree No Opinion

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Politics of knowledge

Q17 Who gets to make new knowledge that is eventually used in your organisation? (please tick all that apply)

- Councillors
- Senior management
- Middle management
- Team leaders
- Employees
- Clients/customers
- Suppliers
- Contractors
- Consultants
- Self-organised groups

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Q18 Does your organisation take deliberate steps to recruit people who bring with them divergent views, experiences, and interests?

- Systematically
- Most times
- Ad hoc/occasionally
- Sometimes
- Never

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Connectivity

Q19 Are existing knowledge groups (communities of practice or interest) currently supported by technology tools?

- Yes
- No

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Knowledge management in the Scottish local government context

Q21 How effective are you current Information Communication Technologies (ICTs) in supporting:

	Very effective	Effective	Ineffective	Very ineffective	No Opinion
the transfer of knowledge within your organisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the transfer or knowledge between your organisation and your clients/customers and vice versa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the transfer of knowledge between local authorities/partner organisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Q20 Which of the following tools are used within your organisation? (please tick all that apply)

- E-mail
- Instant messaging
- Web-based learning
- Workgroup software
- Project management software
- Web or intranet portals
- Blogs
- Virtual-learning classrooms
- Wikis
- Knowledge repositories
- Knowledge maps/directories
- Expertise locators
- Best practice catalogues
- Lessons learned databases
- Others

If 'others' please specify:

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Q21 How effective are you current Information Communication Technologies (ICTs) in supporting:

	Very effective	Effective	Ineffective	Very ineffective	No Opinion
the transfer of knowledge within your organisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the transfer or knowledge between your organisation and your clients/customers and vice versa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the transfer of knowledge between local authorities/partner organisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Knowledge management in the Scottish local government context

Influences

Q22 **How has knowledge management emerged within your organisation?** (please tick all that apply)

- As part of the service planning process
- As part of the community planning process
- As part of a change management programme
- As part of a corporate knowledge management or other strategy
- As a supporting mechanism to an existing business process
- As part of a grass roots or bottom-up process
- As a side effect of another initiative

Other initiative, please specify

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Q23 **What external factors or agendas have influenced the emergence of knowledge management in your organisation?**

- Transformational/modernising government agenda
- Efficient government agenda
- Shared services agenda
- Availability of funding
- Legislative requirements
- Criticism from external agencies
- Demands for more openness/transparency from stakeholders
- Other external factors

What other external factors?

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Q27 **You have indicated that other external factors have influenced the emergence of knowledge management in your organisation. Can you give more details:**

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Knowledge management in the Scottish local government context

Q28 What **internal** factors have influenced the emergence of knowledge management in your organisation? (please tick all that apply)

- Best Value Reviews
- Benchmarking exercises with other organisations
- An organisational culture that values and supports sharing and re-use
- An organisational structure which facilitates knowledge sharing and re-use
- The availability of social networking software
- Future demographic changes in the workforce
- Other internal factors

What 'other' internal factors?

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Q29 Please describe any particular examples of knowledge management programmes or initiatives in your organisation?

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Progress

Knowledge management maturity

Level	Default	
1	Default	<ul style="list-style-type: none"> • Complete dependency on individual skills/abilities. • Organisation's knowledge is fragmented in isolated pockets and stays in people's heads. • Belief in formal training as sole mechanism for learning.
2	Reactive	<ul style="list-style-type: none"> • The organisation shares knowledge purely on a need basis. • Routine and procedural knowledge is shared. • Able to repeat basic business tasks of the organisation.
3	Aware	<ul style="list-style-type: none"> • Beginnings of an integrated approach to managing knowledge life cycle. • Enterprise wide knowledge propagation systems are in existence (awareness and maintenance are moderate). • The organisation collects and understands metrics for knowledge management. • Managers recognise the role of and encourage knowledge sharing.
4	Convinced	<ul style="list-style-type: none"> • Enterprise wide knowledge systems are in place – quality, currency, utility, usage are high. • Organisational boundaries breakdown as knowledge barriers. • High ability to leverage internal and external sources of expertise. • The organisation realises measurable benefits through knowledge sharing.
5	Sharing	<ul style="list-style-type: none"> • Culture of sharing institutionalised, sharing becomes second nature to all. • Organisational boundaries are irrelevant. • Streamlined process for leveraging new ideas for business advantage. • Knowledge return on investment is integral to decision-making.

Source: after InfoSys (Kochikar, 2000)

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Knowledge management in the Scottish local government context

Q30 Which of the following knowledge management maturity levels best describes your organisation?

- Level 1 - Default
- Level 2 - Reactive
- Level 3 - Aware
- Level 4 - Convinced
- Level 5 - Sharing

Barriers encountered

Q31 What are the main barriers to successful knowledge management in your organisation?

Individual barriers

Organisational barriers

Technology barriers

Measurement

Q32 Does your organisation have a system in place to measure the impact of knowledge management?

- Yes
- No

Q33 Is it based on any of the following measurement systems? (please tick all that apply)

- Balanced scorecard
- EFQM Excellent Model
- Six Sigma
- Intellectual asset monitor
- Skandia navigator
- Return on Investment (ROI)
- Locally derived performance indicators
- Other

Other, please specify

Q34 Are they measures that support organisational objectives?

- Systematically
- Most times
- Ad hoc
- Sometimes
- Never

Knowledge management in the Scottish local government context

Q35 Is it used as management information?

- Systematically
- Most times
- Ad hoc
- Sometimes
- Never

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Q36 Has your organisation undertaken any form of knowledge management audit?

- Yes
- No

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And finally.....

Q37 Your details:

Name	
Job Title	
Organisation name	
Department	
Phone	
E-mail	

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Case study nomination

Q38 Would you be willing for your organisation to be used as a case study?

- Yes
- No

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Q39 Can you suggest people in your organisation who may be interested in taking part?

ⓘ All information you send to me is strictly confidential. It will be processed and held in accordance with the principles of the Data Protection Act (1998). This information will be used only for statistical and research purposes. No information about you as an individual will be passed on to any other organisation.

THANK YOU FOR YOUR FEEDBACK

PLEASE NOW CLICK THE 'SUBMIT' BUTTON BELOW TO SEND YOUR COMPLETED QUESTIONNAIRE.

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Appendix 4: Covering letter for questionnaire

«Name»	1 Davidson Gardens
«Position»	Stonehouse
«Organisation»	ML9 3HF
«Unit»	
«Add1»	01698 792280 (h)
«Add2»	01698 455138 (w)
«Town»	john.mitchell@ecosse.net
«Postcode»	

20 November 2006

Dear «Forename»

Knowledge management survey of Scottish local authorities

I would be most obliged if you could take the time to complete and return the attached questionnaire which seeks your observations and experience of knowledge management within local government and your authority.

This survey forms part of research into knowledge management within Scottish local authorities for an MSc dissertation at Robert Gordon University. It is attempting to gauge levels of awareness, determine how knowledge management is emerging, what progress has been made and what forms of measurement are being used to assess and evaluate its impact.

The questionnaire is currently available from the Improvement Service website www.improvementservice.org.uk and at www.tarus.co.uk/km/ should you wish to complete it online.

It is intended that the results from the survey are made available early in 2007 as a short report and potentially summary article, via the Improvement Service.

The second part of the research will focus on a series of case studies. If you feel that your organisation would like to become a case study, which may focus on an individual programme, initiative or project, then I would be delighted to learn more about it and discuss it with the relevant members of staff in your organisation.

If you have any further questions about this research, please do not hesitate to contact me.

Yours sincerely

John Mitchell

Appendix 5: Case study questions

1.0 General

1.1 Which local government agendas are you most closely/heavily involved in? [For example: transformational/modernising government, efficient government, shared services, community planning, performance management, information compliance, other]

1.2 What do you understand by the term knowledge management (KM)?

2.0 Awareness

2.1 What is the current level of awareness of knowledge management within the council?

2.2 At what level and where has it found expression?

2.3 Who needs to know about KM in the council?

2.4 Can there be a one-size-fits-all approach to KM or has it to be defined to meet or suit individual organisational (or departmental) needs?

2.5 Are there any parts of the council with strong sharing cultures?

2.6 Where is knowledge systematically captured? (For example: senior management, middle management, team leaders, employees, daily experiences, lessons learned through projects, customers, suppliers, competitors, benchmarking, other)

2.7 How is tacit knowledge captured? (For example: inductions, appraisals, interviews, informal discussions, formal discussions, exit interviews, other)

2.8 How is knowledge sharing and re-use facilitated? (For example: face-to-face, workshops, forums, multimedia presentations, divergent or convergent databases, mentoring or coaching, lessons learned from project groups, creativity techniques, discussion forums, training needs analysis, learning processes, other).

3.0 Emergence

3.1 How is KM emerging within this council? (For example: part of national initiatives/mandated, top-down, bottom-up, middle-out, as part of a support mechanism to other initiatives/programmes/ projects)

3.2 What factors have influenced the emergence of KM in this council? (Internal, external)

3.3 What managerial support is there for KM?

3.4 Are employees in the council free to:

3. Prioritise their own learning agendas?

4. Self-organise into knowledge making groups (communities of knowledge, interest or practice)?

Knowledge management in the Scottish local government context

3.5 Who gets to make new knowledge that is eventually used in the council? (For example: councillors, senior management, middle management, team leaders, employees, clients/customers, suppliers, contractors, consultants, self-organised groups, other).

3.6 Which tools are currently in use for knowledge sharing and re-use?

IT based:	People/learning based:
Email, instant messaging, web-based learning, workgroup software, project management software, web or intranet portal, blogs, virtual learning classrooms, wikis, knowledge repositories, knowledge maps/directories, expertise locators, best practice catalogues, lessons learned databases, other	Problem solving (exit interviews and mind mapping), organisational learning approaches (After Action Reviews, project reviews and 'baton-passing'), organisational design approaches (virtual teams, coaching and mentoring), Cultural approaches (identifying intellectual capital and building communities of practice), other.

- How satisfactorily does the use of technology facilitate learning transfer?
- How satisfactorily does the use of people based approaches facilitate learning transfer?

3.7 *Is knowledge management linked to employee advancement? (Optional question)*

3.8 *Is there a KM strategy or does it form part of another strategic approach? (Optional question)*

4.0 Progress

4.1 Is it important for this council to understand at what level of KM maturity it is at? Why?

4.2 What have been the main barriers to successful KM in this council? (Group under organisational, technological and people factors)

5.0 Measurement

5.1 What measurement systems are currently used to monitor and report improvements in organisational efficiency?

5.2 Should this council attempt to measure the impact of KM? Why?

5.3 What measurement systems might be/are used to monitor/report on it?

Appendix 6: Case study – collated responses by question

1.0 General

1.1 Which local government agendas are you most closely/heavily involved in?

[For example: transformational/modernising government, efficient government, shared services, community planning, performance management, information compliance, other]

	Job title	Function	Agendas involved in
a.	Business Systems Manager	IT manager for one Resource (department)	transformational/modernising government, efficient government, performance management
b.	Policy Advisor	Community planning partnership coordination	community planning
c.	Administration Advisor	Information management, principal archivist	transformational/modernising government, information compliance
d.	Research Manager	Research and intelligence	transformational government, efficient government, shared services, community planning, research and intelligence
e.	Employee Development and Diversity Manager	Human resources, consultation	modernising government, efficient government, shared services
f.	Customer Services Development Manager	Development/ implementation of customer services; one-stop-shops (QandA network), and call centre (customer services centre).	modernising government, shared services, performance management
g.	Modernising Government Manager	IT manager (Customer Relationship Management, intranet, internet, integration, infrastructure)	Modernising government, efficient government, shared services

1.2 What do you understand by the term knowledge management (KM)?

a. KM is the harvesting of individual knowledge, that which is not formally documented. It raises issues over dissemination and how to ensure that there is some quality assurance in place to share good practice, filtering out the extraneous elements.

Knowledge management in the Scottish local government context

- b. Not generally aware of the term KM, but was familiar with the concepts behind it once discussed.
- c. The term KM means different things to different people. Most people currently don't see the link to tangible outcomes. Awareness and understanding may not be there yet as it is possibly vague as a term in use.
- d. Sees KM as information storage and retrieval. From the perspective of an R&I council function this is about creating information from data about geographical area and contextualising them for operational use as Services are often 'too busy'. This relates to 'hard' information and not the softer attitudinal information. This is about marrying the sections knowledge of data sets and their limitations with the Services' knowledge of programmes.
- e. KM is the sharing of information and good practice, decreasing duplication of effort, maximising resources and about 'not reinventing the wheel'.
- f. KM is about how you share and distribute types of information rather than the information itself. The main issue from a customer services centre perspective is on the quality of information. An expert system for instance had been considered as part of the Customer Relationship Management system but the quality of the expert script could not always be relied on and was therefore not implemented in this way.
- g. KM is a central repository or 'single source of truth' for sharing knowledge or best practice that provides a framework for service delivery.

2.0 Awareness

2.1 What is the current level of awareness of knowledge management within the council?

- a. The current level of awareness of KM on the organisation is patchy. Those most aware of it are involved in business process re-engineering and mapping and the documentation of tacit knowledge.
- b. Most people are aware of the general issues surrounding it, but it hasn't always been expressed.
- c. There are pockets of awareness, but overall it is low and KM principles are not necessarily being applied.
- d. The level of awareness is considered low, possibly as people don't recognise the term, but may instead see it as information management, personal development or skills development and perhaps there is a degree of resistance to it. KM though may be influenced by the recent introduction of job families within the organisation as there is an emphasis here on continuous professional development, potentially supporting knowledge transfer better.
- e. Time spent with partner organisations was considered to be more likely to stimulate sharing (as the practical requirements of sharing minutes of meetings for instance becomes important), enabled by shared folders on dedicated websites.
- f. The current level of awareness is not high.
- g. There are high levels of awareness within the Modernising Government team as they are involved in content management (intranet and website). There is however a general lack of awareness of the use of KM technology tools (such as the intranet).

2.2 At what level and where has it found expression?

- a. It is probably a phrase heard of at supervisor level and above. It will also have found expression in the groups that have been formed to take forward BPR

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(Business Process Re-engineering) exercises for an Electronic Document Records Management System and Planning portal. So those members of staff involved in the workshops and invited to participate will be involved in KM activity.

b. There are number of examples from the community planning partnerships of what might be called KM, though it hasn't necessarily been defined as such. This is an area where there is a need to share information between partners in order to improve service delivery. Two examples are the single shared assessment in Social Work and the problem-solving unit in the community safety partnership. In the first example, older people when leaving hospital were being interviewed by a range of services. This process however was redesigned and now there is a single questionnaire used to capture the information for the various services. An IT system was developed which allows each partner access only to the information relevant to them. In the second, the problem-solving unit is a team that determines which services should be applied to specific problems, such as anti-social behaviour. Through the council's housing department, neighbourhood wardens discuss issues with residents and record details which can then be fed to the police for tactical assessment of situations. This though is a two-way process, with the police on the beat feeding back any issues to the housing and social work departments. This required a number of changes to the way information was recorded, with for instance the police now recording on a local authority ward basis, rather than on a police beat geography. Ensuring that information was recorded as co-terminus was an important starting point for this multi-partner approach and has helped reduce anti-social behaviour in some neighbourhoods.

c. It has found expression at a low level, as there is no holistic approach within the organisation. There are parts of the organisation, such as within Housing and Technical Resources that employ KM principles without either knowing it or stating it.

d. KM has not found expression explicitly within the council. If it has at all it may be articulated through external validation in the form of the various awards it receives: IIP (Investors In People), SOLACE (Society of Local Authority Chief Executives and Senior Managers) and those from professional bodies like the RTPI (Royal Town Planning Institute).

e. It is perhaps becoming more evident when dealing with external bodies and partnerships. One example cited was the Clyde Valley consortium (eight local

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authorities from the west of Scotland) which has received funding for workforce training for an e-learning programme through the Scottish Executive's Efficient Government Fund. One of the requirements of the funding is that knowledge from this initiative is shared in a public forum.

f. It may have found expression at a strategic level within IT and those looking at customer services and improvement, but corporately it is probably through the Continuous Improvement Steering Group.

g. Modernising government, Shared services agenda, national initiatives (working in collaboration with other councils), IT delivery.

2.3 Who needs to know about KM in the council?

a. See 2.2

b. The interviewee felt it was about information sharing to improve service response. Therefore, those who are responsible for sharing/holding information and passing it on to others should be aware of KM.

c. There should be a general awareness amongst everyone, but it needs to be deconstructed for different audiences so that different levels within the organisation can get the appropriate introduction to it, ie for frontline staff, supervisors and 'experts' - as was done with the introduction of processes to deal with information requests under FoI etc. Any awareness raising needs to explain the potential benefits.

d. Expressed the view that if KM was allocated as a function to one department, then it would be perceived that KM was 'done' by that department and no-one else in the organisation would need to concern themselves with it.

e. Employees should be encouraged to use KM tools, but they don't need to know the theory behind it.

f. Everyone should know about it, but this should relate to the implementation stage of improved services.

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g. Everyone, KM is a point of reference, independent of line management. It is perhaps middle management that are most aware of it.

2.4 Can there be a one-size-fits-all approach to KM or has it to be defined to meet or suit individual organisational (or departmental) needs?

a. There should be a two strand approach. Firstly there should be a lead from the centre of the organisation at a strategic level, forming the high level aspirations for KM. However, a more tailored/structured approach for each department would also be required, and not a one-size-fits-all.

b. Any approach has to be designed to recognise the relationship with and needs of other partner organisations. For example, health information has to consider the protocols for patient confidentiality. Each has to be defined to meet organisational requirements.

c. No, there cannot be a one-size-fits-all approach to KM. It needs to be tailored to the needs and culture of the department, as it is largely a new concept.

d. Considered that KM systems are possibly determined to an extent more by the influence of external bodies (Scottish Executive, HM Inspectorate of Education) rather than internal drivers. Structures and systems will therefore be determined by these down to the lowest level. The other main influence is budgetary, such as following the public pound. However, the interviewee wondered whether local government was good at understanding the outcomes. Potentially there is little scope for KM as councils are constrained by these external influences, though the single outcome agreement may act to free this up.

e. An overall commitment to do it may need to be articulated at the corporate management team, but there should be a range of ways of implementing it.

f. Through appropriate guidelines and standards there could be in principle a one-size-fits-all approach, but in practice in a large diverse organisation there should be scope to tailor the approach.

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g. No, but there should be a standard/shared framework with acknowledged best practice.

2.5 Are there any parts of the council with strong sharing cultures?

a. There are some parts of the council with strong sharing cultures. But there is the problem of diversity in such a large organisation and sometimes it is difficult to know who or which groups to share with. Overall, the council has a good sharing culture, which comes from the top-down. However, there are sometimes silos within the organisation as a result of demands for non-interference.

b. Yes, there are some parts of the council with strong sharing cultures - such as in social work and housing. There have also been technology tools developed to aid sharing amongst the community planning partners, via a website and the development of a local intelligence/information system called NIP and TUC (Neighbourhood Information Profiles and Tracking Univariate Change) available on the community planning website. In addition to the council, partners such as the police now want to add their information to this largely geodemographic information. There is also a network of community planning officers which pulls together information under the Improvement Service website.

c. There is perhaps not a strong inter-departmental sharing culture, with some potentially being a bit territorial. However, there is perhaps a strong sharing culture at individual officer level.

d. Considered that a number of organisational silos still exist, partly as a result of professional boundaries and demarcations, partly due to legal barriers over the release of certain types of information (eg Annual Business Enquiry) and partly as a result of legacy issues, tied up with the record and information management systems inherited over 10 years ago.

e. Some examples of strong sharing cultures are: the equal opportunities working group (where there is collaboration and not competition and common goals of gender and race equality), personnel managers (a professional grouping) and, to a lesser extent the leadership development group (teams of senior managers given specific tasks focused on making improvement recommendations).

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f. Within Housing and Technical Resources (the interviewee's department) as sharing drives their business, seeing themselves as highly customer orientated. Additional places would include Corporate Resources as that is part of their role.

g. There are a few: IT, project offices (such as Mod Gov), those involved in national initiatives (where SLC is leading occasionally) and perhaps within the business systems teams, such as in Enterprise Resources with the national planning portal.

2.6 Where is knowledge systematically captured? (For example: senior management, middle management, team leaders, employees, daily experiences, lessons learned through projects, customers, suppliers, competitors, benchmarking, other)

a. Knowledge is systematically captured at all levels. It is also captured specifically through best value reviews.

b. Knowledge is systematically captured through daily experiences by neighbourhood wardens, while lessons learned are shared via the community planning website.

c. A lot of this tacit knowledge is captured at these levels by all these means, however unless it is seen to benefit those who retain it, it may not always be readily shared. This can become an issue for succession planning, particularly when the knowledge base is very specific and has been built up over decades of experience. An example cited was the forthcoming retirement of records centre staff in the council archive unit. As the IT system in use does not fully capture where all records are stored, these staff members are being encouraged to document in more detail the locations of archive material. If not captured, this know-where will be lost to the organisation.

d. There is no 'system' that captures knowledge as such, but the interviewee raised concerns over a potential decline in the capacity of the organisation in policy development. Indeed, it was suggested that as people were promoted, retire or leave the council the knowledge base may be being eroded in this area, leading to intellectual capital becoming slowly diminished. This was equated with the danger of becoming a specialist. An area where knowledge was felt to be systematically captured was through benchmarking exercises. Certain families of council, as defined by COSLA, are compared on the basis of their KPIs (limited to headline

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indicators). The importance of informal networks was noted - or the knowledge of who knows where in the organisation certain knowledge might reside.

e. Systematically capturing knowledge can occur also within the formal networks in the council such as the equal opportunities network, heads of personnel and for instance through a writing group used to support the writing of Charter Mark applications, who share their experiences internally. Benchmarking - seen to refer to hard information, such as unit cost per service.

f. None selected.

g. All, though mainly at middle-management/team leader level and via lessons learned through IT projects.

2.7 How is tacit knowledge captured? (For example: inductions, appraisals, interviews, informal discussions, formal discussions, exit interviews, other)

a. Tacit knowledge is perhaps captured more through informal and formal discussions than other methods, but it is also captured through mentoring, work shadowing, team meetings, cross-Resource groups and the dissemination of new knowledge from external seminars (though there is no formal process for this).

b. All of these are used, though specific examples are: face-to-face interviews using individual household questionnaires undertaken as part of a community engagement process found pockets of deprivation which were not previously revealed (ie 60% of adults smoked in one pocket). The interviewee also pointed to the links between data, information and knowledge as important to the community planning partnership. Data in the form of census of population statistics and other performance statistics are interpreted to produce background papers on geographical areas and thematically. This information is then used to inform the community planning partnership and eventually forms new knowledge through discussion and deciding on what are the issues that will require action - the policy development process.

c. Tacit knowledge is captured through: appraisals - the PDR process, informal discussions - bumping into people in the corridors, exit interviews - which are very

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general and may not be effective in capturing tacit knowledge as they are not apparently designed with this in mind.

d. All but, as for exit interviews, the question was raised as to what is actually done with the information gathered. It was also felt that 'this council lives on meetings' and that there was probably an encouragement to keep these as tightly focused as possible, meaning that frequently they might not always be valuable learning experiences. The interviewee however encouraged his staff to attend meetings that they may not have a direct input into, but would learn as a result.

e. All of these, but also through evaluations, training courses ("happy sheets" and learning level evaluations). Pointed out that management information tends to be quantitative and not qualitative. Noted that there had been a slight increase in secondment activity which could also be a form of knowledge capture, and is one which works well. The example given was of front line managers being seconded into the corporate training unit, which enables them to share front line experience with those going through the council's training programmes.

f. Informal discussions, team meetings, the employee suggestion scheme (with front line processes being changed as a result).

g. Most of these, but particularly where formal project management is applied (Prince2) there are post-implementation reviews.

2.8 How is knowledge sharing and re-use facilitated? (For example: face-to-face, workshops, forums, multimedia presentations, divergent or convergent databases, mentoring or coaching, lessons learned from project groups, creativity techniques, discussion forums, training needs analysis, learning processes, other).

a. There are pockets of knowledge dissemination using these tools, but there are issues over how and when this is done. There could for instance be better use made of technology tools like the corporate intranet, developing discussion forums for example. [The council intranet holds content and documents, plus some online forms. It provides access to a searchable internal telephone directory and minutes and agendas of committees. Content and documents are loaded using a content management system, via a series of departmental information co-ordinators. Some

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content is also shared from the council website, driven back to appropriate locations on the intranet.]

b. All, but specifically workshops, forums, presentations, databases, lessons learned and creativity techniques.

c. Sharing and re-use is very effectively facilitated by face-to-face meetings, workshops and forums.

d. Facilitated face-to-face, presentations and through groups. However, certain information and knowledge is not necessarily disseminated and some will only go as far as it needs for decision making (say to the corporate management team) and no further.

e. Face-to-face, workshops, mentoring or coaching (not used so much as can be perceived as some sort of failure), lessons learned from project groups (felt this could be better used and exploring the use of action learning sets or groups with Education Resources), creativity techniques (not used so much as the authority tends to be risk adverse).

f. Workshops, forums, databases (for the QandA and CSC use MS Visio to capture business processes and amend them), mentoring or coaching (have a buddy system for new staff), monthly one-to-ones and quality audits on an individual basis.

g. Working groups, user groups, forums, post implementation reviews, lessons learned. It is triggered on a when-you-need-to-know basis. So giving them access to the tools to enable them to take this approach and engage in self directed learning is preferable to other techniques.

3.0 Emergence

3.1 How is KM emerging within this council? (For example: part of national initiatives/ mandated, top-down, bottom-up, middle-out, as part of a support mechanism to other initiatives/programmes/projects)

a. KM is being talked about but the interviewee was not convinced that it is emerging yet. It may be a by-product of other initiatives, but no-one has run with it as a driver for change within the council.

b. No view.

c. The Improvement Service was cited as an influence on the emergence of KM, though it was considered that it is not yet emerging.

d. Nationally. As for middle-out there may be a lack of capacity to see it might translate into a difference.

e. More as part of a national initiative and perhaps as part of a support mechanism, by default rather than strategically.

f. It is perhaps recognised as a term by managers and practitioners.

g. Participation in national initiatives and forums. Shared services - best practice, lean thinking and standards. SLC is not frightened to step outside national initiatives and try something new, often being asked to share lessons, post pilot/implementation.

3.2 What factors have influenced the emergence of KM in this council? (Internal, external)

a. The factors influencing the emergence of KM are primarily external, coming from the Improvement Service.

b. Lack of resources possibly.

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- c. Within the organisation it was felt that it would emerge more middle-out than top-down. It was considered that the Scottish Executive would influence the approach and acceptance of the concept.
- d. Primarily externally. If internal they might be financial and from personnel.
- e. External.
- f. External changes forced on the authority, noted the Customer First programme and shared services agenda. These haven't driven KM, but it could be seen as a means or mechanism to achieve objectives.
- g. See 3.1

3.3 What managerial support is there for KM?

- a. As there is no absolute process, support for KM will be based on individual viewpoints at this time. There is though no current formal support for it. This might potentially be via the PDR process. PDR - performance development reviews attempt to tie individual learning and training requirements with the higher level objectives of the organisation as expressed in its council plan, FourCast.
- b. Don't know.
- c. None.
- d. Some may see merits in parts of it, but there is a question over whether there is managerial support. May be a crunch - when intellectual capital dips too low.
- e. KM is not a priority, but there may not be resistance from managers to it.
- f. Not a great deal, though individual managers may see it as important. It is not high on the Council's agenda overall however.
- g. There may be buy-in from middle management at a framework level, but not necessarily at a delivery level. Noted that it is always easiest to drop those stages at

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the end of a project, such as lessons learned, but perhaps this should become a key objective.

3.4 Are employees in the council free to:

1. Prioritise their own learning agendas?

2. Self-organise into knowledge making groups (communities of knowledge, interest or practice)?

a. Employees are not free to prioritise their own learning agendas and there is a limited amount of freedom to organise into knowledge making groups.

b. Employees are free to prioritise their own learning agendas and within the community planning partnership there is freedom to organise into knowledge making groups, as people with common interests get together to do this.

c. The degree to which staff can prioritise their own learning agendas depends on the level they are at and perhaps on which department they are in - determining the latitude available. Employees are free to self organise into knowledge making groups, but this is not necessarily encouraged, as there may be a lack of awareness of the benefits it could bring.

d. 1. Within the job specification that employees have - yes. There may though be an issue when it is something outwith an employee's competence. Currently, this is all about 'doing your job better'. 2. No.

e. 1. Yes, because both professional and personal development is encouraged, though the commitment departmentally may vary. 2. Self organising into knowledge making groups is more common in some areas than it is in others, such as Social Work and (possibly) Education.

f. 1. No. 2. Partly, through managerial support.

g. 1. Should be encouraged to do this, but in practice more difficult to do, having to achieve a balance between personal and organisational learning objectives. 2. Yes, but felt the need for control of these, with defined life spans.

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3.5 Who gets to make new knowledge that is eventually used in the council?

(For example: councillors, senior management, middle management, team leaders, employees, clients/customers, suppliers, contractors, consultants, self-organised groups, other).

- a. This is still very piecemeal. Frequently, consultants will influence new knowledge that will be circulated within the organisation and possibly also the Citizens Panel. However, all those listed will influence the creation of new knowledge at various points in time.
- b. Within the community planning partnership middle management and team leaders.
- c. All those listed get to make new knowledge that is eventually used. Considered that councillors exert the most influence. Consultants were viewed as wielding a lot of power and could be a major influence.
- d. Main driver of management in reaction to external pressures. So new knowledge is frequently made when councils are given new duties or powers (such as ASBO legislation) which provide the opportunity for managers tasked with implementing policies to develop and learn how to produce a service delivery model.
- e. Senior councillors, senior and middle management. Consultants increasingly used to conduct research. Clients/customers through the consultation process. New employees - increasingly there has been a trend towards specialist posts and recruitment from within for senior posts.
- f. All to an extent.
- g. The source of new knowledge was identified as contractors/suppliers fed out to and through team leaders and middle management, promoted by senior management.

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3.6 Which tools are currently in use for knowledge sharing and re-use?

IT based:	People/learning based:
Email, instant messaging, web-based learning, workgroup software, project management software, web or intranet portal, blogs, virtual learning classrooms, wikis, knowledge repositories, knowledge maps/directories, expertise locators, best practice catalogues, lessons learned databases, other	Problem solving (exit interviews and mind mapping), organisational learning approaches (After Action Reviews, project reviews and 'baton-passing'), organisational design approaches (virtual teams, coaching and mentoring), Cultural approaches (identifying intellectual capital and building communities of practice), other.

a. Email, web-based learning, project management software, web or intranet portal, best practice catalogues. Exit interviews, After Action Reviews (post-implementation reviews within IT), virtual teams, possibly communities of practice in some areas.

b. Email, web-based learning, project management software, web or intranet portal, best practice catalogues. One example of project management software being CoreVu - piloted in Housing and then community planning. Uses a traffic light system to track tasks to see whether they are on target or not. Individually in use was mind-mapping, organisationally virtual teams and culturally communities of practice. The interviewee also acts to forward relevant content to individuals and networks.

c. IT based: Email, web-based learning, web or intranet portal, best practice catalogues. People based: Exit interviews, mind mapping (perhaps more on an individual basis).

d. Email, project management software, web or intranet portal. Exit interviews, baton-passing, cultural approaches possibly linked to professional bodies.

e. Email, web-based learning, web or intranet portal (Improvement Service website). Exit interviews, coaching and mentoring (should use more often), peer-review also undertaken as part of the front line managers training programme.

f. Email, project management software, web or intranet portal. Exit interviews - though not sure if they are used for knowledge sharing. Some project reviews, but evaluation of lessons learned is weak.

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g. Shared folders, email, SLC intranet (shared content management system for this and website), ESD toolkits (SNL, FAQs, forms), BPR toolkits, Customer First - Improvement Service portals specific to national projects, Public sector forums, OSIAF (open Scotland Information Age Framework portal). Person based: PDR, PMA (standard framework for delivery and reporting of IT projects/includes post implementation review/lessons learned/impact assessment on standards, Business change/centre of excellence (consistent approach to business change throughout IT services, standardisation of tools, techniques and skills in the execution of business change elements of IT projects, consistent and transparent management of business change), OGC -procurement framework.

How satisfactorily does the use of technology facilitate learning transfer?

a. For those who are IT literate, technology can be very satisfactory in facilitating learning transfer. However, this is very much dependent on personal preference and learning style. The Council's code of practice in the use of IT equipment may also act to prevent or limit learning transfer.

b. Very satisfactory -as there is immediate access.

c. Mixed satisfaction.

d. Satisfactorily when related to specific sets of information, but not when dealing with 'soft information'.

e. Problematic.

f. Fairly satisfactorily.

g. Usage only as good as marketing.

How satisfactorily does the use of people based approaches facilitate learning transfer?

a. People based approaches are very satisfactory in facilitating learning transfer, but they are not widely used.

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b. Possibly less efficient and satisfactory - given the time required to arrange face-to-face meetings.

c. Again mixed, pockets of which are very satisfactory in facilitating learning transfer.

d. More satisfactorily than technology. Can shortcut processes and do get the 'softer' aspect. Felt that people-based approaches could become more and more important.

e. More effective.

f. Not well/satisfactorily.

g. Coaching and mentoring (and core competencies) work best in staff development. Thus, it depends on who is driving this.

3.7 Is knowledge management linked to employee advancement? (Optional question)

a. Possibly.

c. No/ not aware.

e. KM can be linked with employee advancement, but is not explicit with the performance development review process, though might be considered to there implicitly already.

f. No.

3.8 Is there a KM strategy or does it form part of another strategic approach? (Optional question)

a. No.

b. No.

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c. No KM strategy, but encapsulated elsewhere as there are pockets of good practice. Considered therefore that the foundations at least exist for a strategy. The council is currently attempting to introduce an information management strategy, which in its early versions made explicit reference to knowledge as an asset. Later versions restricted this more to addressing issues of compliance and information standards, focusing on policies dealing with information, records management and Fol.

d. Not really. Overall priorities are set by council members and there is always the possibility that objectives could change after the elections on 3 May 2007.

f. No.

g. Probably should be linked to all strategic initiatives. Argues for an embedded approach.

4.0 Progress

4.1 Is it important for this council to understand at what level of KM maturity it is at? Why?

- a. Yes, it should understand at what level of KM maturity it is at, as until this happens it has nothing to base its progress/development on.
- b. Yes, if it is becoming part of the strategic approach by the council.
- c. Yes, if it is to be taken forward.
- d. Yes. One basic set of information which eventually becomes actionable knowledge are the various forecasts of population and employment levels used for long term planning, such as the implications of an older/aging population.
- e. Considered that understanding at what level on KM the organisation is at may be a prompt for action.
- f. On the basis that you want to develop it, then yes, as you need to know where you are before you can proceed. Allows barriers to be identified.
- g. A time series comparison would be valuable.

4.2 What have been the main barriers to successful KM in this council? (Group under organisational, technological and people factors)

- a. The main barrier is the lack of an obvious lead, the skills required to implement it and an understanding of the benefits. There is also a lack of central government focus and funding to support this area. The main internal barriers are cultural and political factors
- b. Lack of awareness is the main barrier.

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- c. The main barrier is culture. Change may be embraced in some areas but not in others, particularly if there is a low level of turnover. Suggested there may be a 'council mindset' with those in post longest possibly resistant to change. This may though equally affect areas where there is a high staff turnover, as they might not stay long enough to contribute.
- d. Organisational barriers: silos - services are very focused on service delivery, but not on future pressures/drivers. Technological barriers: yes, certain IT systems. Shared services could deliver KM as if more councils have similar systems then it would be easier to ignore council boundaries.
- e. Organisational: doesn't encourage engaging with others much. Technological: at a practical level the council can't do video streaming which would enable just-in-time training [due to technical constraints of insufficient bandwidth on the local area network].
- f. Main barrier is cultural; interviewee considered that silos still operate in the council.
- g. Getting the business case is the main barrier, so both organisational and people. The debate will be over the ownership of KM. The example cited was that of the implementation of the customer service centre, which bedded in technically, but the ownership became a 'hot-potato'.

5.0 Measurement

5.1 What measurement systems are currently used to monitor and report improvements in organisational efficiency?

a. The systems currently in use are corporate PIs and the improvement plans developed from best value service reviews. This though may be more monitoring rather than actual measurement. Efficiency is also measured individually through the PDR - a point where key work objectives are being assessed and whether they have been achieved.

b. Within the community planning partnership there are 28 KPIs. The themes with which partnership works are engaging with the community and equal opportunities. When and how often they report is up to the partnership. KM would become part and parcel of this process.

c. The Archive and Information Management Service currently uses performance management indicators, for instance within their Service Level Agreements.

d. Few if any are in place, but those that are specific to headline activities (eg absenteeism), some on customer satisfaction and others on KPIs.

e. These include a range of performance indicators (KPIs, SPIs and local indicators), customer satisfaction (measured piecemeal, but not for the whole of the council). Currently looking at the CorVu performance management system to track performance indicators (CorVu, 2007).

f. Best value, Performance management framework, KPIs and targets, budgetary targets (Financial efficiencies group - Council wide and at Resource level).

g. IT is audited internally and externally (by Audit Scotland).

5.2 Should this council attempt to measure the impact of KM? Why?

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- a. The council needs a KM base level to understand where it is. It should measure as the organisation would want to see the impact of any 'solutions' introduced. One potential indicator might be level of take-up in the new e-learning pilot project.
- b. Possibly should not attempt to measure the impact of system, but should focus on service delivery (statutory PIs) and business objectives.
- c. Felt that it would be difficult to measure the impact of KM, possibly as it is too soon to measure things - relates to the level of KM maturity of the organisation.
- d. There is a difficulty over the definition of KM and therefore the approach to measurement. The interviewee suggested that the council could look to existing tools (exit interviews, mentoring and lessons learned) and the extent to which these are used to support knowledge transfer and organisational learning.
- e. Important to do if KM maturity is first baselined.
- f. You would want to see the improvements and efficiencies it brings, if KM was introduced.
- g. Yes.

5.3 What measurement systems might be/are used to monitor/report on it?

- a. It could be driven by KPIs and the best value regime, which might be widened to see if KM can improve this. Thus, existing measurement systems should be co-opted or adopted.
- c. One potential measurement system is the Balanced Scorecard. Not too sure about the use of specific KM systems/IIP or Charter Mark.
- d. Considered that with the increased emphasis on customer-centric service delivery, which could lead to a re-definition of how certain services are delivered (social care example) there could be a role for KM in developing market intelligence and sharing this within the organisation.
- e. Charter Mark and IIP, those commitments in the council plan (FourCast).

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f. Considered that rather than introduce a specific KM approach, that measurement should be tied to existing business processes and use currently collected indicators as much as possible.

g. One approach might be to use the CorVu system which can monitor current management information and indicators and hence effectiveness.