



Understanding the value and benefits of establishing and running a local information system



Understanding the value and benefits of establishing and running a local information system

January 2010

Paul Foley, Ximena Alfonso, Ian Wiseman, David Sutton and
Cristiano Cordagnone, Tech4i2 Ltd
Department for Communities and Local Government

The findings and recommendations in this report are those of the authors and do not necessarily represent the views of the Department for Communities and Local Government.

Department for Communities and Local Government
Eland House
Bressenden Place
London
SW1E 5DU
Telephone: 0303 444 0000
Website: www.communities.gov.uk

© Queen's Printer and Controller of Her Majesty's Stationery Office, 2010

Copyright in the typographical arrangement rests with the Crown.

This publication, excluding logos, may be reproduced free of charge in any format or medium for research, private study or for internal circulation within an organisation. This is subject to it being reproduced accurately and not used in a misleading context. The material must be acknowledged as Crown copyright and the title of the publication specified.

Any other use of the contents of this publication would require a copyright licence. Please apply for a Click-Use Licence for core material at www.opsi.gov.uk/click-use/system/online/pLogin.asp, or by writing to the Office of Public Sector Information, Information Policy Team, Kew, Richmond, Surrey TW9 4DU

e-mail: licensing@opsi.gov.uk

If you require this publication in an alternative format please email alternativeformats@communities.gsi.gov.uk

Communities and Local Government Publications
Tel: 0300 123 1124
Fax: 0300 123 1125
Email: product@communities.gsi.gov.uk
Online via the Communities and Local Government website: www.communities.gov.uk

January 2010

Product Code: 09ACST06170

ISBN 978-1-4098-2054-3

Contents

	Executive summary	5
1.	Study objectives and structure of the report	9
	1.1 Background to the study	9
	1.2 Study objectives	10
	1.3 Specific objectives and results	10
2.	The context for exploring the costs and benefits of LIS	12
	2.1 Introduction	12
	2.2 The role of LIS in making better decisions and in producing better outcomes	12
	2.3 The policy context: Local Area Agreements, the Review of Sub-national Economic Development and Regeneration, and the 2008 empowerment white paper	13
3.	Methodology	15
	3.1 Introduction	15
	3.2 Background conceptual issues: The value of information	15
	3.3 The approach adopted for the study	17
	3.4 The authorities selected for the study	18
	3.5 Quantifying the magnitude of system benefits	19
4.	LIS and PMS costs and integration	21
	4.1 Introduction	21
	4.2 LIS development and running costs	21
	4.3 PMS development and running costs	22
	4.4 LIS and PMS integration	24
5.	The role and benefits of LIS and PMS in policymaking and the development of Local Area Agreements	26
	5.1 Introduction	26
	5.2 The role of LIS and PMS in policymaking	26
	5.3 The development of Local Area Agreements	27
6.	LIS utilisation and perceived user benefits	29
	6.1 Introduction	29
	6.2 LIS use and benefits for local authorities	30
	6.3 LIS use by Local Strategic Partnerships and other public sector organisations	31

6.4	LIS use by citizens and local community and voluntary groups	33
7.	The financial benefits of LIS	36
7.1	Introduction	36
7.2	Survey response: A note of caution	36
7.3	LIS use and time savings	37
7.4	Time savings achieved by LIS	38
7.5	Estimating the monetary value of LIS	40
7.6	Perceived values of LIS	41
8.	Conclusions and recommendations	44
8.1	Introduction	44
8.2	Conclusions and recommendations	44
	Appendix 1: Methodology – further information	48
	Appendix 2: LIS Manager Questionnaire schedule	59
	Appendix 3: The online LIS user questionnaire	71
	Appendix 4: Additional examples of the use of information provided by LIS	74
	Appendix 5: Bibliography	76

Executive summary

- 1.1 This study provides a better understanding of the *value and benefits of establishing and running a Local Information System*. A study in 2007 found 72 local information systems (LIS). LIS enable the analysis of local information. They are normally, but not exclusively, externally facing websites provided by local authorities and their partners that allow users to interrogate, map, analyse and download local and national datasets.
- 1.2 The primary objective of the study was to explore the potential costs and benefits to local authorities and/or local partnerships of implementing LIS, and thus to provide a framework for local authorities to come to a reasoned decision as to if, when and how to develop their own LIS. This has been raised as an issue about which those developing LIS would value greater clarity.
- The study focused on three areas:
- i. to understand how LIS can perform effective functions within the context of other systems and services provided within a local authority or Local Strategic Partnership
 - ii. to illustrate the benefits realised through the use of an LIS
 - iii. to analyse the costs and savings that can be achieved for local authorities and their partners if they establish and run an LIS.
- 1.3 The research was undertaken using three core components that addressed the key objectives for the study. These three components provide the opportunity for triangulation to ensure that findings are consistent and robust. The study interviewed 23 local information and performance management system staff and 61 system users. Two hundred and four users completed an online questionnaire about LIS use and value.
- 1.4 Twelve authorities and partnerships were selected for the study. Three selection criteria were adopted, these were:
- i. the level of integration between LIS and performance management systems (PMS)
 - ii. participation in the Local Area Agreement (LAA) dry run pilot exercise in 2007
 - iii. representation of two different types of LIS – those providing a service (through staff assisting users) and those that are primarily an online system (a portal with little support for users).
- 1.5 The average annual running costs for the 12 LIS in this study was £63,000, with a range between £12,000 and £158,000. The largest single cost at all systems was staff; on average this contributed just over 80 per cent of total running costs. When asked what could be done to decrease costs more than

half of the LIS managers said 'nothing'. Suggestions to decrease costs mainly focussed on decreasing the time taken to input data

It was also found that off-the-shelf systems appear to offer cost advantages over the development of bespoke systems. The average development cost for bespoke systems was £95,000, annual licences for off-the-shelf systems ranged from £2,500 to £10,000 although they also incur additional procurement and set up costs.

- 1.6 The first PMS was introduced in 2003 in the authorities interviewed. In all except one authority PMS were introduced after LIS.

The PMS market appears to be a direct contrast with the LIS market. All the authorities interviewed had adopted off-the-shelf PMS systems. The adoption of off-the-shelf systems reduced the average development costs for PMS to £43,000 in comparison with LIS development costs of £95,500. Average running costs are also lower than for LIS systems at £49,000 (LIS running costs are £63,000).

The annual software and licence costs for PMS systems range between £3,500 and £15,000. However, it was suggested in interviews that some authorities were paying significantly different licence fees for exactly the same product.

- 1.7 Amongst PMS managers there was greater interest in integrating PMS with finance systems than there was with LIS. Managers suggested integration with finance systems would enable expenditure to be better linked with performance and budgetary planning could be enhanced.

Off-the-shelf LIS, PMS and finance systems are, however, rarely compatible and this can make integration difficult. Some observers have suggested that the CLG data interchange hub is becoming the de facto standard against which all LIS, PMS and finance systems will have to become compatible. The hub could therefore be a catalyst in establishing interoperability standards between systems.

- 1.8 Respondents were asked to identify the potential time savings from use of these information systems. Users who knew of an alternative source estimated that it would have taken them 19.7 minutes longer (than the 16.6 minutes they spent obtaining the information they required in their visit to the LIS) to find the information they required from alternative sources. By utilising the average time saving estimate from this group and multiplying it by monetary values per hour using HM Treasury Green Book methodologies it was possible to calculate a monetary value for the time saving provided by LIS of £142 per unique LIS visitor per year.

This is, however, considered to be a conservative estimate because users who knew of other information sources spent less time using LIS than the average LIS user. The average user would probably achieve a time saving of 14 hours a year; this would equate to a time saving value of £210 per unique LIS visitor per year. These two values (£142 and £210) are therefore suggested

as the range of values that can be used to estimate the value of time-savings per LIS visitor per annum.

- 1.9 For an average system with annual running costs of £63,000 per annum the break even point for the number of unique repeat users is between 300 and 442 users per annum.

The minimum number of users of a LIS in this study was 900. We estimate, after taking into account running costs, that this LIS is creating net benefit of more than £100,000 per year. The maximum number of users of a system in this study is 4,300. The net benefit created by this LIS is more than £500,000 per year.

- 1.10 An online value assessment tool, which utilises the range of values calculated in this study, has been developed to enable LIS managers to calculate the value of their systems. The tool can be found at www.esd.org.uk/LIS-value-assessment

Recommendations

The final chapter of the report provides an overview of key conclusions and makes eight recommendations to enhance the understanding, cost-effectiveness and utility of existing and potential new LIS.

Recommendation 1

The LIS Value Assessment Tool should be utilised by LIS managers considering adopting or developing LIS to better understand the current or future potential net benefit of their systems. The tool enables the impact of different cost options to be calculated and it will provide valuable information for those investigating the business case for LIS.

Recommendation 2

The magnitude of the monetary value of time savings created by LIS should be communicated by CLG and delivery support partners such as the Regional Improvement and Efficiency Partnerships and/or an LIS managers group to ensure existing systems receive continued or enhanced support and new systems are created.

Recommendation 3

LIS managers should be encouraged to collect more detailed information about users or the number of hours systems are utilised. This will enable them to calculate more easily the value of their systems using the methods developed in this study.

Recommendation 4

The list, throughout chapter six, of ways in which LIS intelligence has been utilised should be enhanced and developed as an online 'living' document (that can be enhanced by contributors) so that it can inform current and potential users about the wide variety of ways in which LIS can be beneficial.

Recommendation 5

LIS managers should seize opportunities for data-sharing and the integration of analytical resources between local authorities and Local Strategic Partnerships, police, Primary Care Trusts and other local data providers. This should enhance mutual understanding of local circumstances, problems and opportunities.

Recommendation 6

LIS, PMS and finance systems should be encouraged to adopt common interoperability standards so that they can be integrated more easily within a partnership and between partner organisations.

Recommendation 7

LIS and PMS managers should consult other authorities using off-the-shelf packages they are considering purchasing so that they can examine system usability, utility and costs. It has been suggested that differential pricing policies may be adopted by vendors for similar off-the-shelf systems.

Recommendation 8

LIS managers should be encouraged and supported to adopt and share good practice in the XML data downloading capability provided by the ONS.

1. Study objectives and structure of the report

This is the final report for the study to *Understand the value and benefits of establishing and running a Local Information System*. This report will support the activities of Local Information System (henceforth LIS) managers and administrators. It also provides information useful to individuals and organisations utilising LIS and to those contributing intelligence to LIS. Survey results will also be of interest to central, regional and local government organisations interested in evidence based policy making and service delivery.

This introductory section provides a background to the study, the objectives for the research and outputs from the study.

1.1 Background to the study

Communities and Local Government (CLG) and its partners are supporting the use of LIS to enable evidence-based decision making. CLG is building on previously commissioned research through the development of an online better practice network (www.esd.org.uk/esdtoolkit/Communities/LIS), and has developed a toolkit to assist the successful development of LIS. Through this research the business case for LIS development is being examined.

LIS are normally, but not exclusively, externally facing websites provided by local authorities and their partners that have a focus on meeting the data requirements of local policymakers and citizens. They enable users to interrogate, map, analyse and download local and national datasets. The key shared characteristic is that LIS enable the analysis of local information, a working definition of which is:

[Local information is] performance data and contextual information that may be collected at a national level or at a local level (e.g. demographic, environmental, economic or attitudinal data). Local information is used by one or more local public service bodies to measure performance, identify priorities for improvement, set targets and inform local citizens about the performance of their local service.

A study in 2007 found 72 LIS (Foley et al, 2008). There had been considerable change since a previous study 18 months earlier (Communities and Local Government, 2007). More than a quarter of the 72 systems had been created (developed or revised) in the intervening period.

1.2 Study objectives

The primary objective of this study was to explore the potential costs and benefits to local authorities and/or local partnerships of implementing LIS, and so provide a framework for local authorities to come to a reasoned decision as to if, when and how to develop their own LIS.

The project also mapped synergies and potential synergies between LIS and other systems (especially Performance Management Systems; henceforth PMS) and demonstrates the benefits and potential benefits of system interoperability.

The study focused on three broad areas. First, understanding how an LIS can perform effective functions within the context of other systems and services provided within a local authority or Local Strategic Partnership. Section four focuses on the utilisation of information from systems and section five investigates the integration of LIS, PMS, finance systems and other datasets held by partner organisations.

Second, illustrating the benefits realised through the use of an LIS. For example by showing how the use of LIS has directly impacted the way in which a service is delivered, policy is developed, grants are gained and funding is delivered. Section six of this report identifies where LIS make a real difference.

Third, and most important, developing an innovative methodology (in section seven) to analyse the costs savings that can be achieved for local authorities and their partners if they establish and run a LIS. This is investigated in section seven.

1.3 Specific objectives and results

Introductory sections of the paper provide the context for the development of LIS and PMS and an introduction to the methodology adopted to overcome difficulties encountered by previous researchers in providing a financial value for information.

Section four provides an insight into the costs of LIS and PMS systems; this enables potential system developers and existing managers to benchmark their systems and consider the impact of changes in operating activities. It investigates synergies that can be created by integration. It also examines technical and practical barriers to closer working and proposes recommendations to overcome them.

An important catalyst to the development of LIS and the integration of LIS and PMS has been the introduction of the new Performance Framework and the development of Local Area Agreements (LAAs) in England. The use of LIS by Local Strategic Partnerships to develop LAAs provides a unique opportunity in section five to investigate how LIS were used for a single

purpose. This overcomes the 'situation specificity' problem that has plagued previous studies (Repo, 1989) investigating the value of information.

Every participant in the study was asked to provide details of the most significant contribution an LIS had made to their job or personal activities. Section six provides an overview from more than 280 respondents of the way LIS information has been utilised at all stages of the policy making process – strategy development, policy implementation and performance management. This section provides a valuable insight for managers and users into the extensive and innovative way LIS information is utilised.

Finally, the study concludes with a presentation of three different methods for investigating the financial value of LIS. These methods and an online Value Assessment Tool: www.esd.org.uk/LIS-value-assessment enable LIS managers to calculate the value of their systems and examine the way changes in costs and the number of users affect the value of their systems.

The study concludes that the break-even point for an average LIS, with annual running costs of £63,000, is between 300 and 442 unique repeat users per year. This very conservative method only provides an estimate of the value for the time saved by using LIS instead of going to alternative sources. As this study shows, most users would suggest this is a very conservative estimate because they perceive a far higher value for the information and support provided by LIS.

2. The context for exploring the costs and benefits of LIS

2.1 Introduction

This section provides a background to the development and growth of LIS and their importance in a policy-making context. This is a highly topical and fast-moving area. For example the Audit Commission published *In the Know* in February 2008; a discussion paper on the use of information to make better decisions; and the *Communities in Control* white paper, published in July 2008 highlighted the need to improve the information available to local citizens (Prime Minister's foreword, p. i). These two documents highlight the important role that LIS can play for policy makers and citizens in improving their understanding of local neighbourhoods and circumstances.

This section focuses on two important background issues concerning the role of LIS. These are the role of LIS in making better decisions and in producing better outcomes and the policy context for LIS.

2.2 The role of LIS in making better decisions and in producing better outcomes

Two previous studies of LIS (CLG, 2007 and Foley et al., 2008) provided a good understanding of the characteristics, role and benefits of LIS.

In the Know (Audit Commission, 2008) highlighted a number of observations and recommendations about the role and importance of information in policymaking. These include:

- using information well in decision making leads to better local public services
- different decisions require different information, and judging what information is relevant for a decision is not easy
- aggregating information (for example over geography or time), using a range of information from different sources, and sharing information, will generate a fuller picture
- data should be captured once and used numerous times
- decision makers need to be able to identify the information they need and to interpret it accurately
- those who make important decisions about local public services should demand better and clearer information

- public bodies need to evaluate whether their information is fit for purpose and used to best effect.

The primary role of most LIS is to achieve these and other goals. The Audit Commission report (2008) also went on to identify a number of constraints or barriers that LIS can help to address. These included:

- relevant, good quality, information will not help decision makers if they cannot understand it
- how information is presented, and what story it helps to tell, can affect the decisions based upon it
- those providing information need strong analytical and presentation skills
- evidence suggests that these skills are in short supply.

As this study emphasises LIS and their support staff provide a key resource in many authorities and partnerships to signpost available data, to assist with analysis and interpretation and to help citizens and policy makers to understand data and information. Indeed, this study provides numerous examples of how LIS have led to better understanding, better decision-making and better services.

Eighty-four (of the 179) variables on systems are known to be available from central government sources (CLG, 2007). However, only 45 of these data sets have information at a fine geographical level of detail and 21 of these are becoming dated because they were collected as part of the 2001 Census. Our 2007 LIS study found that only 22 of the variables from central government agencies (utilised by systems) provided data for 2004 or later at the fine degree of detail required to monitor neighbourhood change. These shortcomings have encouraged system managers to find additional local data. Indeed, on most systems the majority of the 179 variables found have been locally sourced from partners. Collecting data from partners enables users to obtain information that might otherwise not be available or remain hidden. As this study shows this is an important role that is valued by users.

2.3 The policy context: Local Area Agreements, the Review of Sub-national Economic Development and Regeneration, and the 2008 empowerment white paper

The local government white paper *Strong and Prosperous Communities* (CLG, 2006a; 2006b) set out the new local authority performance management framework that was introduced in 2008. A key component within the regime is evidence based policy making. Indeed, the white paper was a catalyst for the support of LIS (para 6.27) and LIS are expected to be a key component in informing policy making under this regime.

Local Area Agreements (LAAs) will form the key vehicle for the delivery of national and local outcomes at the local level and provide the basis for a single local authority performance management framework. HM Treasury highlight that “all central government funding for local authorities will be in support of the outcomes defined through targets and indicators in LAAs, giving local authorities considerable flexibility in how they use their resources” (para 2.7; HM Treasury, 2007).

Local government is responsible for many other services and activities not directly reflected in the national indicator set. But nonetheless the new approach represents a step change in local policy making. From April 2008, all other sets of indicators, including Best Value Performance Indicators and Performance Assessment Framework indicators, were abolished. The national indicator set of 198 variables are the only measures which central government use to performance manage outcomes delivered by local government working alone or in partnerships (CLG, 2007a).

Local Area Agreements are also an important component identified in the *Review of Sub-national Economic Development and Regeneration* (HM Treasury, 2007).

The two strategic reports (CLG, 2006a; HM Treasury, 2007) have overlapping themes. These include:

- use of a robust evidence base
- innovative and responsive service delivery
- flexible policy making.

The first two of these themes are very important in the context of the proposed study.

The primary focus of the 2006 local government white paper is on enabling local service providers “to give citizens and communities a bigger say; to enable local partners to respond more flexibly to local needs; and to reduce the amount of top-down control from central government” (CLG, 2006a, page 7). This focus was further emphasised in the introduction to the 2008 empowerment white paper (CLG, 2008, p2) that stated government would introduce a – “new duty to promote democracy to help councils promote involvement through clearer information”.

LIS clearly have a key role to play in communicating data and information to both policy makers and citizens. Indeed, previous research (CLG, 2007) found that many LIS managers were initially surprised at the relatively high levels of use of their LIS (largely designed with a policy maker focus) received from citizens.

3. Methodology

3.1 Introduction

This chapter provides an overview of the approach adopted by the study. A more detailed methodological and conceptual overview can be found in Appendix 1.

3.2 Background conceptual issues: The value of information

Many LIS system managers have requested an investigation of the value of LIS (CLG, 2007). They believe a better understanding of the benefits of LIS will demonstrate the importance and utility of systems to those that fund them and this might help to secure their long-term future or provide additional resources to better undertake activities. It is important this goal is achieved and a clear picture emerges of the benefits and value of LIS.

However, this will not be easy. Systems are used by a wide variety of users for many different activities. Taylor (1986) highlighted the crux of this difficulty:

“The value of information has meaning only in the context of its usefulness to the user.”

LIS have a wide variety of forms, they provide information in different ways (due to software and supporting activities or services), to a large number of different users who utilise the information for strategic, operational, managerial and performance activities for organisational or personal purposes. Individual items of information on a LIS may have a huge value or utility to one user; but be totally worthless to another. This is the **situation specificity** problem. For example information that has considerable value when writing an important report or bid document one day may have negligible value after a submission deadline has passed.

In the public sector, costs associated with making the wrong decision are usually unknown or obscure. The Audit Commission (2008) has highlighted “that using information well in decision making leads to better local public services” (*In the know*, p2). Whilst this is undoubtedly the case and there is a general consensus that this assertion is true, measuring the value of information or LIS is tricky.

Three basic themes emerge from a review of literature concerning the value of information; each provided a robust theoretical and methodological grounding for the study. The three primary concerns were:-

Organisational and resource management contexts: Previous studies have explored the role of information resources in enhancing organisational effectiveness. Broadbent (1992) developed methods to assess the value of information to specific users and the potential costs they would incur if they obtained the information by other means. These valuation methodologies have been replicated and enhanced in this study.

Costing, pricing and evaluation of information service provision: Increasingly, owing to economic pressures, librarians and information service managers are finding themselves in positions where they need to justify funding or they need to prove that they are providing better services (Koenig, 1992; Griffiths et al, 1994; Holt et al, 1999; MacEachern 2001). A similar situation exists for LIS managers.

Previous studies have developed detailed cost and benefit criteria for IT projects in government (Foley et al, 2005; Codagnone and Boccadelli, 2006) and these were utilised in this study. However, as Badenoch et al (1994) highlight it is not just a question of the purchase price of materials or the salaries of staff or the costs of various overheads. There is a cost in not having particular information and/or there will be costs if there is no information service.

Our study addressed this issue and the increased costs that might be associated by not having information or an LIS through two complementary methods. Firstly, by investigating how information is obtained (by policymakers) or provided (to citizens) in authorities or partnerships that do not possess LIS. Secondly, by asking users how much time, resource or money it would cost them to find the information provided by a LIS if it had not provided the information they accessed.

This approach enabled more detailed consideration of the 'do nothing' option as a baseline against which to compare the value and benefits for authorities and partnerships that do have local information or performance management or other systems (individually and working in tandem).

Social and cultural value of information: There is an additional dimension that has posed a further problem in studies examining the value of information. Libraries and LIS are seen in general terms as a 'good thing'. They provide social, educational and democratic value.

Previous studies (Foley and Larsen, 2007; Percy-Smith et al, 2002) have produced criteria to examine the context and utility of information when used by policymakers. These were utilised as Likert¹ scales in this study to collect subjective views about the user's personal and organisational socio-cultural context. This contextual information was essential to better understanding the organisational context (the importance of information and support for evidence based policymaking) and personal context within which information was provided by LIS.

¹ A Likert scale is a psychometric scale commonly used in questionnaires. When responding to a Likert questionnaire item, respondents specify their level of agreement to a statement.

The literature review emphasised a number of common themes that highlight the need to adopt a multi-faceted approach to finding the value of LIS. Further details about the theoretical underpinning and the approach adopted for this study can be found in Appendix 1.

3.3 The approach adopted for the study

The research was undertaken using three core components (face-to-face interviews with system managers, a telephone survey of users and an online user survey) that addressed the key objectives for the study (see Table 3.1). The three components provide the opportunity for triangulation to ensure that results are consistent and robust.

Face-to-face interviews with LIS, PMS and other system managers from 12 case study authorities were undertaken. Twenty-three respondents were interviewed using a questionnaire schedule (this is a series of questions which encourages additional discussion around significant issues), see Appendix 2. These interviews provided a thorough insight to LIS and PMS costs, roles, integration and benefits.

A telephone survey using a questionnaire schedule was used to interview 61 users of the case study LIS. The users were suggested to the study team by LIS managers. The interviews enabled a wide-ranging discussion about the role and benefits of LIS and the advantages that might arise from LIS integration with other systems.

The face-to-face and telephone survey interviews were undertaken using semi-structured interviews. This approach enabled standardisation in the comparison of interviews whilst at the same time allowing interviewees freedom to express their viewpoints and elaborate on answers to key themes. Analysis enabled the unique views of each interviewee to be examined as separate cases. Multi-step thematic coding was used to analyse and categorise common themes and responses from the semi-structured interviews.

The final component of the study was a **nine question online user survey**. Participation in the survey was promoted to managers of all 72 known LIS systems. The questionnaire provided a good insight to the benefits and value provided by LIS use. Two hundred and four users from 12 LIS took part in this study.

Triangulation and comparison between the three core components of the study (see Table 3.1) were undertaken to increase the robustness of analysis and highlight potential problems.

Table 3.1 Study objectives and the components of the study that contributed to examining the objectives			
Study Objective	Face-to-face survey of LIS, PMS and other system managers	Telephone survey of LIS users recommended by LIS managers	Online LIS user survey
1 Identify LIS costs and characteristics	✓		
1 Examine the role of LIS	✓	✓	
1 Investigate integration between LIS, PMS and other systems	✓		
2 Identify the benefits of LIS integration with other systems	✓	✓	
2 Understand the benefits of using LIS		✓	✓
3 Calculate the economic benefits of LIS		✓	✓
Study objectives are provided in detail in section 1.2			

3.4 The authorities selected for the study

Twelve authorities and partnerships were selected for in-depth case study, see Table 3.2. Three key selection criteria were adopted.

Firstly, the nature of links or the level of integration between LIS and PMS systems was an important factor. Systems at the two ends of the continuum were selected. Two authorities that had close links between systems and two that had limited or no links were selected. This enabled the advantages and problems associated with co-operative or integrated systems to be considered (against a ‘comparator’ group that had no links).

The second criterion involved the selection of authorities that took part in the Local Area Agreement (LAA) dry run pilot exercise in 2007 (Sullivan et al, 2007). Focusing on a single use for LIS (such as support for LAA development) provides a more robust method of addressing the situation specificity problem. Research previously undertaken in December 2007 by the study team contacted 18 dry run LAA partnerships to investigate whether they had LIS or PMS and the extent to which these were used in the development of LAA targets. Ten of the 18 LAA dry run pilots had LIS. But only four respondents thought their LIS had played a significant role in developing the LAA. Two authorities that used their LIS and two that did not were selected. LIS managers who thought their systems were not significant in the development of the LAA provided a variety of reasons. Some suggested their systems were still under development and not sufficiently developed to contribute at the time. Interestingly, most of these suggested the LAA exercise had been a stimulus to further LIS development. Two suggested that Best Value performance managers undertook the LAA

exercise and focused solely on previous Best Value Performance Indicator (BVPI) information.

Thirdly, for each of the preceding two criteria two different types of LIS were selected. Firstly, those that provide a service (through staff to provide user assistance) and secondly those that are really just an online system (with a portal and little user support). This enabled the importance of staff assistance to users, and their perceived value of this assistance, to be investigated.

Two authorities that do not have LIS were also selected. Previous studies have suggested that less than half of the authorities in the UK have an LIS, so the 'comparator' group provide an insight into the situation among half the authorities in England.

Table 3.2 The authorities and partnerships selected for the study

Characteristic	LIS characteristics		
	Service (support for users)	System (primarily a portal)	No LIS
Close links between LIS and PMS	Doncaster	Wiltshire	–
Limited links between LIS and PMS	Gloucester	Leicestershire	–
LIS utilised in dry run LAA development	Oldham	Northants	–
LIS not utilised in dry run LAA development	Cumbria	Shropshire	Derbyshire Swindon

In addition to the ten selected systems two additional authorities were selected. Newham and Brighton were both undergoing a major overhaul of their relatively well-established systems. They were included because their managers were able to provide an informed insight (due to the age of their systems and thus knowledge of user requirements) into the various options (such as off-the-shelf or bespoke systems and providing a service or system) that were available to enhance and develop their systems. Both are operating as a LIS service (offering a higher level of support to users) and neither was involved in LAA dry-run activities.

Whilst every effort was made to ensure that the sample of 12 LIS chosen for this study and the interviewees selected were representative of all systems and users it was impossible within the limitations imposed by the adopted methodology to provide an absolute assurance about the validity and reliability of results.

3.5 Quantifying the magnitude of system benefits

Quantitative benefits were investigated in three ways.

Firstly, by examining the time spent utilising systems by users (calculated in minutes per year) it was possible to obtain an estimate of the **time value of systems**.

The time value of systems, obviously, provides a good indication of the total time spent on systems, but it does not provide an insight into the time savings gained from using an LIS instead of obtaining the required information from other sources. Respondents were therefore asked how much longer it would take them to find the information they required from alternative sources. This enabled the calculation of the benefits of LIS in terms of a ***time saving as a substitute source***.

Monetary values can be associated with these time-savings for those using systems for work or for personal use. It is thus possible to estimate a ***monetary time-saving value***.

Chapter seven, the financial and non-financial benefits of LIS, explores time savings and monetary benefit of LIS. Further information on how quantitative benefits were investigated can be found in Appendix 1.

4. LIS and PMS costs and integration

4.1 Introduction

This chapter investigates the costs of LIS and PMS systems and the impact and benefits of joining or more closely integrating systems. Results of this analysis will enable potential system developers and existing managers to benchmark their systems and consider the impact of changes in activities. Suggestions are also provided about how running costs can be reduced.

4.2 LIS development and running costs

A variety of funding models have been developed to provide resources for LIS. Previous research (CLG, 2007) found that 58 per cent of systems had been absorbed into the mainstream budget of local authorities (many had previously been area-based or special initiatives with a finite budget period). Thirty per cent are funded from partner contributions and 12 per cent are funded by area-based or special initiatives with a finite budget period.

The average running costs for LIS found by the 2007 study was £58,000 per annum. The average running costs for the 12 LIS in this study was £63,000. Running costs ranged from £12,000 to £158,000 per annum. The largest single cost at all systems was staff; on average this contributed just over 80 per cent of total running costs.

When asked what could be done to decrease costs more than half of the LIS managers said 'nothing'. Suggestions to decrease costs mainly focussed on decreasing the time taken to input data, either by partners inputting their own data or by automated data downloading using XML schema, such as that offered by the Neighbourhood Statistics Data Exchange. Some managers have high expectations of this development and are hopeful that it will help to decrease staff time on basic data input activities. However, it must be noted that others are rather more sceptical about the availability and ease of use of this innovative technology.

Three of the LIS had recently migrated their data and system from a bespoke system to off-the-shelf systems. This did not provide any immediate financial benefits, but all the system managers felt that the new system offered better usability and functionality than their aging bespoke systems. Off-the-shelf systems appear to offer cost benefits over the development of bespoke systems. The average development cost for bespoke systems was £95,000; annual licences for off-the-shelf systems ranged from £2,500 to £10,000 although they also incur additional procurement and set up costs.

Managers of bespoke systems generally had favourable views about off-the-shelf systems. However, thoughts of making a move to off-the-shelf systems were constrained by concerns about difficulties associated with change for users who were familiar with existing systems. Most managers suggested they would seriously consider a move when off-the-shelf systems met all their users' needs or when their old bespoke systems became too out-dated. Constraints were also imposed on some managers because their authority was 'tied' to a single IT supplier.

Managers were confident about the benefits of their systems and predominantly felt that these benefits could be enhanced if the number of system users increased or if existing users were better able to use systems and the information they provided. Some managers felt that benefits could be enhanced if the usability of their system was enhanced or if the data on the system increased or was up-dated more frequently.

4.3 PMS development and running costs

LIS and PMS managers were interviewed to investigate system costs and issues associated with integration at all of the selected areas.

The first PMS amongst the authorities interviewed was introduced in 2003. In all except one authority PMS were introduced after LIS. Three of the surveyed authorities introduced their LIS in 2001. Interviews with managers and users of these three systems (and others that had been established for some time) provided a good understanding of the chronological development of LIS and the problems and opportunities that are encountered by LIS during development. This enabled the study to become more than just a snapshot of existing LIS activities. The average age of LIS at the time of writing is six and a half years. The average age of PMS systems at the time of writing is four years. On average PMS were introduced two and half years after their LIS counterparts.

The PMS market appears to be the antithesis of the LIS market. All the authorities interviewed had adopted off-the-shelf PMS systems (Performance+ four systems, OTS two, Corvu two, others four). Off-the-shelf providers have only recently assumed a significant role in the LIS market and most LIS were developed on a bespoke basis. The off-the-shelf PMS market appears to be more mature with several different providers offering systems.

PMS managers believed that off-the-shelf systems have the advantage of being robust and regularly updated, as well as conforming to performance reporting standards. None thought they would consider developing a bespoke system in the future.

The adoption of off-the-shelf systems reduced the average development costs for PMS to £43,000. Average annual running costs are also lower than for LIS systems at £49,000 (in comparison with development costs of £95,500 and running costs of £63,000 for LIS). The annual software

and licence costs for PMS systems range between £3,500 and £15,000. However, it became apparent in interviews that some authorities were paying significantly different licence fees for exactly the same product. Those considering purchasing off-the-shelf packages are advised to consult other authorities using the same off-the-shelf packages so that they can examine system usability and utility and obtain information about the likely costs of systems (that they might subsequently compare with vendor quotes).

One difficulty associated with some PMS is that licences have been purchased on an individual entry basis and access rights are not transferable between users utilising the system at different times. Access to some systems is therefore restricted to a small number of users because each new user would incur an additional user licence cost. Some authorities have overcome this problem, however, by paying considerably more for a 'site' licence, rather than 'individual user' licences.

Few suggestions were forthcoming about how costs could be decreased. Most managers felt that licence costs were 'a given' and staff resources were already at a minimum level.

Managers were more informative about methods of increasing the benefits of their PMS. Several suggested that benefits could be enhanced if the numbers of systems users increased, but at some systems licence constraints (and/or additional costs associated with licences) were a restriction. Some managers suggested that they wanted to integrate finance systems with PMS so that expenditure could be linked with performance and budgetary planning could be enhanced. Indeed, amongst the PMS managers interviewed there was greater interest in integrating with finance systems than with LIS systems.

At some authorities finance systems were, however, provided by one off-the-shelf provider (for example SAP) and PMS were provided by a different provider and integration was problematical. Consequently, some authorities were considering consolidating with one provider for finance and PMS systems.

This has implications for integration between PMS and LIS systems. Off-the-shelf systems providing LIS, PMS and/or finance systems may not be compatible and this could be a technical constraint on integration. At present we believe that only one off-the-shelf LIS system has the capability to integrate with a PMS system. We believe this PMS system is not immediately compatible with other off-the-shelf finance systems. However, the development of XML data coding and transfer methods may help to overcome this problem; since separate interfaces may be able to access, analyse and present the same core data-sets for users.

Some observers have suggested that the CLG data interchange hub is becoming the de facto standard against which all LIS, PMS and finance systems will need to become compatible. It has been suggested that this could become a catalyst in establishing interoperability standards between systems. CLG might consider utilising this situation to recommend

interoperability standards that should be adopted by off-the-shelf LIS, PMS and finance system suppliers to enhance the potential for integration between systems.

4.4 LIS and PMS integration

Only nine of the authorities interviewed had both LIS and PMS systems (Derbyshire and Swindon were selected because they did not have LIS; Northamptonshire is introducing a PMS, which when implemented will be integrated with the LIS). Integration between LIS and PMS was most advanced in authorities where the LIS provided a service (through staff assisting users – Cumbria, Brighton, Gloucestershire, Northamptonshire and Oldham), rather than in authorities where the LIS was essentially just an online system (a portal with little user support).

In Gloucestershire, Oldham and Brighton integration was well developed and LIS and PMS teams were working under the same manager or assistant director. In these three areas the systems' staff were also located adjacent to each other, or in the same building. This was thought to be beneficial in enhancing communication between staff. Conversely, in areas where there was little integration systems were frequently administered by different Directorates and located in separate buildings.

Despite close working relationships none of the systems had yet been combined. As noted in the previous section licence constraints and incompatibility between bespoke and off-the-shelf systems were a constraint on integrating data sets and/or developing a common interface. One manager suggested that off-the-shelf providers should try to define common standards so that interoperability would be possible. Two managers are discussing integration with the providers of off-the-shelf systems and Northamptonshire is shortly to introduce a system that will integrate its existing LIS with a PMS. One manager suggested that the cost of integrating systems had been estimated to be more than £100,000 and this was thought to be prohibitive.

There was universal agreement that an important catalyst for integration was the new national Local Government Performance Framework and the development and monitoring of LAAs. The key benefits of integration were thought to be a better understanding of all stages of the policy and implementation cycle. Several managers suggested that integrated systems would enable better understanding of local circumstances and the selection of targets, the delivery and implementation of services and performance monitoring. It was also noted that integration should provide a better perspective for understanding performance.

Some benefits from integration had already emerged. Where teams were working closely, duplication in data collection and input had been reduced and data sharing had been enhanced, managers were not able to attach a

value to these savings. Several managers noted that integration made sense, because both teams had similar skills and support requirements.

Forty-three of the 61 users interviewed for the study were located in authorities that had both LIS and PMS. Thirty-eight per cent of respondents stated they did not need both systems for their job. Twenty-five per cent only knew of the existence of one of the systems. Twenty-five per cent suggested that they would like to use the PMS but did not have access; there was a perception amongst these respondents that senior managers and directors were the primary users for PMS systems. None of these mentioned the issue raised by PMS managers – that access might have been restricted due to licensing restrictions.

Only two respondents thought that closer integration between LIS and PMS would not be beneficial. One of these thought more information would be confusing the other was worried that integration would take resources away from the LIS. The remainder were supportive of integration. The primary perceived benefit from integration was that a single point of access to two complementary datasets would enhance usability, enhance the targeting of neighbourhood improvements and monitoring, help with risk management and assist better understanding of the relationship between local circumstances and performance. Most of those with positive views felt that it would aid transparency and enhance partnership working. One respondent suggested it would “allow quicker links to be made between how we inform targets and performance against those targets”.

Several respondents suggested co-location with both teams working together as a single group would be beneficial. Indeed, some suggested that researchers and analysts from partner organisations should also join this team because it would assist joint working and break down silo mentalities. However, others were aware of the problems of integration and one respondent urged caution because she would “rather have two systems that work well separately; rather than two that don’t work well together”.

Managers were also asked if there were any other organisations that their systems could beneficially be integrated with. There was universal agreement that police and the Primary Care Trust (PCT) would be very beneficial partners. In all areas these organisations were members of the Local Strategic Partnership that was responsible for implementing the LAA. They were therefore integrally involved in LAA implementation and service delivery activities. However, it was highlighted that many of these organisations had also adopted off-the-shelf LIS and/or PMS systems. Many of the off-the-shelf PMS system providers supply systems to all three of these organisations. However, it was rare that all three organisations in an area had adopted the same provider. In the same way that there was incompatibility between systems in the same organisation, there is also incompatibility between systems in different organisations. Common interoperability standards would help to overcome this problem.

5. The role and benefits of LIS and PMS in policymaking and the development of Local Area Agreements

5.1 Introduction

Section 4.4 highlighted that system managers thought the new Local Government Performance Framework and the development and monitoring of Local Area Agreements were important catalysts for the integration of LIS and PMS. This section focuses on the utilisation of LIS, PMS and other information sources for general policy making activities and for the development and monitoring of LAAs.

5.2 The role of LIS and PMS in policymaking

To provide a better understanding of the way information and LIS are utilised the 61 users interviewed in this study were asked about the importance and support their organisation placed on providing information or evidence in the policymaking process. It is acknowledged that the 12 areas selected for this study may not be representative of the 72 LIS in England, but sampling methods were adopted to try and obtain responses from a range of systems with different characteristics. Nonetheless, results should be treated with caution.

The views of users of LIS with different characteristics were compared. Authorities were divided into two groups; those that had an LIS that provided a service (through staff to provide user assistance) and those that are an online system (with a portal and little user support). Service focused LIS in this study on average introduced their LIS systems eight months ahead of their system-oriented counterparts.

Differences between the two types of LIS in introducing PMS were even more significant. On average authorities with service focused LIS introduced their PMS systems five years ago (at the time of writing), their system-oriented counterparts introduced their PMS two years later.

It was postulated that authorities with LIS providing support might place greater importance on the role of information in policymaking than their counterparts. Analysis revealed only a very weak association between the

different types of LIS and perceptions of the importance of information in policymaking.

Users were asked about the support their organisation provided them in accessing general information and statistics (not LIS and PMS, these are examined in the next paragraph) to enhance policymaking. Table 5.1 shows that respondents in authorities with LIS providing support were more in agreement with the statement that 'their organisation provides sufficient means to access information to enhance policymaking' (average Likert score 3.2) than those in organisations that only had access to a portal based LIS (average 2.7).

There was a slightly larger divergence in the views of users from systems providing support and those from portal based systems for the assertion that their 'LIS/PMS provides good access to information to enhance policymaking'. It is evident from Table 5.1 that users from supported LIS perceive a higher value in their LIS/PMS than their portal using counterparts (average Likert scores of 3.1 and 2.5 respectively).

Table 5.1 demonstrates that users that can utilise supported LIS perceive easier access to information than their counterparts with portal based LIS. This could be significant in determining the style of LIS and PMS to develop (or introduce) in organisations seeking to provide good access to information to enhance the policymaking process.

Table 5.1 Perceptions of access to information and support provided by LIS in authorities with different types of LIS

Statement	Users of LIS providing support	Users of Portal based systems
My organisation provides sufficient means to access information to enhance policymaking	3.2	2.7
Our LIS/PMS provides good access to information to enhance policymaking	3.1	2.5

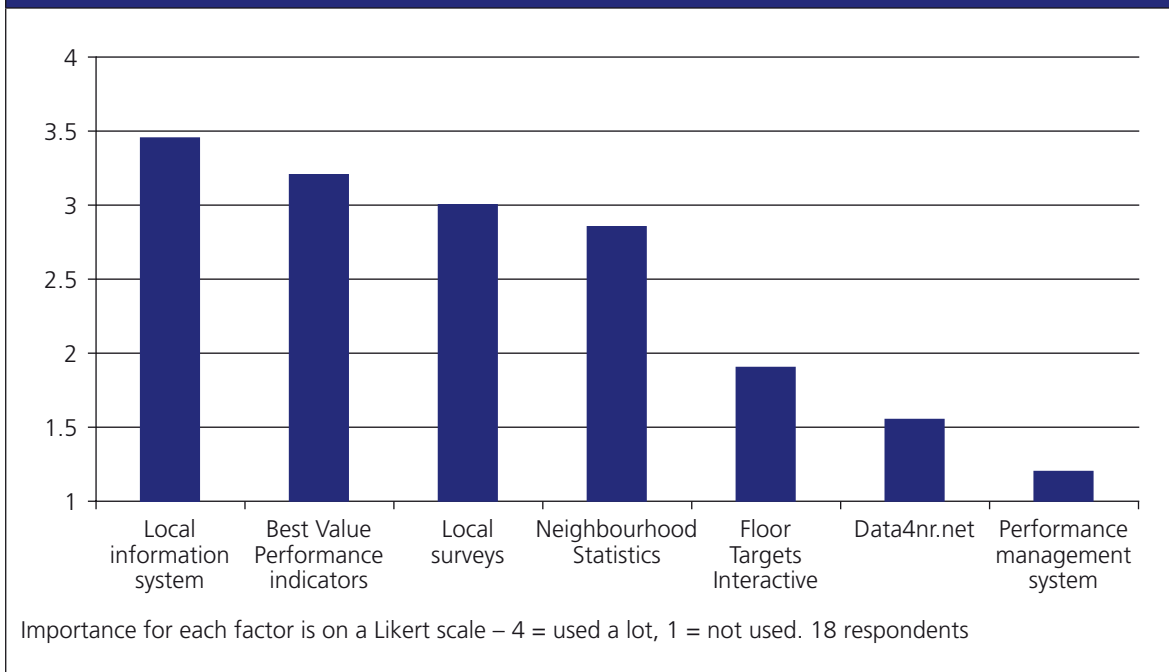
Support for the statement in the table was investigated using a Likert scale – users were asked how strongly they agreed with the statement. 5 = strongly agree, 1 = strongly disagree; 61 LIS users

5.3 The development of Local Area Agreements

Eighteen of the 61 LIS and PMS interviewees in this study had involvement in the development of their LAA. They were asked about the sources of information and statistics that were used in developing their LAA. Figure 5.1 shows that the most important source was the LIS. The next most important source was Best Value Performance Indicators (BVPI). It was noted earlier that at some authorities Best Value performance managers became closely involved in developing the LAA; Figure 5.1 suggests that the use of BVPI information was influential. PMS were rarely used in formulating LAAs, but this is not too surprising since LAAs are predominantly strategic documents.

Most respondents envisaged an enhanced role for PMS in monitoring progress.

Figure 5.1 Information sources used in formulating Local Area Agreements



In several areas LIS received considerable praise for their support in developing LAA. Respondents found the availability of information in one place to be highly beneficial. But more important for many respondents was the level of understanding and support provided by LIS staff. One respondent stressed that *"the (LIS) support staff were excellent"*.

Two areas were selected for this study that did not have LIS – Swindon and Derbyshire. Interviews with PMS managers in these two areas suggested that the process of stakeholder engagement was successful and priorities were agreed during discussions. It was difficult to gauge the extent to which information played a role in these discussions, but the range of sources used by both areas was more limited than in areas with LIS. The primary sources utilised were BVPI, local surveys and Neighbourhood Statistics; the other sources shown in Figure 5.1 were not used. One of the interviewees suggested that they could have done with more time to collect and understand information to better inform the selection of National Indicator targets. It is possible that if this information was already available (through LIS) a better understanding might already have existed and more time could have been spent on analysis and strategy development. Swindon is now in the process of re-evaluating its information requirements to better inform and monitor LAA performance.

6. LIS utilisation and perceived user benefits

6.1 Introduction

One of the objectives of this study was to investigate where the use of LIS has made a real difference. The 288 respondents that took part in this study were asked to provide details of the way in which LIS had made a significant difference in their job or personal activities.

The overview of benefits in this chapter and examples of how LIS can make a difference will enable LIS managers to better understand the ways in which different groups use their information for a variety of purposes. This section focuses on respondent's perceived benefits of LIS. This reveals the range of uses of LIS and the types of cost savings which might be attributed to them. Chapter 7 uses a standard cost-benefit appraisal method and quantifies the benefits in a more systematic manner.

The examples provided in this chapter are limited due to space constraints. Many more examples supplied by respondents can be found in Appendix 4.

We recommend that these examples should be enhanced by further research and developed as an online 'living' document (that can have further examples added by contributors to enhance better practice in LIS utilisation) so that it can inform current and potential users about the wide variety of ways in which LIS can be beneficial.

Section 6.2 provides an overview of the use of LIS specifically in local authority work (excluding Local Strategic Partnership activities). Section 6.3 examines the role of LIS for wider Local Strategic Partnership and other public sector use. The final section in this chapter provides an overview of LIS use by community and voluntary groups and citizens.

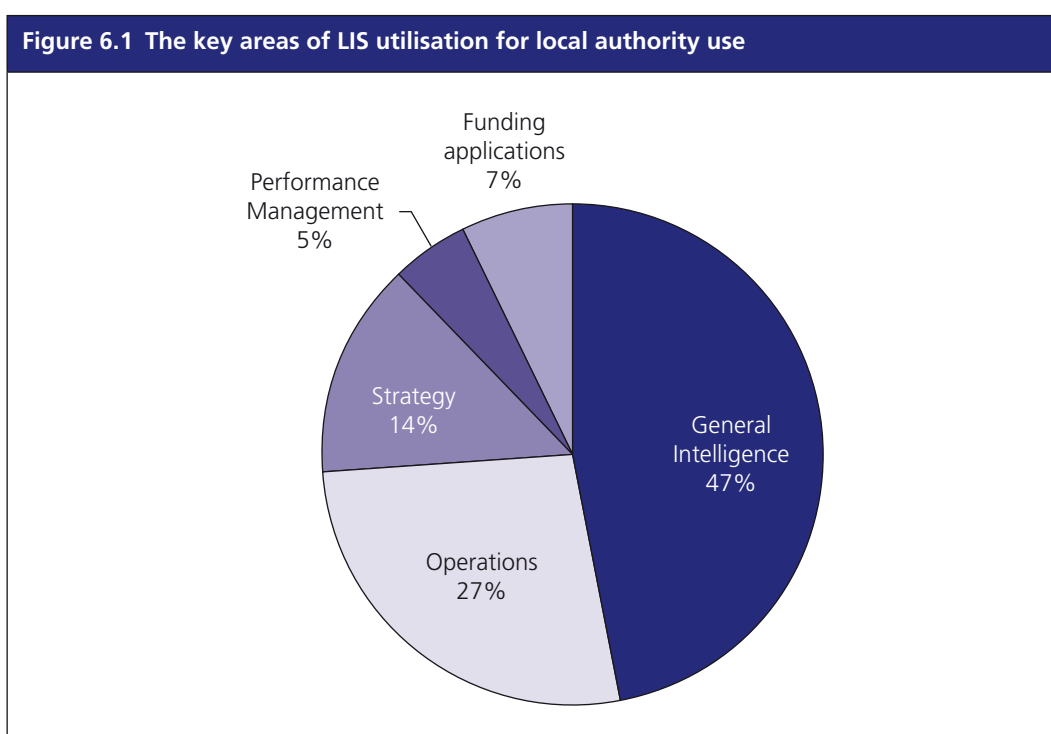
As the figures in this section reveal the majority of users utilise LIS to obtain general intelligence about their local area. However, even this seemingly simple function should not be taken lightly. As one respondent suggest *"multiple deprivation data is available via the Office for National Statistics website but it would have taken me many hours to compile the comparisons with England and the rest of the county that are available on our LIS"*. The local focus of LIS and the access to local data that is not available elsewhere (usually provided by partners and sometimes comprising over half of the datasets held by the LIS) is regarded as a major advantage by most users.

6.2 LIS use and benefits for local authorities

Eighty one online survey respondents who declared a use for LIS were utilising systems for local authority use. As Figure 6.1 shows nearly half (47 per cent) are using LIS to collect general intelligence. Many of these users appear to regularly visit LIS. For example a local authority librarian reported:

“as a local librarian I have to maintain knowledge of the communities I work in. There are various ways of doing this but using the LIS is one useful source because most of it is done for you and it is fairly understandable”.

Other respondents highlighted the usability of systems, the fine level of geographical coverage and breadth of data. For example one respondent suggested that *“data is presented in a way that makes it more meaningful to my locality. Also there is someone available to talk to if necessary who has excellent knowledge of the locality”* (respondent perceived visit value £200).



Just over a quarter (27 per cent) of local authority users thought that the most useful information provided by their LIS had been for operational activities. The range of activities undertaken with LIS intelligence was considerable. These include:

- *“The LIS is useful for checking on the accuracy of our Section 106 (planning gain) applications that need to be updated annually”* (perceived value £2,000)
- *“We have been trying to calculate how many properties are suitable for wheeled bins. By using data on the LIS we have been able to make a*

reasonable estimate of how many properties will need wheeled bins, how many properties will require smaller bins, and how many properties will require communal bins. The only other way of accurately working out this information would have been to survey every property in the borough” (perceived value £60,000)

- *“The LIS enabled the fair allocation of budgets for Children's centres based on hardest-to-reach areas and deprivation data. Information was used in a similar way to restructure social care services” (perceived value £15,000).*

Fourteen per cent of local authority users suggested that the most useful information they obtained from an LIS was for strategic use. The use of local demographic data and forecasts was widespread amongst users; suggesting a relatively high level of use for strategic activities. Utilisation for strategy development purposes included:

- *“LIS was used to forecast the types and amount of accommodation with care that will be needed at a very local level up to 2020 and this was used to inform future strategy. Without the range of statistics it would have been more difficult to produce reliable proposals that will (hopefully) withstand scrutiny”*
- *“Awareness of demographic changes locally which could affect the way Social Services, and more particularly, the Local Access Service (i.e. first point of contact for accessing services) responds to local needs” (perceived value £50)*
- *“Statistics for writing the Economic Regeneration Strategy and economic updates, data was also used to support regeneration funding bids” (perceived value £45,000).*

Local authority staff make relatively little use of LIS for performance monitoring. A number of respondents reported that LIS information had been used to support funding bids for local authorities and the local organisations that they were helping. Local authority respondents reported that successful bids of £500,000 and £750,000 to the European Union had been supported by LIS information.

6.3 LIS use by Local Strategic Partnerships and other public sector organisations

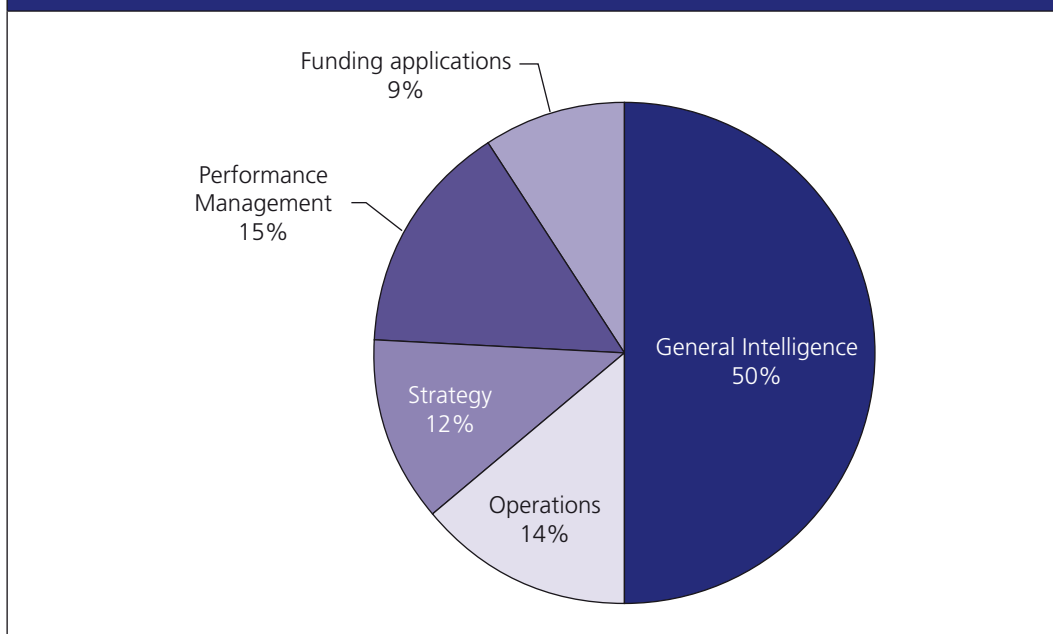
LIS use by Local Strategic Partnerships and other public sector organisations is broadly similar to their local authority counterparts. The majority of users (50 per cent, see Figure 6.2) utilise LIS for general intelligence gathering. Users highlighted a number of key benefits, these included comments about the data as well as the help provided by LIS staff.

- *“It is a concise reference point for key datasets relevant to the town (and areas within it) while allowing for convenient comparisons with other*

towns and the county itself. The datasets have helped to provide context to documents and evidence of trends and the current situation”

- *“LIS information on local population demographics is more up to date than the census”*
- *“My local system will provide further analysis upon request, specific to a task/research being undertaken (in addition to the information on the site already)” (perceived value £100).*

Figure 6.2 The key areas of LIS utilisation for Local Strategic Partnerships and other public sector organisations



Local Strategic Partnerships and other public sector organisations make slightly greater use of LIS for performance management than their local authority counterparts (15 per cent versus 5 per cent, see Figure 6.1). Performance management activities include:

- *“The LIS allows me to obtain performance figures not only for my local town but for other neighbouring towns and the region, which allows comparison. This saves me having to contact information analysts from each Primary Care Trust” (perceived value £250)*
- *“The LIS provides sub regional performance data to confirm attainment issues in relation to school aged pupils” (perceived value £100)*
- *“We have used the LIS to map, target and monitor the spread of deprivation in the local area” (perceived value £200).*

The level of strategic use of information from LIS is similar between Local Strategic Partnerships and other public sector organisations and their local authority counterparts. However, the ways in which the information is used strategically reflect the wider service delivery remit of the Local Strategic Partnership and other public sector organisations. For example there is greater use for strategic health care and prevention strategies.

- *“The LIS was utilised in needs assessment work to examine teenage pregnancy rates in different areas, these were matched against proxy indicators to provide information for strategic goal setting and targeting activities”*
- *“The LIS provided easily accessible ward based data over a range of indicators which assisted the drafting of a Tobacco strategy by the Primary Care Trust” (perceived value £1,000)*
- *“Profiling the homeless within the county to examine the magnitude of the extent of the problem and potential initiatives”.*

Local Strategic Partnerships and other public sector organisations had also used LIS to support some significant funding bids. For example a European Urbact 2 Programme funding bid attracted funding of £75,000 and a Sub-regional Education Challenge bid, supported by LIS data, received funding of £25m.

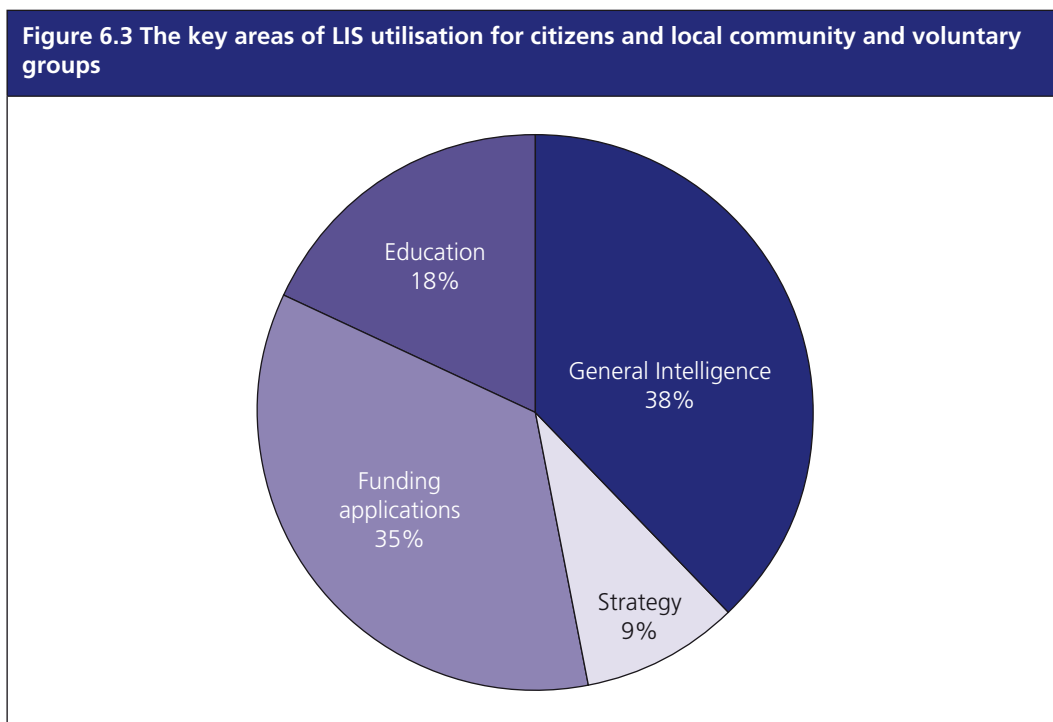
6.4 LIS use by citizens and local community and voluntary groups

Information provided by LIS is utilised by citizens and local community and voluntary groups in significantly different ways to local authority staff and other public sector users. Citizens and local community and voluntary groups make much greater use of LIS to support funding applications. Use for strategic purposes is similar, but none of the respondents reported LIS use for operational activities or performance management. Citizens and local community and voluntary groups are also the only respondents to report the use of LIS to support (their own) educational and learning activities, see Figure 6.3.

The examples below provide a flavour of the different ways in which citizens and local community and voluntary groups utilised LIS for general intelligence gathering. Examples include:

- *“Information about the local area for my residents association” (perceived value £10)*
- *“As a CAB in a growing city, we need to have an accurate current community profile in order to make sure we conduct an accurate needs analysis for our advice services”*
- *“I can ring up and discover sources of information or go to sources and seek ideas that I might turn into stories or features”.*

Strategic uses of information emphasised the slightly different strategic focus for this group. One respondent stated *“as chair of my local Neighbourhood Action Group I need access to local data concerning our neighbourhood estates to set priorities”* (perceived value £50). Another respondent was a County Councillor who required information so that he could better understand *“where local priorities should lie”*.



Thirty-eight per cent of citizens and local community and voluntary groups who provided an example of the way they used LIS mentioned information required to support funding applications. Several respondents appear to use LIS to support multiple bids.

- *“The LIS provided information to support a successful funding bid for the establishment of new playgroup – grants received value £20,000” (perceived value £500)*
- *“I use it for supporting funding bids. These bids have included funding for renewable energy additions to our community buildings” (perceived value £180,000)*
- *“I used the information as part of a successful Big Lottery Fund grant application that resulted in a 5 year project/grant” (perceived value £381,911).*

It is obvious that any of the bids that utilised LIS information have also been reliant on a great many other factors for their success. Nonetheless, the magnitude of the successful bids supported by LIS is impressive.

Finally, Figure 6.3 reveals the relatively high level of LIS use for educational purposes by citizens and local community and voluntary groups. Responses included both students and teachers and they covered a wide age spectrum from school children to post-graduate students.

- *“In preparing for an Ofsted visit I was able to show that levels of deprivation were greater than you would expect given the number of free school meals and the number of social issues were higher than expected” (perceived value £50)*

- *“I used the information for a paper at university. Only by using the information system could I obtain the latest information and details”* (perceived value £500).

This study has provided the first extensive investigation of the many uses for LIS intelligence. It is recommended this list is enhanced and provided as a resource for LIS managers to inform their users of the many ways in which LIS intelligence can be utilised.

7. The financial benefits of LIS

7.1 Introduction

The penultimate section of this report examines the use of LIS and the time saving and monetary benefits this provides to users.

Within central government, the Department for Transport's approach to valuing time in the appraisal of road schemes and other projects is well established (Appendix 1 reviews these methods). This approach uses different values for 'employers' time and 'own' time and calculates the value of time-savings as the opportunity cost of the time to the employer and individuals. In Department for Transport studies, time-savings are obtained from faster journey times arising from transport improvements. In this study time-savings are achieved because users can obtain the information they require in less time.

7.2 Survey response: A note of caution

The study investigated use of LIS through telephone interviews with 61 system users suggested by LIS managers at the 12 authorities examined in this study (see Appendix 2). In addition, all 72 LIS managers in England were invited to promote a short (nine question) online survey to users of their LIS (see Appendix 3). Six of the 12 authorities selected as cases studies participated in the online survey and an additional six LIS also participated. The online survey was promoted to all users of these 12 LIS. This was important since it could help to reduce (though not overcome) participant bias that might have arisen through LIS managers only providing details of supportive contacts and/or satisfied users. Nonetheless, it must be acknowledged that those most likely to complete the online questionnaire are motivated or supportive users who have obtained benefits from systems. It is unlikely that dissatisfied users who received limited benefits from the system will have participated.

Results in some of the subsequent graphics and tables are therefore drawn from two sources – 61 telephone interviews and 204 online survey replies. At an early stage in the analysis it became evident that the 61 LIS users interviewed by phone were probably more intensive users of LIS than their counterparts that took part in the online survey. This result was expected and was an important reason for adopting *triangulation* methods to improve the robustness of results (see Appendix 1). It is well known that many managers know very few of their users and it was probable those they did suggest would be higher volume or important users. Nonetheless, the longer telephone interviews enabled an insight into many more qualitative and

factual issues, covered previously in this report, which could not be obtained from a short online survey.

The online survey consisted of only nine questions, all concerned LIS utilisation. The survey only collected limited information about user characteristics. However, since the characteristics of the population of LIS users are unknown there would have been no basis for comparison, even if more data had been collected in the online survey, to ensure respondents were representative. The distribution of online respondents by groups (local authority, partner organisations and citizens) appears to match managers' perceptions of LIS utilisation from these groups (CLG, 2007). Nonetheless, it must be noted that the sample was not random and the results are not necessarily representative of the wider population.

7.3 LIS use and time savings

Table 7.1 reveals the characteristics of 204 LIS users who responded to the online survey. Forty-three per cent were using the LIS for local authority use, 36 per cent were public sector, Local Strategic Partnership or other work users and 21 per cent were personal, community or voluntary group users. These figures correspond with the views of managers in a previous study (CLG, 2007) that suggested 71 per cent of users were partners or from the public sector and citizens and community groups comprised 29 per cent of users.

Personal, community or voluntary group users generally use LIS fewer times a year than the average for all LIS users (21 versus 32 for all users). However, when they do use LIS they tend to use it for slightly longer on each visit – 28 minutes per visit versus 25 minutes for all users. The highest level of utilisation is for Local Strategic Partnership use. This is significant because many LIS were established to support partnership working and more recently Local Strategic Partnerships. This relatively high utilisation figure (17.6 hours per year) suggests LIS are fulfilling this role. These figures will be useful to LIS administrative staff in better understanding the characteristics and intensity of use of different user groups.

Table 7.1 Purpose of LIS use and system utilisation by 204 online respondents

	Percentage of users	Times used per year (mean)	Minutes per visit (mean)	Hours used per year (mean)
Local authority work use	43%	35	25	14.6
Other public sector work use	18%	45	20	15.0
Local strategic partnership use	9%	32	33	17.6
Other work use	9%	16	22	5.9
Community and voluntary group use	17%	21	27	9.5
Personal use	4%	21	31	10.9

There was a relatively large difference between the characteristics of LIS users contacted by telephone and online respondents, see Table 7.2. The number of times users in the online survey had visited LIS ranged from six users who claimed to be a first time visitor and six that claimed they were only visiting the LIS for the second time; to eight users who claimed to visit the LIS more than 180 times a year.

Table 7.2 LIS use and personal time cost		
	61 Telephone respondents	204 Online respondents
LIS visits per year (mean)	65.6	31.8
Time per visit (minutes; mean)	32.1	25.2
Hours a year spent using LIS (mean)	35.1	11.9
Personal or employer cost of time spent using the LIS (mean) ^a	£584	£190

^a The time value spent at LIS (utilising *hours a year spent using LIS* data) was calculated by multiplying 'hours a year spent using LIS' by a value of £17.50 per hour for work use and £5.68 for personal or voluntary use, see Appendix A1.3

Telephone respondents, suggested by LIS managers, appear to be more intensive users of LIS. On average they spend 35.1 hours a year using LIS. The online survey probably provides a better understanding of the average user; they spend only 11.9 hours a year using LIS. However, the time per visit is broadly similar (32.1 minutes for telephone respondents; 25.2 minutes for online respondents).

Using the HM Treasury Green Book (2008) and Department for Transport methods (see Appendix 1; A1.3) it was possible to calculate the cost to users' employers or the cost of personal time spent using LIS (see the footnote in Table 7.2). Whilst this is a useful value in estimating the value of time users spend utilising an LIS it cannot be adopted in calculations of the value of LIS since this does not represent the opportunity cost of the time to the employer.

7.4 Time savings achieved by LIS

All interviewees were asked to estimate how much longer it would have taken them to find and obtain information from alternative sources if they had not used the LIS. Table 7.3 provides an overview of results for different types of users. A one-hour time saving for someone working is valued at £17.50 per hour (this is the value per hour for employing data/analysts and researchers, see Appendix 1; A1.3). The value of a one hour time saving for personal LIS use is £5.86.

In the telephone survey 15 per cent of respondents stated that they did not know of alternative sources to their LIS to obtain the data they required.

Twenty-three per cent of online survey respondents did not know of an alternative source.

Table 7.3 Online study respondents perceived time savings from using LIS			
	Time saved using LIS (mins per visit) (respondents)	Average minutes per LIS visit	Hours per year using LIS
All online respondents (mean)	47.0	25.2	11.9
Users who knew of a substitute source	19.7 (25)	16.6	8.3
Users who thought there was probably a substitute source	37.4 (39)	21.5	14.0
Users who thought there was probably not a substitute source	62.6 (70)	28.1	12.8

Table 7.3 reveals that the perceived time to find and obtain information from alternative sources increased amongst online users as the respondent becomes less certain about the existence of substitutes. Users who knew of an alternative source thought it would take them 19.7 minutes longer (than their LIS visit) to find the information they required from alternative sources.

Fourteen per cent of online respondents (25 users) knew of other information sources. This group probably offer the best insight into the time saved by using LIS, since if they know of an alternative source they should have a good idea of how long it would take to obtain the information from this source.

Utilising the views of this group in subsequent calculations ensures that only the most conservative, and probably most accurate, method for estimating the value of an LIS is adopted. By utilising the time saving estimates from this group and multiplying the total time saving by monetary values per hour using Green Book methodologies it is possible to calculate a robust monetary value for the time saving provided by LIS.

Table 7.4 provides an estimate of the annual value of time saved from using LIS (rather than going to alternative sources, which take longer to access) by the different categories of users adopted in Table 7.3. The number of hours saved per year is estimated by multiplying the time saving per visit by the average number of visits that group of users makes per year to LIS. The monetary value in Table 7.4 is then estimated by multiplying the number of hours saved by the appropriate hourly rate, depending upon whether the use was for work or personal use. Appendix A1.4 provides further details of these calculations and an alternative method to calculate the value of a system if the number of unique LIS users is not known but there is information about the total time an LIS is utilised.

Table 7.4 The annual value of time savings provided by LIS by online survey respondents per respondent

	Hours saved per year using LIS	Monetary value of time saving
All online users	21.1	£329
Users who knew of a substitute source	10.5	£142
Users who thought there was probably a substitute source	18.2	£294
Users who thought there was probably not a substitute source	23.8	£368

^a The value of time savings was calculated using a value of £17.50 per hour for work use and £5.68 for personal or voluntary use, see section Appendix 1; A1.3

Using the calculation derived from Table 7.4 it would be easy to suggest that an appropriate figure to estimate the value of time-savings at an LIS is £142 per user per annum. However, this would be a very conservative estimate. Because users who knew of other sources spent less time using LIS than the average for all users in the study (8.3 hours versus 11.9 hours respectively, see Table 7.3) the time saving value calculation was repeated using the average hourly usage figure (11.9 hours) for all visitors. This generated an annual time saving value of £210 per annum.

This figure was adopted as the upper end of a range of values likely to be achieved by each unique visitor at an LIS. The lower end of the range is the £142 value derived for users who knew of an alternative source. It is suggested that this range of values (£142 to £210) is adopted to provide the high and low spread of estimates that can be used to produce estimates for the value of LIS. This range of values has been adopted for calculations in the online Value Assessment Tool.

7.5 Estimating the monetary value of LIS

This project has developed a Value Assessment Tool to enable LIS managers to estimate the value of their LIS. Users of the **Value Assessment Tool** can enter the costs (or proposed costs) of their system and the number of users (or predicted users) they have using different channels (face-to-face, telephone and online) and the online tool calculates the annual financial benefits of their LIS to users. The number of online users required to break-even and the pay-back period for LIS are also calculated. As well as enabling LIS managers to calculate the value of their systems, the tool also enables them to examine the way changes in costs and the number of users could affect the value of their systems.

Our figures suggest that for an average system with annual running costs of £63,000 per annum the break even point for the number of unique repeat

users is between 442 and 300 users per annum (if annual values of £142 and £210 per annum respectively are applied).

As noted earlier this is a conservative estimate for many reasons. These include the fact that it is derived by:

- selecting the views of users who knew of alternative information sources (and not adopting the higher time estimates of users who thought there were 'probably' alternative sources)
- using annual pay estimates that are probably below the average for the type of public sector users an LIS will attract
- using the views of self-selecting online users (and not higher volume telephone interviewees).

We were slightly surprised by the lack of data collected about LIS usage levels by managers. Nonetheless the six managers in this study who knew the number of LIS users suggested that they had between 900 and 4,300 unique users. This would equate to an annual LIS system value of between £128,000 and £189,000 for the system with 900 users. This system has annual running costs of £32,000, thus suggesting a net benefit of approximately £100,000 or more per year. The system with 4,300 unique users would have a value of between £610,600 and £903,000 per annum. This system has annual running costs of £107,000, thus suggesting a 'net benefit of more than £500,000 per year.

These figures could be interpreted in a different way by organisations or Local Strategic Partnerships that do not possess an LIS. If their use of local information is the same or similar to authorities or partnerships with an LIS the above figures probably provide a good estimate of the additional costs their users and citizens are incurring in having to search for information because they do not possess a LIS that provides one-stop access to local intelligence.

As noted earlier many of the users surveyed hold LIS in very high esteem. The help and support staff provide and the access they enable to sources of information that otherwise could not be obtained are not included in the conservative approach adopted by this study. The next section provides an insight into the significantly higher value that many users place on LIS.

7.6 Perceived values of LIS

Most users in the survey were very supportive of the assistance provided by LIS and we were interested to know the monetary value that users perceived for the assistance provided by LIS. Some found this very difficult; suggesting that the LIS was 'priceless' because they could not find the information from other sources. Others highlighted that the ease of having data in a usable format in one location was also a major benefit.

Users were therefore asked to estimate the average monetary value of each of their last three visits to the LIS. Sixty three per cent of telephone users were able to provide a monetary estimate. The 204 online survey users were slightly more forthcoming and 85 per cent offered an estimate, see Table 7.5.

Table 7.5 The perceived value of LIS per visit

	Telephone survey (61 respondents)	Online survey (204 respondents)
Average perceived value per visit	£56.20	£30.40
Perceived value for those visiting 1 to 10 times a year	£80.00 (6)	£39.40 (44)
Perceived value for those visiting 11 to 30 times a year	£75.80 (10)	£30.40 (58)
Perceived value for those visiting 31 to 100 times a year	£66.70 (8)	£18.60 (20)
Perceived value for those visiting more than 100 times a year	£40.40 (15)	£14.20 (14)
Average perceived annual value for LIS *	£3,687	£967

* Perceived annual value is the average for all participants calculated for each respondent by multiplying their perceived monetary value for visit by their number of LIS visits per year

Interestingly, the perceived value of LIS decreases with regularity of use; see Table 7.5. Telephone and online users visiting LIS less than ten times a year estimate a value per visit of almost twice the amount estimated by users utilising LIS more than 100 times a year. If these values were used to calculate the annual average value of LIS per user it would equate to £3,687 for telephone respondents and £967 for online respondents (see the footnote in Table 7.5).

We asked respondents how they calculated the value of their estimate. Eight per cent (13 respondents) of online respondents who provide a value suggested it was the value of funds won when using LIS data. The amounts won using LIS data ranged from £100 to £3,000,000 (these values were omitted from calculations in Table 7.5).

Twenty respondents (12 per cent of online respondents) calculated the amount it would have cost them or their organisation to hire consultants to obtain the data. The average annual value of an LIS for this group was £5,950 per annum (these values were omitted from calculations in Table 7.5).

The most popular method, used by 125 respondents (72 per cent of respondents providing details in the online study of how they calculated a value), was to estimate the monetary value of the time they saved from not searching alternative sources. This produced an average figure of £967 for the value of an LIS to each user per annum.

This method of calculating a value for LIS is interesting. It provides a useful comparison between the annual value users perceive they obtain from utilising LIS and the 'cost' of time spent by users at an LIS (£967 per annum perceived value [Table 7.5] and £190 time value [Table 7.2] respectively).

Whilst these results are a useful insight into users' perceived values for LIS the utilisation of a user 'guesstimate' does not adhere to commonly accepted robust methods adopted by the UK government to address similar problems.

8. Conclusions and recommendations

8.1 Introduction

The final section of this report provides a review of key findings and suggests eight recommendations.

8.2 Conclusions and recommendations

This study developed an innovative methodology to examine the characteristics, value and benefits of LIS.

Our research suggests that for an average system; with annual running costs of £63,000 per annum, the break even point for the number of unique repeat users is between 300 and 442 users per annum.

The minimum number of users at a LIS in this study was 900. We estimate, after taking into account running costs, that this LIS is creating 'net benefit' of £100,000 or more per year. The maximum number of users at a system in this study is 4,300. The net benefit created by this LIS is more than £500,000 per year.

Recommendation 1

The LIS Value Assessment Tool developed for this study should be utilised by LIS managers considering adopting or developing LIS to better understand the current or future potential net benefit of their systems. The tool enables the impact of different cost options to be calculated and it will provide valuable information for those investigating the business case for LIS.

Recommendation 2

The magnitude of the monetary value of time savings created by LIS should be promoted by CLG and/or an LIS managers' group to ensure existing systems receive continued or enhanced support and new systems are created.

The study developed an innovative approach to determine the time savings which LIS provide for users (over other sources of intelligence). This time saving provides an opportunity cost for the employers of LIS users or individuals.

Users who knew of an alternative source thought it would take them 19.7 minutes longer to find the information they required from alternative sources. This group probably offer the best insight into the time saved by using LIS, since if they know of an alternative source they should have a good idea of how long it would take to obtain the information. By utilising HM Treasury Green Book methodologies it was possible to calculate a monetary value of £142 for the time saving (of 10.5 hours per year) provided by LIS for each visitor. This conservative figure was used to calculate the lowest point on a range of values to estimate the annual monetary value for each unique user of an LIS.

Average users (who use LIS for longer per annum than users who knew of alternative sources) would achieve a time saving of 14.0 hours a year; this would equate to a monetary value of £210 per unique LIS visitor per year. This figure was used as the upper end of the range of values to estimate the annual monetary value of LIS.

Section 7.5 noted that for a number of reasons this range is a conservative estimate. Application of this value against the number of unique visitors to an LIS each year appeared relatively easy. But we were surprised by the lack of data collected about LIS usage levels by managers.

Recommendation 3

LIS managers should be encouraged to collect more detailed information about users or the number of hours systems are utilised. This will enable them to calculate more easily the value of their systems using the methods developed in this study.

This study of more than 288 respondents provides the first extensive investigation of the many uses for LIS intelligence. Chapter six and Appendix 4 include more than 50 examples of LIS use to demonstrate the impact of LIS intelligence at all stages of the policymaking cycle (strategic, operational and performance management), for successfully bidding for major grants and for supporting school children, students, post-graduates and teachers. These examples of better practice should be developed and shared more widely.

Recommendation 4

The list, throughout chapter six, of ways in which LIS intelligence has been utilised should be enhanced and developed as an online 'living' document (that can be amended or enhanced by contributors) so that it can inform current and potential users about the wide variety of ways in which LIS can be beneficial.

Some observers have suggested that the CLG Data Interchange Hub is becoming the de facto standard against which all LIS, PMS and finance systems will have to become compatible. This central role could be utilised to encourage further interoperability between systems.

There was universal agreement that police and the local Primary Care Trust would be very beneficial partners for LIS. In all areas these organisations were members of the Local Strategic Partnership responsible for overseeing the LAA and implementing service delivery activities.

Recommendation 5

LIS managers should seize opportunities for data-sharing and the integration of analytical resources between local authorities and Local Strategic Partnerships, police, Primary Care Trusts and other local data providers. This should enhance mutual understanding of local circumstances, problems and opportunities.

Some managers suggested that they wanted to integrate finance systems with PMS so that expenditure could be linked with performance and budgetary planning could be enhanced. Indeed, amongst PMS managers there was greater interest in integrating PMS with finance systems than there was with LIS systems.

Despite close working relationships none of the LIS and PMS systems had yet been combined. User licence constraints and incompatibility between bespoke and off-the-shelf systems were a constraint on integrating data sets and/or developing a common interface. Off-the-shelf LIS, PMS and finance systems are rarely compatible and this can make integration difficult.

Recommendation 6

LIS, PMS and finance systems should be encouraged to adopt common interoperability standards so that they can be integrated more easily with LIS within a partnership and between partner organisations.

Off-the-shelf systems appear to offer cost advantages over the development of bespoke systems. The average development cost for bespoke systems was £95,000; annual licences for off-the-shelf LIS systems were reported as ranging from £2,500 to £10,000 although they also incur additional procurement and set up costs.

All the authorities interviewed had adopted off-the-shelf PMS systems. The adoption of off-the-shelf systems led to lower average development costs for PMS of £43,000. Average running costs for PMS are also lower than for LIS systems at £49,000 (LIS running costs are £63,000).

The annual software and licence costs for PMS systems range between £3,500 and £15,000. However, it became apparent in interviews that some authorities were paying significantly different licence fees for exactly the same product.

Recommendation 7

LIS and PMS managers should consult other authorities using off-the-shelf packages they are considering purchasing so that they can examine system usability, utility and costs. It has been suggested that differential pricing policies may be adopted by vendors for similar off-the-shelf system.

The average running cost for the 12 LIS in this study was £63,000. The largest single cost at all systems was staff; on average this contributed just over 80 per cent of total running costs. Suggestions to decrease costs mainly focussed on decreasing the time taken to input data primarily by using automated data downloading using XML schema, such as that offered by the Neighbourhood Statistics Data Exchange. Some managers have high expectations of this development and are hopeful that it will help to decrease staff time on basic data input activities. However, it must be noted that others are rather more sceptical.

Recommendation 8

LIS managers should be encouraged and supported to adopt and share good practice in the XML data downloading capability provided by the ONS.

Appendix 1: Methodology – further information

A1.1 The theoretical and practical underpinning for the study

Literature concerning the value of information is considerable. However, a common agreed definition of 'information' is noticeable by its absence (Griffiths and King, 1994). However, since the focus of this study was predetermined (LIS) this is less problematical.

According to information theory information is defined as beneficial in "reducing uncertainty". However, the *uncertainty* conceptualisation corresponds to a 'problem oriented' view of information science (Saracevic, 1991), where information decreases uncertainty about problems. This view is pertinent in the private sector or to private sector organisations using LIS where there are frequently costs (from superior performance achieved by competitors) associated with making the wrong decisions.

In the public sector costs associated with making the wrong decision are usually unknown or obscure (since there are not competitors who could have pursued alternative strategies). The Audit Commission (2008) has highlighted "that using information well in decision making leads to better local public services" (*In the know*, p2). Whilst this is undoubtedly the case and there is a general consensus that this assertion is true, measuring the value of information or LIS is tricky.

Three basic themes emerge from a review of literature concerning the value of information; each provided a robust theoretical and methodological grounding for the study. The three primary concerns were:

Organisational and resource management contexts: Previous studies have explored the role of information resources in enhancing organisational effectiveness. Studies often attempt to build an overall picture of where information fits into organisational activities and how it is supplied. This is complemented by an emphasis on the strategic importance of information. These studies (largely arising from the work of Marchand and Horton, 1986) adopt an approach in which information is a resource that should be handled like other resources, such as personnel, plant, capital etc.

This Information Resource Management (IRM) approach has frequently attempted to find values for information holdings. Costs of creation are difficult to calculate but good progress has been made with cost accounting and other techniques (Foley et al, 2005; Codagnone and Boccadelli, 2006).

However, deriving the value or *benefits* of information has been more problematical.

Broadbent (1992) developed methods to assess the value of information to specific users and the potential costs they would incur if they obtained the information by other means (the cost of substitution). Her major conclusions highlighted that users save time, obtain better quality information, are better informed and avoid extra costs for literature or data searches from using centralised systems. She estimated that the Cost Benefit Appraisal for such profiles was 1:1.8. This was a somewhat lower figure than that obtained by Griffiths and King (1994), but still significant. These valuation methodologies have been replicated and enhanced in this study. In addition an innovative element (involving triangulation between LIS manager and user views and using two different methods to elicit views from users) was added that enabled comparison between studies.

Costing, pricing and evaluation of information service provision:

Increasingly, owing to economic pressures, librarians and information service managers are finding themselves in positions where they need to justify funding or they need to prove that they are providing better services (Koenig, 1992; Griffiths et al, 1994; Holt et al, 1999; MacEachern 2001). A similar situation exists for LIS managers.

Costing methods, such as direct costing, absorption costing, standard costing, life cycle costing and opportunity costing have all been developed to examine library services in the last decade.

Cost benefit analysis (CBA) has produced some advantages and problems. CBA suffers from problems when applied to information systems. Costs can be clearly converted into monetary values, but benefits are highly dependent on subjective judgements and their conversion into monetary values can be suspect.

Previous studies have developed detailed cost and benefit criteria for IT projects in government (Foley et al, 2005; Codagnone and Boccardelli, 2006) and these were utilised in this study.

However, as Badenoch et al (1994) highlight it is not just a question of the purchase price of materials or the salaries of staff or the costs of various overheads. There is a cost in not having particular information and/or there will be costs if there is no information service.

Our study addressed this issue and the increased costs that might be associated by not having information or no LIS through two complementary methods. Firstly, by investigating how information is obtained (by policymakers) or provided (to citizens) in authorities or partnerships that do not possess LIS. Secondly, by asking users how much time, resource or money it would cost them to find the information provided by a LIS if it had not provided the information they accessed.

This innovative approach enabled more detailed consideration of the 'do nothing' option as a baseline against which to compare the value and benefits for authorities and partnerships that do have local information or performance management or other systems (individually and working in tandem).

Social and cultural value of information: There is an additional dimension that has posed a further problem in studies examining the value of information. Libraries and LIS are seen in general terms as a 'good thing'. They provide social, educational and democratic value.

Repo (1989) highlights an issue very pertinent to this study. There is an important distinction between information products provided by libraries (and in this study by LIS) and information services and the additional support, advice and assistance they provide. Repo's conclusion is that it is necessary to adopt a dual approach that uses classic economics to investigate costs and exchange values and also to adopt cognitive approaches that take account of the user, the use and the effects of information provided.

In the past case studies have been undertaken to investigate the use of information, the task for which it used and the consequences of its utilisation. This approach places the use of information in a socio-cultural framework. Several authors (Landry et al, 2003 and Gerhardus et al, 2002) have noted how information service providers and those examining costs and benefits of information provision must take social and cultural contexts into account when developing and designing services. Socio-cultural studies (Taylor, 1986 and Repo, 1989) have tended to focus on factors concerning the ease of access to information services, usability, completeness of information and time-savings.

Previous studies (Foley and Larsen, 2007; Percy-Smith et al, 2002) have produced criteria to examine the context and utility of information when used by policymakers. These were utilised as Likert² scales in this study to collect subjective views about the user's personal and organisational socio-cultural context. Criteria included respondent information acquisition effort, organisational context and support for evidence based policy making, respondent assessment of information availability and usability, respondent assessment of the way information was used, respondent assessment of the impact and importance of information in improving policymaking.

This contextual information was essential to better understanding the organisational context (the importance of information and support for evidence based policymaking) and personal context within which information was provided by LIS.

These measures provide a valuable basis for comparing subjective attitudes to information access and utilisation in different situations; they also address the situation specificity problem. They provided a sound basis against which

² A Likert scale is a psychometric scale commonly used in questionnaires. When responding to a Likert questionnaire item, respondents specify their level of agreement to a statement.

to compare authorities or partnerships with LIS and those without, or between authorities where various information systems are well integrated and those where they are not. This approach provided a proven and well-founded standardisation method to compare responses between individuals and organisations about the utilisation and utility of information. This was important because one would expect local information and others systems (working separately or in tandem) to be less 'valued' in an organisation or partnership where there is little emphasis on evidence-based policy making. Conversely, it is posited that in organisations with a high regard for evidence LIS will probably be more important and perceived to have greater value. A clear understanding of these 'baseline' organisational and personal contexts was important in ensuring spurious results are not inferred from research.

The preceding literature review emphasises a number of common themes that highlight the need to adopt a multi-faceted approach to finding the value of LIS. A number of common problems to be addressed during the study were identified; these are shown below, before describing the approach adopted in this study to overcome them.

Situation specificity: This refers to whether information is valued within a *specific scenario* (with specific, quantifiable benefits and risks, as assumed by econometric approaches) or in the context of *general support* for operation, decision making and administration (Saracevic, 1999). This latter type of generic value is derived from the contribution of information to many different situations. It is best exemplified by the role of a LIS (or PMS or management information system) in supporting more routine and ad hoc queries for a variety of organisational outcomes. Unlike the scenario specific uses (such as informing a decision about whether to undertake further drilling to find oil reserves that will have a known financial value), generic information supports decisions or activities that are not critically dependent on the existence of a LIS. The situation specificity problem has to be addressed by adopting a multi-faceted approach that acknowledges the differing contexts for users and information use.

Methodologies: A variety of approaches exist. Decision analysis techniques have been criticised as being too rigid and simplistic. At the other end of the scale, econometric techniques are too situation-specific (Badenoch et al; 1994). Multi-faceted approaches were considered to be the most appropriate for the proposed study where a variety of systems, users and organisations exist.

One indicator of value is whether a library (or in the context of the study a LIS or PMS) is well used, is ***whether people come back again***, as opposed to whether it is well stocked or contains lots of information. Our approach investigated repeat use and loyalty at LIS.

A1.2 Research methodology: Approach and key components

There were three key components to our study.

Firstly, we utilised an enhanced matched pairs methodology to select authorities and partnerships that have different synergies between LIS, PMS and other systems. We also selected authorities that do not have LIS. It was also important to divide LIS into two groups; those that provide a service (through staff to provide user assistance) and those that are really just an online system (with a portal and little user support).

Secondly, in order to minimise the problems caused by *situation specificity*, we focused on the information requirements and benefits of information in informing one key event – the development of LAA by Local Strategic Partnerships.

Thirdly, invitations to complete online questionnaires were distributed to all users of LIS and PMS systems. This ensured that the full range of users was invited to participate (instead of users notified to us by managers, who might have had a higher probability of being frequent users with a positive view of systems). Nonetheless, it must be acknowledged that those most likely to complete the online questionnaire are motivated or supportive users who have obtained benefits from systems. It is unlikely that dissatisfied users who received limited benefits from the system will have participated. This caveat must be noted, but it is a largely unsolvable problem using the current methodology that is encountered by all studies seeking user views. In any case the increasing numbers of users at systems and high levels of repeat users suggests dissatisfied users are far out-numbered by satisfied users.

Face-to-face and telephone survey interviews were undertaken using semi-structured interviews. This approach enabled greater depth and roundness in understanding than 'closed' or formal questionnaires which often only allow a broad understanding of surface patterns. The semi-structured interview schedule allowed some degree of systematisation and standardization in order to help control and reduce the researcher's bias, whilst at the same time allowing freedom for interviewees to express their viewpoints in the manner they choose. This was achieved by utilising an open-ended structure, which asked probing questions about a topic or area and then allowed the interviewee to express his or her views in the manner they choose. Prompts were utilised where more depth was required in answers. Clear areas for investigation were identified with CLG prior to the finalisation of the interview schedule to ensure that all interviewees were asked questions on all areas that needed to be researched by this study.

Difficulties frequently encountered in producing generalisations from qualitative data were addressed in two ways. Firstly, the study used multiple-case studies. This approach made it possible to generalise by comparing multiple responses from 12 case study LIS. The relatively large stratified

sample and comparative techniques enabled the study to assume wider relevance.

Secondly, the interview schedule was designed to facilitate generalisation by seeking to provide more than a snapshot in time of LIS development and utilisation. The interview schedule explored the development and utilisation of LIS over time. In this way, interviews explored past, current and future strategic and operational development and utilisation of LIS. It also explored past and current perceptions of LIS held by users. Thus LIS at different stages of development could be identified and results more easily generalised in the light of this.

The analytical approach used by this study was *cross-case analysis*. Data analysis consists of identifying patterns and producing generalisations that explain the phenomenon under study; in this case the impact of LIS. Cross-case analysis was used because it retains holistic and meaningful contextual characteristics. These were important in addressing the data specificity problem.

Multi-step thematic coding was used to analyse and categorise common themes and responses to the semi-structured interviews. Other data analysis techniques, in addition to thematic coding, were considered but rejected. For example the use of *theoretical propositions* was rejected because it requires establishing a set of propositions to be tested from the outset. Since the purpose of this study was to describe and explain a phenomenon of which little is known, establishing propositions prior to data analysis would have been flawed since they would be based on ungrounded assumptions. Similarly, the use of *rival explanations* was also rejected because this would also have required establishing propositions or hypotheses to be proven or tested, rather than an exploration of the phenomenon.

Thematic coding is a multi-step procedure derived from Strauss (1987) that consists of developing a system of categories for each case study. Mason (2002) explains that the selection of categories depends on the overall methodology and on whether the purpose of the study is to test certain clearly formed hypotheses or to generate ideas. Since this studies was concerned with the generation of ideas and explanation of a specific phenomenon, initial categories were identified a priori and brought into the analysis. Prior identification of initial categories, with input from CLG, was considered necessary to facilitate and enhance data collection and data analysis.

The analytical process was developed further by creating different levels of categories and sub-categories that derived from the interpretation of data collected. The iterative nature of thematic coding means that categories and sub-categories were further refined and modified as many times as necessary while interpretation and analysis was taking place. The result, depending on the complexity of the case study, was on occasions a set of interrelated or unrelated categories and sub-categories. The use of categories enabled the creation of thematic domains for each case study. These were regularly crosschecked with other categories that emerged from other cases. This

thematic structure was used to increase comparability and analysis across cases (Flick, 2002). It is important to emphasise that the intention of these procedures was not to develop a rigid thematic structure. A flexible approach was adopted that enabled categories to be modified and new categories to emerge as analysis was undertaken.

Analysis of categories was undertaken using variable analysis methods. This meant that categories were seen as variables and the main purpose was to explore relations between them (Mason, 2002). Analysis followed an explanatory logic. The aim was to produce understanding of the impact that LIS have on meeting the different needs of users. This was accomplished mainly by the use of pattern matching, explanation building, generalisations and conceptual coherence; these are all well-known data analysis techniques (Miles and Huberman, 1994).

The quality of research studies can be measured according to certain logical tests. The problem is that conventional measures of quality (e.g. validity and reliability) are frequently associated with quantitative research. This is primarily because quantitative research uses standardised research instruments that are frequently regarded as being neutral and un-biased (Mason, 2002). Qualitative research, of the type used in the face-to-face and telephone interviews in this study does not use standard procedures and therefore is sometimes criticised for failing to adhere to notions of reliability and validity in the traditional sense. Much of this debate has focused on whether the quality of qualitative studies should be assessed following the notions of positivistic approaches.

Lincoln and Guba (1985) use alternative terms for conventional measures that they contend are more appropriate for the nature of qualitative research. In this way Lincoln and Guba (1985) use the terms credibility, transferability, dependability and confirmability instead of internal validity, external validity, reliability and objectivity. This study took the view that due to differences in methodological procedures and research practice, the approach to judging the quality of studies should be different for qualitative studies. However, this research followed the example of many authors (Yin, 2003; Flick, 2002; Miles and Huberman, 1994) and uses the conventional terminology of logical tests. This was done for reasons of clarity and familiarity. More important than terminology was the need to demonstrate that data analysis was undertaken in a systematic manner, that the methodology is rigorous and that research design and implementation are reasonable and well-founded.

Four components were taken into account during the development of this research to ensure the high quality of this study. These were:

Internal validity, this concerns the accuracy of information and whether it matches reality. To ensure internal validity this study paid considerable attention to this issue during the design, implementation and analysis stages of the research. As explained above the interview schedule was designed to avoid research bias and to allow interviewees to respond openly and freely. All analytical inferences were based on plausible explanations. They were all tested and verified by an iterative process

of explanation building. Other techniques such as pattern matching, triangulation and addressing rival or alternatives explanations were also used to confirm and verify inferences made during the research

External validity refers to the transferability of generalisations made by the study. To produce generalisation in qualitative research, findings must be replicated in other case studies where replication has been predicted (Yin, 2003). This study addressed the issue of external validity by using replication logic across the multiple-case studies investigated by the research.

Reliability The reliability of a study depends on how much the procedures of the study can be repeated for another study and provide the same results (Litwin, 1995). Due to the uniqueness of every qualitative research study reliability is difficult to prove on some occasions. This study addresses the issue of reliability by carefully documenting in this Appendix and Chapter 3 the methodological approach used, and how and why procedures, such as sampling, data collection and data analysis, were implemented in the manner chosen.

Triangulation was used by this study as a method of validation to increase consistency of methodological procedures. This was done by combining different methods of data collection from different respondents. Triangulation and comparison between respondent groups was also undertaken to highlight inconsistencies in responses between groups. For example the higher utilisation of LIS by telephone respondents (than online respondents, was identified by triangulation, see Table 7.2)

Whilst every effort was made to ensure that the sample of 12 LIS chosen for this study and the interviewees selected were representative of all systems and users it was impossible within the limitations imposed by the methodology to provide an absolute assurance about the validity and reliability of results. Nonetheless, the preceding methodological overview has documented the methods adopted to increase the robustness of analysis and results derived from this study.

A1.3 Investigating the magnitude of system benefits

Qualitative and quantitative methods were used to investigate the benefits of systems.

Everyone involved in the study (more than 288 respondents) was asked to provide details of the most beneficial use they obtained from systems. This provided a rich qualitative source of system benefits; see section six. Respondents were also asked to provide an estimate of the financial benefits for these examples.

Quantitative benefits were investigated in three ways. Firstly, by examining the time spent utilising systems by users (calculated in minutes per year) it was possible to obtain an estimate of the **time value of systems**.

The *time value of systems*, obviously, provides a good indication of the total time spent on systems, but it does not provide an insight into the time savings gained from using an LIS instead of obtaining the required information from other sources. Respondents were therefore asked how much longer it would take them to find the information they required from alternative sources. This enabled the calculation of the benefits of LIS in terms of a **time saving as a substitute source**.

Monetary values can be associated with these time-savings for those using systems for work or for personal use. It is thus possible to estimate a **monetary time-saving value**.

The HM Treasury Green Book provides detailed methods to derive a monetary value for time-savings derived from government investments. The value of employees' time-savings (working) is the opportunity cost of the time to the employer. This is equal at the margin to the cost of labour to the employer: the gross wage rate plus non-wage labour costs such as national insurance, pensions and other costs that vary with hours worked. The Department for Transport has undertaken pioneering work in this area for several years to estimate the monetary value of time savings arising from reducing travel times; see www.webtag.org.uk (TAG Unit 3.5.6). They suggest a 21.2 per cent mark-up to take account of non-wage labour costs such as national insurance, pensions etc.

Local Government Analysis and Research undertake annual local government earnings surveys, for more than 100 different job categories. The category of users most likely to use LIS is 'Data/Analysts and Researchers'. However, it must be acknowledged that a wide variety of other public sector employees in different job categories will also utilise systems. In 2007 the mean annual pay rate for data/analysts and researchers was £24,875 in England (LGAR, 2007). This level of remuneration was similar to or slightly below other job categories that might be expected to use systems (for example benefits officers, average annual pay rate £21,047; chartered surveyors, £30,223; child protection officers, £35,047; economists and statisticians, £33,721; environmental protection officers, £26,545; housing officers, £23,903; librarians, £22,432; planning officers £27,603; and social workers, £28,494). The remuneration for this group therefore probably represents a conservative estimate of the average annual pay for public sector users. Applying the Department for Transport 21.2 per cent mark-up suggests a gross annual pay rate for data/analysts and researchers of £30,149. This equates to an average value of approximately £17.50 per hour.

This rate is below the average for all working persons of £22.11 per hour estimated by the Department for Transport in 2002. This suggests that the estimated rate (£17.50 per hour) is a conservative estimate.

The Department for Transport has also estimated monetary values for the non-working time per person. These should be applicable to the time-savings for those using systems for personal use. These estimates suggest a non-work value of time of £5.68 per hour in 2008.

A1.4 Calculating the value of time savings at an LIS

In the online survey, undertaken in November 2008, 204 LIS users were asked to estimate how much longer it would have taken them to find and obtain information from alternative sources if they had not used LIS, see Appendix 3; question 5 of the online questionnaire).

Table 7.3 revealed that users who knew of an alternative source thought it would take them 19.7 minutes longer (than their LIS visit) to find the information they required from alternative sources. This group probably offer the best insight into the time saved by using LIS, since if they know of an alternative source they should have a good idea of how long it would take to obtain the information from this source. Utilising the views of this group in subsequent calculations ensures that only the most conservative, and probably most accurate, method for estimating the value of an LIS is adopted.

The approach developed for this study adopted the Department of Transport methodology by utilising the annual time saving at an LIS and multiplying the hours 'saved' by monetary values per hour (for LIS users utilising the system for work [£17.50/hour] and for citizen and voluntary use [£5.68/hour]) using HM Treasury Green Book estimates. The proportion of users from the two groups in this study was 79 per cent work use; 21 per cent citizen and community use utilisation (see Table 7.1).

For each of the users who knew of an alternative source the value of their time saving was found by calculating (in hours) their estimated time saving by the number of times they visited LIS per annum. This figure was then multiplied by the appropriate HM Treasury Green Book monetary value for work or non-work use. The average monetary value for all users that knew of an alternative source was £142 per year.

Because users who knew of other sources spent less time using LIS than the average for all users in the study (8.3 hours versus 11.9 hours respectively, see Table 7.3) the time saving value calculation was repeated using the average hourly usage figure (11.9 hours) for all visitors. This generated an annual time saving value of £210 per annum. This figure was adopted as the upper end of a range of values likely to be achieved by each unique visitor at an LIS. The lower end of the range is the £142 value derived for users who knew of an alternative source. This range of values (£142 to £210) is used to provide the high and low spread of estimates produced in the bottom section of the LIS Value Assessment Tool.

Some LIS administrators do not have sufficiently good web browsing statistics for their site to know the number of unique visitors per year. This group will be unable to use the above range of values to calculate an LIS system value.

An alternative approach is possible if administrators know the number of minutes or hours their LIS is utilised for (average figures per day, week or month can be utilised to calculate the number of hours their LIS is used per annum by all visitors).

Table 7.3 reveals that users who knew of a substitute source estimate it would take them 19.7 minutes longer to find the information they required (than the average of 16.6 minutes they spent getting the information from an LIS). This means it takes more than twice as long on average to find information from alternative sources than LIS.

The time saved by using LIS is 1.188 times longer than the time spent obtaining the information from the LIS [$19.7 / 16.6 = 1.188$]). This ratio could provide a useful 'rule of thumb' to assist LIS managers to calculate LIS system value if they know the time spent on their system by users. By multiplying the number of hours a year spent on an LIS by 1.188 it is possible to calculate the total time saved (from not having to seek information from alternative sources). This total value can then be multiplied by monetary values of £17.50 per hour for work oriented use or £5.86 per hour for community or citizen use to calculate a monetary value for this time saving.

If managers do not know the proportion of users in each of these categories the 79 per cent work use; 21 per cent citizen and community use ratio found by this study (see Table 7.1) could be adopted. This would suggest an average hourly value of £15.06 (calculated by using the proportions of user groups multiplied by the HM Green Book value for that group ($[\text{£}17.50 \times 0.79] + [5.86 \times 0.21]$). These figures were calculated in November 2008, see A1.3 above. They will change in the future. The sources of data to revise estimates after this date are provided above.

A1.5 The online Value Assessment Tool

To enhance the benefits derived from this research an interactive portal that enables systems managers to obtain an estimate of the value of their system has been created by Tech4i2. Users of this **Value Assessment Tool** (www.esd.org.uk/LIS-value-assessment) are required to input basic data about systems costs, uses and the number of users. An algorithm derived from users' views (clearly documented in an accompanying methodology section of the portal) is then used to estimate the economic value of the LIS. The value assessment tool has been useful in collecting information about system development costs and numbers of users from LIS systems that were not amongst the 12 that took part in the first stage of this study.

Appendix 2: LIS Manager Questionnaire schedule

LIS Manager Questionnaire schedule

Interviewee Name

Interviewee Organisation

Institutional Information use and utilisation

Policy Making and Strategy Development Information						
	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree	Not applicable
My organisation provides sufficient means to <u>access</u> information and statistics to enhance strategy development and policy making						
Information and statistics are <u>important in enhancing strategy development and policy making</u> in my organisation						
Our Local Information System provides <u>good access</u> to information and statistics to enhance strategy development and policy making						

What is the most significant example you can think of where information and statistics made an important impact in enhancing strategy development and policy making?

.....

Policy Implementation (service delivery, projects and initiatives) Information						
	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree	Not applicable
My organisation provides sufficient means to <u>access</u> information and statistics to enhance service delivery and policy implementation						
Information and statistics are <u>used in enhancing service delivery and policy implementation</u> in my organisation						
Our Local Information System provides <u>good access</u> to information and statistics to enhance service delivery and policy implementation						

What is the most significant example you can think of where information and statistics made an important impact to enhance service delivery and policy implementation?

.....

Performance Monitoring Information						
	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree	Not applicable
My organisation provides sufficient means to <u>access</u> information and statistics to monitor performance						
Information and statistics are <u>important in monitoring performance</u> in my organisation						
Our Performance Monitoring System provides <u>good access</u> to information and statistics to monitor performance						

What is the most significant example you can think of where information and statistics made an important impact to performance monitoring?

.....

What are the barriers to using information and statistics in your organisation:-						
	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree	Not applicable
Difficult to find information and statistics						
Not enough time to read and consider information and statistics adequately						
Limited relevance of information and statistics that are available						
Limited knowledge/skills of <u>service/delivery</u> staff about how to utilise information and statistics						
Limited knowledge/skills of <u>managerial/administrative</u> staff about how to utilise information and statistics						
Available information and statistics contradict each other						
Poor quality of information and statistics						
Other						

Personal Information use and utilisation

How frequently do you use the following sources of information?

For those you have used how would you rate them for ease of use in finding the information you require (10 = Excellent, 1 = very poor)

	Daily	Once a week	Once a month	Once a quarter	Once a year	Never	Ease of use, 10 high; 1 low
Local Information System							
Performance Management System							
Neighbourhood Statistics							
Office for National Statistics							
Floor targets interactive							
Data for neighbourhood renewal data4nr.net							
Data interchange hub (the Hub)							
Partnership and places library							
esdToolkit							
Other							
Other							

Local Area Agreements and information utilisation

Were you involved in the developing the Local Area Agreement? **YES NO** If 'yes' how? If 'NO' Skip

.....

How were the up to 35 National Indicators selected for your Local Area Agreement?

.....

How important were the following factors in selecting the national indicators for your Local Area Agreement:-

	Very important	important	Neither important or unimportant	unimportant	Very unimportant	Not applic.
Experience						
Common sense						
Local political will						
The wider political/ legal environment						
Information and statistics						
Research papers and publications						
Citizens views or surveys						
Other						

What role did the local information system and its support staff play in the development of your Local Area Agreement?

.....

Probe – Why did it play that role. If used what were catalysts? If not used why was it overlooked or rejected?

What were the key strengths of the local information system and its support staff in the development of your Local Area Agreement?

.....

In which areas and activities could the local information system and its support staff have done more to support the development of your Local Area Agreement?

.....

What role is envisaged in the future for the local information system and its support staff in the further development and implementation of your Local Area Agreement?

.....

Probe – What role will they play? What were the catalysts for this role? If use not envisaged in future why overlooked or rejected?

What role did information and statistics play in the development of your Local Area Agreement

	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree	Not applicable
They were important in confirming pre-existing ideas						
They were important in challenging pre-existing ideas						
They were important for indicating key local problems						
They were important in quantifying the extent of local problems						
They were important in selecting the national indicators for our LAA						
They will be important in monitoring our performance against the national indicators selected for our LAA						

What were the key sources of information and statistics used in the development of your Local Area Agreement?

	Used a lot	Used a little	Barely used	Not used	Unknown
Best Value Performance Indicators					
Local Surveys					
Local Information System					
Neighbourhood Statistics					
Office for National Statistics					
Floor Targets Interactive					
Data for neighbourhood renewal (data4nr.net)					
Data interchange hub (the Hub)					
Partnership and places library					
esdToolkit					
Other					
Other					

The way the local authority or local strategic partnership deals with routine information and statistics enquiries

Who could we contact to find out the way that routine enquiries are dealt with by your local authority or local strategic partnership?

.....

How are routine information and statistics enquiries dealt with by your organisation for all channels (visitor, phone, email and letter)?

.....

Is there an agreed routine or process?

.....

What role does the local information system play in this routine or process? Does the Local information System only play an ad hoc role?

.....

How many routine information and statistics enquiries are there each month and approximately how many are referred to the local information system?

Channel	Enquiries per month	Number dealt with by LIS	Unknown
Visitors			
Telephone			
Email			
Letter			
Other			
Total			

LIS costs

When did the LIS start?

.....

Is the system bespoke or off-the-shelf?

.....

What were the initial development or licence costs?

.....

Expenditure per year	2002	2003	2004	2005	2006	2007
Initial site development						
Staff costs						
Hardware						
Software/licences						
Training						
Telephone, incidentals						
Other						
Total						

If a bespoke system was developed – If you were developing a system now would you consider buying an off-the-shelf solution? AND vica versa why?

What are the most important factors affecting the costs and benefits of your system?

.....

What could be done to decrease the costs of your system?

.....

What could be done to increase the benefits of your system?

.....

Which costs are mostly likely to increase in the future?

.....

Have you ever developed a business case or an evaluation of your system?

.....

LIS use and support

LIS Use and Channels	Face to face no.	F to F avg mins	Telephone no.	Telephone avg mins	Online no.	Online mins or page views
Local Authority staff supported each month						
Local Strategic Partnership staff supported each month						
Other local organisation staff supported each month						
Third sector staff supported each month						
Citizens and general inquiries supported each month						
Other						

We are trying to estimate the levels of use and costs of processing different types of enquiries. We know that some of this information is not collected by all local information systems but your estimate of levels of use and processing costs for enquiries would be greatly appreciated.

LIS channel use per year	2002	2003	2004	2005	2006	2007	Processing cost/enq (£ or mins)
Face to Face							
Telephone							
Email							
Letter							
Web (try to collect consistent measures)							
Total							

Has increasing use led to increasing costs or have the resources to deal with increasing users or enquiries remained the same?

Details

Are you developing mechanisms or tactics to move users to less resource intensive channels?

Details

What do you perceive to be the key benefits of your system? Try to provide an economic value for these benefits

Details

Integration of LIS and PMS

Does your authority or partnership have a performance management system?

What is it? – try to get details (e.g perform, performance+ etc)

Details

How closely integrated are the LIS and PMS systems and staff?

Details

How closely associated are the local information system and the performance management system?

- Location (adjacent, same dept, same building, separate locations)
- Systems integration (same system, integration between systems, share some data, separate systems.
- Data collection (well managed no duplication, some agreement over data collected, no agreement and duplication in data collected)

Details

Is being located in the same or adjacent office a prerequisite in developing good working relationships between local information system and performance management systems? **YES NO**

What the key reasons and most important factors for effective working together

.....

Have there been any stimuli or incentives in the last two years to integrate LIS and PMS systems?

Details

What plans do you have to integrate LIS and PMS systems?

Details

What are the key benefits of integrating LIS and PMS?

Details

What are the costs of integrating LIS and PMS?

Details.....

Does integrating LIS and PMS produce cost savings, now or in the future? **YES NO**

Details.....

Are there any other groups or systems that your local information systems could be beneficially integrated with? **YES NO**

Details.....

Benefits of LIS

Our project is investigating the economic and non-economic benefits of local information system and performance management systems. This is obviously not an easy task. However, by using the views (often subjective) of managers and system users we will derive a robust insight into actual and perceived values. The following questions are therefore difficult to answer and highly subjective but we hope by placing your views alongside those of hundreds of users and other managers we will obtain an important insight into economic and non-economic benefits.

How much time do you think the average user spends on each enquiry using different channels?

LIS channel (used for user time commitment)	Average time spent by user on each type of enquiry	
	Non-citizen users (LAs, LSP partners etc)	Citizen Users
Face to Face mins mins
Telephone mins mins
Email mins mins
Website mins mins

How much monetary value do you think the average user obtains per enquiry? (We realise this is difficult, but we will be asking 'them' too).

LIS channel	Average value for users of each type of enquiry (£ . p)	
	Non-citizen users (LAs, LSP partners etc)	Citizen Users
Face to Face		
Telephone		
Email		
Website		

Benefits

Please provide three examples of the way in which your local information system has made a significant difference to local policymaking, implementation, monitoring or community development. Please try to associate a monetary benefit with these examples.

- 1
- 2
- 3

Non-economic Community benefits

How important is your Local Information System in achieving the following citizen and community benefits?

	Very important	important	Neither important or unimportant	unimportant	Very unimportant	Not applic.
Community empowerment						
Improved community relations						
Greater support for local communities						
Better partnership with community groups						
Increased citizen access to information						
Improved citizen consultation						
Increased citizen feedback /suggestions						
Increased transparency of processes						
Improved image of public sector						

Appendix 3: The online LIS user questionnaire

Local Information Systems

Project Details	LIS Questionnaire	Contact
<p>This questionnaire is part of a research project, commissioned by the Department for Communities and Local Government, to investigate the way users of local information systems benefit from the data and statistics the systems provide. The aim of the questionnaire is to obtain information about how you use the system and the way it helps you. The information from this study will be analysed and used to generate guidelines to improve local information systems. Answers will also be used to produce a list of the beneficial uses of systems and to estimate the value of local systems to users. Your answers will remain anonymous and will not be shared with anyone else.</p>	<p>* WHICH LOCAL INFORMATION SYSTEM WERE YOU USING WHEN YOU WERE REFERRED TO THIS QUESTIONNAIRE?</p> <div style="border: 1px solid #ccc; padding: 2px; width: 100%; margin-bottom: 10px;"> <input type="text"/> </div> <hr/> <p>1. COULD YOU TELL US WHY YOU ARE USING THE LOCAL INFORMATION SYSTEM?</p> <ul style="list-style-type: none"> <input type="radio"/> For local authority work use <input type="radio"/> For Local Strategic Partnership work use <input type="radio"/> For other public sector work use <input type="radio"/> For other work use <input type="radio"/> For community and voluntary group use <input type="radio"/> For personal use <input type="radio"/> Other <hr/> <p>2. ON AVERAGE HOW OFTEN DO YOU USE THE LOCAL INFORMATION SYSTEM?</p> <p>times per month</p> <div style="border: 1px solid #ccc; width: 100%; height: 15px; margin-bottom: 10px;"></div> <p>OR times per year</p> <div style="border: 1px solid #ccc; width: 100%; height: 15px; margin-bottom: 10px;"></div> <hr/> <p>3. ON AVERAGE HOW LONG DO YOU SPEND USING THE LOCAL INFORMATION SYSTEM WHEN YOU VISIT? (minutes)</p> <div style="border: 1px solid #ccc; width: 100%; height: 15px; margin-bottom: 10px;"></div> <hr/> <p>4. THINKING BACK TO YOUR LAST THREE VISITS TO THE SYSTEM, ARE THERE ANY OTHER SOURCES THAT YOU COULD HAVE USED TO OBTAIN THE SAME INFORMATION YOU REQUIRED?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> Probably <input type="radio"/> Probably Not <input type="radio"/> No (go to que 6) <input type="radio"/> Don't know (go to que 6) 	<p>If there are any problems with completing the surveys please contact</p> <p style="text-align: center;">support@tech4i2.com</p>

5. FOR THOSE LAST THREE VISITS HOW MUCH LONGER PER VISIT DO YOU ESTIMATE IT WOULD HAVE TAKEN YOU TO FIND AND OBTAIN THE INFORMATION FROM THIS/THESE ALTERNATIVE SOURCE(S), THAN FROM THE LOCAL INFORMATION SYSTEM? (minutes longer per visit than using the local information system)

6. WE REALISE THIS QUESTION IS DIFFICULT BUT PLEASE TRY TO ANSWER. THINKING BACK TO YOUR LAST THREE VISITS. HOW MUCH MONETARY VALUE DO YOU THINK YOU OBTAINED PER VISIT? (A guesstimate would be very helpful to this study) Enter your answer as a money value £.pp (i.e. 0.50, 1.50, 10.50 etc)

DID YOU CALCULATE THIS BY

- Estimating a monetary value to the time you saved from not searching alternative sources?
- Estimating a monetary value to the time it would have taken consultants to obtain the same information for you?
- Estimating a monetary value for the winning funding bid that the information was used to support?
- Other

Other method details

7. ON AVERAGE HOW MUCH EASIER IS IT TO OBTAIN THE INFORMATION YOU NEED FROM YOUR LOCAL SYSTEM THAN THE ALTERNATIVE(S) AVAILABLE

- Very much easier
- Much easier
- Same
- More difficult
- A lot more difficult
- Not applicable

8. PLEASE PROVIDE THE MOST SIGNIFICANT EXAMPLE OF THE WAY IN WHICH YOUR LOCAL INFORMATION SYSTEM HAS BEEN BENEFICIAL FOR YOU IN YOUR JOB OR IN YOUR PERSONAL ACTIVITIES. PLEASE TRY TO ASSOCIATE A MONETARY BENEFIT WITH THESE EXAMPLES.

DETAILS OF THIS EXAMPLE

MONETARY BENEFITS OF THIS EXAMPLE. Enter your answer as a money value in £ (i.e. 5, 50, 5000 etc)

9. CAN YOU TELL US HOW STRONGLY YOU AGREE THAT THE ISSUES LISTED BELOW APPLY TO YOU IN USING INFORMATION AND STATISTICS

IT IS DIFFICULT TO FIND INFORMATION AND STATISTICS

- Strongly agree
 - Agree
 - Neither agree or disagree
 - Disagree
 - Strongly disagree
 - Not applicable
-

THERE IS NOT ENOUGH TIME TO READ AND CONSIDER INFORMATION AND STATISTICS ADEQUATELY

- Strongly agree
 - Agree
 - Neither agree or disagree
 - Disagree
 - Strongly disagree
 - Not applicable
-

THE INFORMATION AND STATISTICS AVAILABLE ARE OF LIMITED RELEVANCE TO MY NEEDS

- Strongly agree
 - Agree
 - Neither agree or disagree
 - Disagree
 - Strongly disagree
 - Not applicable
-

I HAVE LIMITED KNOWLEDGE OR EXPERIENCE IN UTILISING INFORMATION AND STATISTICS

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree
- Not applicable

Appendix 4: Additional examples of the use of information provided by LIS

Utilisation of LIS for general intelligence purposes

- *The LIS is excellent at mapping of data (perceived value £15)*
- *Ease of graphing and charting from data tables (perceived value £50)*
- *LIS data is sorted into neat clusters so we can see what 'additional' information is available to answer our question and queries (perceived value £10,000)*
- *Obtaining the numbers of older people across the County*
- *Providing a community profile to underpin the possible development of a local university (perceived value £25)*
- *Analysis of community problems and needs by reference to the indices of deprivation*
- *I was accessing data on house burglaries, a crime which is rife in certain parts of my area. I do not know of any other ways of accessing this information. (perceived value £50)*
- *Information to help with a decision to buy and subsequently seek permission to develop a domestic property (perceived value £500)*

Utilisation of LIS for operational purposes

- *Geographical gap analysis of our service provision (perceived value £5,000)*
- *Responding to a Freedom of Information enquiry that required statistics about the borough, such as population distributions (perceived value £25)*
- *Devising community profiles and then using the information to set up community profiling training for library staff. This has fed into the planning process for the library service in the county.*
- *Using the LIS to establish planning constraints on a site without paying for a search (perceived value £50)*
- *Mapping multiple areas of deprivation in the county to identify whether we are targeting the children from the more deprived areas for delivering early intervention services (perceived value £100)*
- *Justifying a second Sure Start Zone in the local area, by being able to get a detailed neighbourhood profile – value £400 per child (perceived value £40,000)*

- *I was in a post sponsored by Sport England that required me to target activities to minority groups in higher areas of deprivation and I used the LIS indices of deprivation information frequently both in deciding on areas and activities and latterly when writing my annual reports (perceived value £150)*

Utilisation of LIS for strategic purposes

- *The LIS provides relevant data to plan and make informed strategic decisions (perceived value £5,000)*
- *The LIS provided the evidence base for an area action plan and sustainability appraisal (perceived value £1,000)*

Utilisation of LIS for performance monitoring purposes

- *The LIS provides a simple easy way to access relevant performance data to use in reports and to identify hot spots etc (perceived value £1,000)*

Utilisation of LIS for funding purposes

- *Really useful when looking for details to place into funding bids and reports and also very useful when looking for data for service development*
- *Population change forecasts and age percentages for proof in a funding application (perceived value £200)*
- *Estimating population growth in the county, helped in obtaining grant (perceived value £500,000)*
- *LIS data was used to make a case for local authority funding for a community project*

Utilisation of LIS for educational purposes

- *School project*
- *I am student and this provided an accessible and relevant resource for my project which used a PEST analysis to examine the prospects for local charities*
- *LIS data was used as part of MSc research project*

Appendix 5: Bibliography

- Alberta Heritage Foundation for Medical Research (2003) *A study of the impact of 2001–2002 health technology assessment products*. Edmonton: AHF.
- Audit Commission (2008) *In the know: Using information to make better decisions*. London: Audit Commission.
- Badenoch, D. et al (1994) The value of information. In: M. Feeney & M. Grieves (eds) *The value and impact of information*. East Grinstead: Bowker Saul.
- Broadbent, J. (1992) Change in organisations: a case study of the use of accounting information in the NHS. *British Accounting Review*, 24, pp.343–67.
- Cabinet Office (1999) *Professional policy making for the 21st century*. www.nationalschool.gov.uk/policyhub/docs/profpolicymaking.pdf
- Codagnone, C. and Boccardelli, P. (2006) *eGovernment Economics Project (eGEP): Economic Model*. Brussels: European Commission.
- Communities and Local Government (2006a) *Strong and prosperous communities: Local Government White Paper – Summary*. London: CLG.
- Communities and Local Government (2006b) *Strong and prosperous communities: Local Government White Paper – Vol. 1 (Cm 6939-1)*. London: TSO.
- Communities and Local Government (2007) *Local Information Systems: A review of their role, characteristics and benefits*. London: CLG.
- Communities and Local Government (2008) *Communities in control: real people, real power (Cm 7427)*. London: TSO.
- Coroners and Justice Bill (2008-9) Bill 9, 54, 4. London: HMSO.
- Coroners and Justice Bill (2008-9) Explanatory Notes. Bill 9, 54, 4. London: HMSO.
- Department for Transport (2008) TAG unit 3.5.6. www.webtag.org.uk
- Eccles, M. (2003) *What is the role of research and evidence in policy making*. www.ncl.ac.uk/ihs/research/publication/19916
- Flick, U. (2002) *An introduction to qualitative research*. London: Sage.
- Foley, P. (1990) Growth in the collection of labour market information. *Regional Studies*, 24 (4), pp.367–71.
- Foley, P. (1992) *Collaboration in the collection and utilisation of economic and labour force information: A survey of data pooling groups in Great Britain*. *Regional Studies*, 26 (3), pp.277–89.

- Foley, P. & Alfonso, X. (2003) *Connecting communities: Tackling exclusion*. London: Greater London Authority.
- Foley, P. & Ghani, S. (2005) The business case for eGovernment. In E. Lau & E. Muller (eds). *eGovernment for better government*. Paris: OECD.
- Foley, P., Alfonso, X. & Wiseman, I. (2008) *Mapping of regional and sub-regional local information systems*. (unpublished report).
- Gerhardus, A. et al (2002) *A methodology to assess the use of research for health policy development*. www.hyg.uni-heidelberg.de/sfb544/pdf/DP_4_2000.pdf
- Glaser, E., Abelson, H. & Garrison, K. (1983) *Putting knowledge to use: facilitating the diffusion of knowledge and the implementation of planned change*. San Francisco: Jossey-Bass.
- Griffiths, J-M. & King, D.W. (1994) *Libraries: the undiscovered national resource – The Value and Impact of Information*. London: Bowker-Saur. pp.79–116.
- HM Government (2006) *Local Government and Public Involvement in Health Bill*
- HM Treasury (2007) *Review of sub-national economic development and regeneration*. London: HM Treasury.
- HM Treasury (2008) *The Green Book: Appraisal and evaluation in central government*. www.hm-treasury.gov.uk/d/green_book_complete.pdf
- Holt, G.E., Elliott, D. & Moore, A. (1999) Placing a value on public library services. *Public Libraries*, 38, pp.98–108.
- Home Office (2006) *Managing and sharing information IMPACT programme* <http://police.homeoffice.gov.uk/operational-policing/impact/>
- Johnstone, D. & Johnstone, S. (2008) *Supporting evidence for local delivery: National research and evaluation – key findings*. London: CLG.
- Koenig, M.E.D. (1992) The importance of services for productivity: under-recognized and under-invested. *Special Libraries*, 83 (4), pp.199–210.
- Lemne, M. & Sohlman, A. (2004) Governance, democracy and evaluation: From not evaluating at all to learning from ex post evaluations – The strenuous Swedish way towards accountability. Presented at: *European Evaluation Society Sixth Conference*. Berlin, Germany 29 September 2004.
- Lincoln, Y. & Guba, E. (1985) *Naturalistic inquiry*. Beverly Hills: Sage.
- Local Government Analysis and Research (2007) *Annual local government earnings survey*. www.lga.gov.uk/lga/core/page.do?pagelid=1095219
- Landry, R., Lamaris, M. & Amara, N. (2003) The extent of determinants of the utilisation of university research in government agencies. *Public Administration Review*, 63 (2), pp.192–205.

MacEachern, R. (2001) *Measuring the added value of library and information services*. *IFLA Journal*, 27, pp.232–36.

Maclennan, D. & Moore, A. (1999) Evidence, what evidence? The foundations for housing policy. *Public Money and Management*, 9 (1), pp17–23.

Mandell, M. & Sauter, V. (1984) Approaches to the study of information utilisation in public agencies. *Journal of Knowledge: Creation, Diffusion and Utilization*, 6 (2), pp.145–63.

Marchand, D. & Horton, F. (1986). *Infotrend: profiting from your information sources*. New York: Wiley.

Mason, J. (2002) *Qualitative researching*. 2nd ed. London: Sage.

Matthews, J.R. (2002) *The Bottom Line: Determining and communicating the value of the Special Library*. Westport (CT): Libraries Unlimited.

Miles, M. & Huberman, A. (1994) *Qualitative data analysis*. 2nd ed. Thousand Oaks: Sage.

Nutley, S. (2003) Bridging the policy/research divide: Reflections and lessons from the UK. Keynote paper presented at: *Facing the Future: Engaging stakeholders and citizens in developing public policy – National Institute of Governance Conference*. Canberra, Australia 23–24 April 2003.
www.ruru.ac.uk/PDFs/Bridging%20Research%20Policy%20Divide.pdf

Nutley, S., Davies, H., Walter, I. & Wilkinson, J. (2004) *Developing projects to assess research impact: Report of RURU Seminar 4*. St Andrews University 25–26 November 2004.

Office for Public Management (2005) *The impact of research on policy making and practice: Current status and ways forward: Report for the Audit Commission*. London: OPM.

Office of the Deputy Prime Minister (2005) *Data sharing for neighbourhood renewal: Lessons from the North West – Research Report 18*. London: ODPM.
www.communities.gov.uk/publications/corporate/datasharing

Percy-Smith, J. et al. (2002) *Promoting change through research: the impact of research on local government*. York: Joseph Rowntree Foundation.

Repo, A. J. (1989) The value of information: Approaches in economics, accounting, and management science. *Journal of the American Society for Information Science*, 40, pp.68–85.

Sanderson, I. (2002) Evaluation, policy learning and evidence-based policy making *Public Administration*, 80 (1), pp.1–22.

Saracevic, T. (1991). Information science: origin, evolution and relation. In: *COLIS 1. International Conference on Conceptions of Library and Information Science: Historical, Theoretical and Empirical Perspective*. London: Taylor Graham.

Saracevic, T. (1999). Information Science. *Journal of the American Society for Information Science*, 50 (12), pp.1051–63.

Saracevic, T. & Kantor, P. (1997) Studying the Value of Library and Information Services. Part I. Establishing a Theoretical Framework. *Journal of the American Society for Information Science*, 48 (6), pp.527–42.

Strauss, A. (1987) *Qualitative analysis for social scientists*. New York: Cambridge University Press.

Sullivan, H. (2001) Maximising the contribution of neighbourhoods – the role of community governance. *Public Policy and Administration*, 16 (2), pp.29–48.

Taylor, M. & Wilson, M. (2006) *The importance of the neighbourhood*. York: Joseph Rowntree Foundation. www.jrf.org.uk/sites/files/jrf/9781859354940.pdf

Taylor, R. (1986) *Value-added process in information systems*. Norwood (NJ): Ablex

Weiss, C. (1979) The many meanings of research utilisation. *Public Administration Review*, 39 (5), pp.426–31.

Yin, R. (2003) *Case study research: design and methods*. 3rd ed. Thousand Oaks: Sage.

£20

ISBN 978-1-4098-2054-3

ISBN 978-1-4098-2054-3



9 781409 820543