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INFORMATION STRATEGY FOR LONDON BOROUGH OF MERTON

An Interactive Qualifying Project Report

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Executive Summary

A recent Best Value Review has revealed that the London Borough of Merton needs a corporate approach to information. The Borough currently utilises a system with over seventy databases. Many of these databases contain identical information which provides an opportunity for consolidation of systems and data normalisation. The development of an information strategy is necessary to increase efficiency and communication in the organisation. However, implementing an information strategy is often a difficult, expensive, and time-consuming process.

An information strategy is defined as a series of methods that managers take to implement a new information system. The focus of our research was to understand the steps of an information strategy and how to apply the strategy to the total system. There are three phases to create an information strategy: definition, construction, and implementation. The definition phase describes the requirements for a new information system. These requirements are identified through research of an organisation's business and system objectives. Aligning the business and system objectives ensures that the goals of the organisation are understood and that the information contained in the system is up-to-date. The Data Protection Act of 1998 requires that the information held on the system is current and accurate.

The goal of our project was to define the Borough of Merton's information technology needs, to identify data overlap in its current system, and to make recommendations in a needs analysis. The needs analysis provides the Borough with a foundation to take the initial steps towards creating an information strategy.

We reached our goal by obtaining information from surveys and interviews with Borough employees. The aim of our methods was to understand the flow of data in the Borough's current information system. We distributed 120 surveys among the managers of the Borough's systems and 600 surveys to the end-users of the systems. Our manager surveys asked about the data processing needs of each division, the number of databases each division uses, the type of information contained in the databases, and the problems with data processing and sharing that the divisions face. The employee survey questions were specific to the database users, regarding the amount of time they spend using a database, the information they process in a database, and the strengths and weaknesses of those systems. We organised the results of each survey in an Access database and analysed the results quantitatively and qualitatively.

The interviews were used to complement the surveys by providing a more in-depth understanding of the aspects employees want in a new system, and probing the weaknesses of the current one. We interviewed three Business Systems Managers (BSMs) and eleven Department Heads of Service. The BSMs are responsible for the IT services in their respective departments. The interviews with the BSMs enabled us to define the data flow within the departments and to reveal any data sharing opportunities in the Borough's information system. The Heads of Service interviews provided more specific responses concerning the data flow within the subdivisions of the five departments and the problems and limitations of the systems that the divisions use.

The results of our surveys and interviews listed the different systems used in the Borough of Merton's total system. We found that there are six main systems utilised for data access and storage. These systems are: Academy, Ash Debtor's, CareFirst, Confirm,

Financial Management Information System (FMIS), and Payroll Human Resource Information System (PaHRis). There are also multiple subsystems and databases contained in the Borough's information system. Our data revealed many redundancies in these systems. An example of duplication of data was that the Borough held thirty nine databases for personal information. This provides an opportunity for data consolidation. Our research also exposed opportunities for system sharing in the organisation. In an interview with a member of Legal Services in the Chief Executive's Department, we discovered that Legal Services needs access to the CareFirst system used in the Environmental Services Department. This would improve efficiency for Legal Services and reduce the time it takes for accurate transfer of information.

Based on our research, we developed recommendations to improve efficiency and communication in the Borough of Merton. In regards to data sharing, these are some opportunities that different departments would like to take advantage of:

- Chief Executives Department wants access to census data within Environmental Services.
- Amenity Services desires access to information about the number of people per household that the Social Services Department holds.
- Parking and Waste Services wants council tax information from Financial Service.
- Waste Services needs access to the Highways Division's database of trash bins for inventory.

Data standardisation also needs to be considered. We discovered instances where data was not uniform in the Borough's information system. Non-uniform data causes confusion and difficulty in accessing information in a database. We recommend that all data entered into the databases of the Borough's information system have one standard form, especially names and addresses. This will save time and effort for employees accessing information in the system's databases.

While data sharing should be considered, we also recommend that the Borough inspect the systems they currently utilise in order to improve efficiency. We discovered three specific examples where sharing systems will create a more efficient system. The first example is an opportunity to reduce redundant data as Council Tax, Housing Benefits Information System (HBIS), and CareFirst databases all hold similar address data. Second, Legal Services wants read only access to CareFirst for client information in trials, thus there is an opportunity to allow system sharing to encourage efficiency. Finally, the environmental gazetteer could be shared with Housing and Social Services as it needs access to its extensive list of addresses.

Based on our research of the organisation, we recommend that the Borough create a corporate policy to define certain elements of the system structure that have not been regulated. We suggest a corporate policy that includes a definition of the role of the BSMs across the Borough, and regulates the purchase of systems outside the Borough. We also recommend that the Borough conduct meetings with the users of its system, specifically Business Systems Managers, Heads of Service, and members of the IT Services Division. These meetings would help encourage management and user training of systems and use of the systems to their full functionality. The goal of the meetings will be to eliminate redundant systems and focus on creating a more efficient total system through sharing between departments.

Abstract

Our project sponsor, the London Borough of Merton, is in the process of creating a new information system. The municipality consists of five departments that utilise over seventy databases and over thirty database programs. The Borough's current information system contains duplicate data and is expensive to maintain. The goal of our project was to assess the Borough's current system using surveys and interviews of its employees. These data were used to create a needs analysis for the Borough of Merton that provided recommendations for making future decisions about improving their information system.

Table of Contents

List of Figures

List of Tables

Glossary

Database – A collection of data arranged for ease and speed of search and retrieval

End-users – Users without technical or specialised knowledge about the system

Gazetteer – A geographic dictionary or index

Hardware – A computer and the associated physical equipment directly involved in the performance of data-processing or communications functions

Information Technology – The development, installation, and implementation of computer systems and applications

Information System – A computer-based structure that uses information technology, procedures (processes) and people to capture, move, store and distribute data and information

Operating System – Application that a computer runs on, for example Windows XP, Linux, or UNIX

Outsourcing – The process organisations take when buying products or services from other organisations

Software – The programs, routines, and symbolic languages that control the functioning of the hard

1.0 Introduction

Information technology is shaping the way organisations operate today. Corporations and municipalities utilise information technology to economically store, transfer, and analyse data. The definition of information technology (IT) is the development, installation, and implementation of computer systems and applications. Information technology is applied through an approach called information strategy. This strategy enables companies to incorporate all of the data they collect and consolidate them into efficient common databases (Bell, 1992).

The process of implementing an information strategy includes the following: defining an organisation's needs, constructing and sending a request for proposal, selecting the best program that meets an organisation's needs, and finally, implementing and maintaining the new system. Although information technology is currently available, many organisations have yet to implement an information strategy for effective business operation. This is because adapting and implementing an information system can be extremely complicated and expensive.

The London Borough of Merton is an example of a government organisation facing the challenge of implementing a new information system. The Borough's database system serves its five departments that together utilise over seventy databases. The Borough realises its system can be made more efficient and wants to implement an information strategy that would be improve efficiency and reduce data overlap.

The goal of our project was to define the Borough's needs, identify data overlap in the current system, and make recommendations that would enable the Borough to continue the steps towards creating an information strategy.

According to the Best Value Review of 2001 for the London Borough of Merton, each of the Borough's departments currently uses over ten databases (Pateman, 2001). The Borough of Merton desires an information strategy that would implement a common database for the organisation or one common database for each department.

We analysed the Borough of Merton's current information system to determine what changes the managers and staff of each department want made to a new system. We accomplished this by collecting data from the departments through surveys and interviews. We developed two different surveys for the managers and end-users of the Borough's system. The manager surveys aimed at obtaining generalisations of the departments and the systems they use. These surveys were supplemented by the staff surveys that sought specific characteristics of the systems in the Borough. The interviews were used to complement both surveys by giving us a more in-depth understanding of what the employees and managers want in a new system and probing the aspects they do not like of the current one.

We analysed this data to determine the limitations of the current system. Our findings and recommendations were formed into a needs analysis report. This report identifies the areas of data overlap, problems and limitations with the current system, and the areas for improvement. The Borough will benefit from this information, as it will provide a basis for implementing a new information strategy.

The next chapter details background on information strategies, the Borough of Merton, and the Data Protection Act of 1998. Following the background, we have explained the methods we utilised to identify the Borough's current problems and

requirements for a new system. Then, we explain the results we collected, our analysis of that data, and our derived conclusions and recommendations.

2.0 Background

In order to take the initial steps to develop an information strategy, we researched existing approaches in creating an information system. These approaches identify the characteristics of the organisation's current system and define its strengths and weaknesses. Before implementing an information strategy, we had to understand the Borough of Merton's technical requirements for a new information system as defined by the operational specifications. We also reviewed the goals of the organisation and parallel them to the objectives of the new system. We researched proper compliance the Data Protection Act of 1998 and how this act would apply to the development of a new information system. These topics are discussed because the success of an information strategy depends on familiarity with the organisation and its needs and objectives.

2.1 Information Strategy

An information strategy enables entire corporations to utilise common databases for their data management, entry, manipulation, and extrapolation. This strategy is necessary for the consolidation and standardisation of database systems across businesses, industries, and government organisations. The information system should enhance resource utilisation, improve the management and availability of information, and be easily updated (Kenbeek, 2002). The outcome of an information strategy is the creation of an effective information system for an organisation.

2.1.1 System Development Cycles

Information managers have created many different strategies with which they can create new systems or products (Auergrou and Cornford, 1998). The method used by

information managers to create a new system is called a system development cycle. We found that although there is no single name or structure for a system development cycle, all the cycles are in essence the same thing. Using our research, we compiled a comprehensive format for a system development cycle, which uses different resources for the different phases. The cycle can be separated into three main phases: the definition phase, the construction phase, and the implementation phase (Martin, 2002). The system development cycle can be used by organisations that are either creating a new system in-house or outsourcing for data management. These methods of creating new systems include a clear outline and definition of the phases and how they are integral to the creation of a new system.

The first phase, definition, includes a number of steps: feasibility analysis, requirements definition, researching possible software packages, establishing a list of needs, creating and sending out a request for proposal (RFP), deciding on a package, and finally, negotiating a package. The definition phase, sometimes referred to as systems investigation, strives to define the objectives of the current system, its effectiveness based on those objectives, and the characteristics of the data being manipulated (Avision, 1985).

Feasibility of an information system is assessed according to its operational, economic, technical, and organisational capabilities (Flynn, 1992; Martin, 2002). Operational feasibility is concerned with user reaction to a new system and whether or not they will accept and use the system (Flynn, 1992). Economic feasibility refers to the amount of money needed to create the system and the budget that management is working under. Technical feasibility is assessed by the information technology

department or technical specialists (Martin, 2002). The specialist's job is to foresee problems that may occur when the new system is integrated with older technology (Flynn, 1992).

Requirements definition, the next step, describes the needs of the new system, the software that is required, the information that may be held in the system, and the scope of the final project. The real questions in this step are what the problems are and how the organisation will solve them. These problems generally lie in the user limitations with the current system. The definition phase helps to outline the requirements of the information that will be received and the final product from that information; this includes the processes that the system will need in order to create these outputs. The other steps included in this definition phase are particular to outsourcing, for example, the creation of a request for proposal, and are not relevant to our project.

The construction phase includes three major steps: system design, system building, and system testing. In cases where management chooses to outsource, the construction phase becomes less relevant. Design is the important factor in the construction phase; organisations use information incurred during the definition phase to structure the needs of a new system (Avision, 1985). The design and building steps allow consumers, such as businesses, non-profit organisations, and municipalities, to make changes to the software package to fit their specific needs.

The last phase is the implementation of the new system into the organisation's computer network. This phase includes installation, operation, and maintenance. Though we did not take the steps that are included in the implementation, it was necessary to understand them when considering the definition phase. Figure 1 shows the

assessment of business and IT needs that can be used to choose a package and make decisions on how to modify it to best fit a company's requirements. The company begins by describing their needs and how they relate to a specific package. After they define this relation the company looks for gaps in their needs and how the system will support these needs.

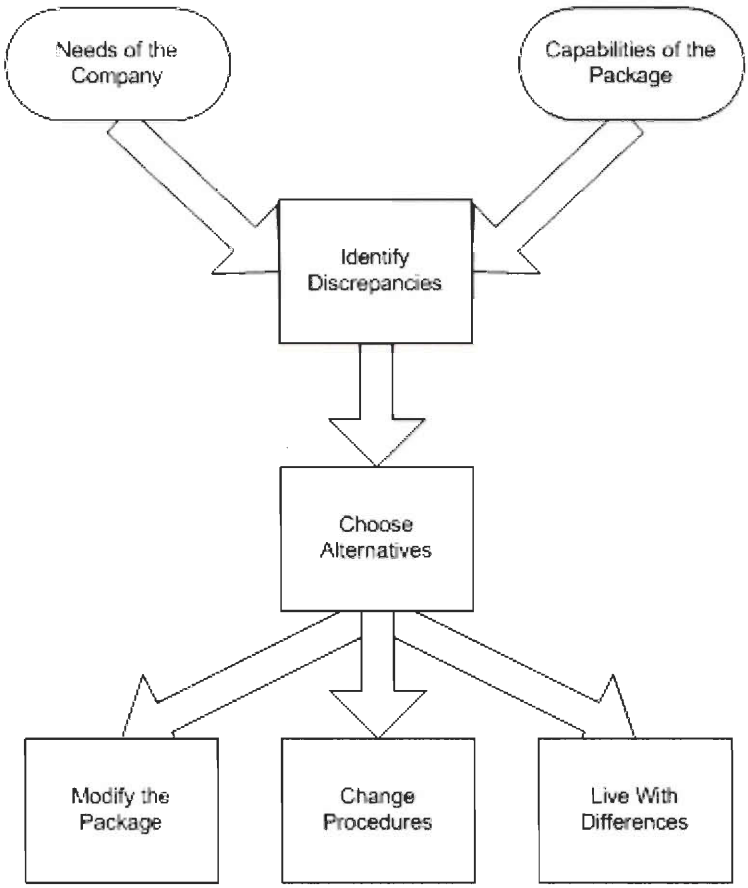

Figure 1: Matching Company Needs with Capabilities of the Package
Source: (Martin, 2002, p. 375)

An information system should include certain activities, for example capturing and processing information (Auergrou and Cornford, 1998). Organisations are becoming aware of the benefits of information systems, but may not realise the task that they are

undertaking or the effect the new system will have. Often the emphasis is placed on the construction and implementation components of the development cycle, rather than the definition phase. This tends to be one of the bigger mistakes organisations make, because they underestimate the size of the project (Auergrou and Cornford, 1998).

2.1.2 Creating an Information System

After structuring a development cycle, it is important for an organisation to realise certain key elements in creating a new information system. There are numerous approaches and methods that are used to create information systems. In the previous section, a version of the system development cycle was discussed. While there are many different versions of a system development cycle, there also exist many different approaches and perspectives when creating a new system.

There are four different areas of concern to consider when planning for an information system: the functional perspective, the technical perspective, the organisational perspective, and the human perspective (Auergrou and Cornford, 1998). The perspectives are ways in which an organisation can decide what the needs are before creating an information system. The functional, organisational, and human perspectives were the only ones applicable to our project because the project did not consider the technical aspects of an information strategy.

The functional perspective describes the actions that an organisation needs to complete with use of the system (Auergrou and Cornford, 1998). This is one of the more common approaches to creating an information system, as it asks for the exact tasks that will be processed by the computers. This perspective supports the need for a departmental analysis of the functions of each existing system. The organisational

perspective looks at the relationship between the systems and the organisational structure. Sometimes the systems can be created to be the heart of the organisation, other times only as a support of the organisation. This perspective defines the need for a system to fit the structure of the organisation, and to fit the business strategy that the organisation implements (Auergrou and Cornford, 1998).

The last perspective that we considered was the human perspective. This particular way of defining the needs of an organisation may be the most important. The previously described perspectives defined the system through the tasks it needed to do and the organisational structure in which it needed to fit. Now the developers must look at the human element, the users. The end-users have specific knowledge of the existing systems; they can provide information about its strengths, weaknesses, and needs for a new system (Auergrou and Cornford, 1998). It is necessary for the organisation to know how the technology will be utilised by the end-users, and what the expected results will be (Flynn, 1992). This is one of the most difficult and important aspects in figuring out what is needed for an information system.

Along with the different perspectives that may be used in creating a new system, there are also different ways to approach this problem. While several perspectives may be taken into account, only one approach may be used. The first two approaches, the organisational chart approach and the top down approach, primarily consider the departments when creating a new system. The organisational chart approach divides the information systems according the each department (Avision, 1985). Then it implements the systems to each department one at a time. The positive aspects of this method include high usability and a custom designed system. On the other hand, it does not support any

interdepartmental data sharing. The top down approach bases the system on management needs and works best if the information and data being used is stable. Unfortunately, this method may overlook the task requirements that may be needed by the users, which could result in a less user-friendly system (Avision, 1985).

The next two approaches, the data collection approach and the total system approach, have a focus on the data rather than the organisational structure. The data collection approach concentrates on the collection and analysis of data without considering the processing that it may be used for. The collection of data is done by department in two stages. The two stages, data modelling and data mapping, keep unnecessary data from being used. The data collection approach asks that the organisation builds the system piece by piece. This creates the system slowly and allows problems to occur through the building process. Since the system is not based on the processes the system will be used for, but rather the data itself, the system is often inflexible and short-lived. The last approach is the total system approach. This approach regards the organisation as a whole when creating a new system. This creates a system that can more easily adapt to change in the information system environment.

2.1.3 Case Study: St. Louis Municipality

While books written about information systems and strategies provide insight on the effort necessary for implementation, the best information comes from examples of other organisations that have faced the same challenge. The city of St. Louis, Missouri has recently confronted the integration of management systems. In comparison to the London Borough of Merton, the municipality of St. Louis is larger with over 5000 employees, and with more existing databases. During the creation of a new information

system, St. Louis took a series of steps in the development of their information strategy. The research process began by creating an oversight committee. The committee was then broken up into three subcommittees: management information systems, information technology, and geographic information systems. The committee's main focus was to realise the difficulties, prospects, and barriers that may arise when implementing the system. Surveys of employees were used to discover the tasks and information needs of each department. Another focus of the municipality was to give all the employees an opportunity to become involved in the creation of a new information system. The municipality was able to progress in creating a new information system by using the data provided to the committee through research. This information was used to define the goals of the project and the requirements of the new system. The municipality then researched how to provide those goals and requirements for the organisation (Campbell et al., 2001).

2.2 Introduction to Merton

The Borough's elected council consists of fifty-seven councillors that meet six times a year. The Borough is divided into five departments: Chief Executive's Department; Financial Services; Environmental Services; Education, Leisure and Libraries; and Housing and Social Services. Appendix A provides the goals and heads of each department; Appendix B shows an organisational structure chart for the Borough of Merton. These departments are responsible for running and maintaining all facets of Merton (Private Merton Document, 2003).

2.2.1 Responsibilities and Business Objectives

The first step in developing an information strategy is defining the requirements of the future information system. In order to accomplish this for the Borough, an in-depth analysis of its responsibilities and business objectives must be completed. Frenzel (1999) summarizes the need for outlining the business objectives in the following quote: "developing a sound strategy begins with a thoughtful understanding of the firm's mission, an analysis of the environment in which the firm and the organisation operate, extensive interaction with senior executives and other managers, and a detailed definition of how the firm's business units interact" (Frenzel, 1999, p. 63).

2.2.1.1 Chief Executive's Department

The Chief Executive's Department advises the Borough in creating the strategies and policies necessary to ensure that the organisation delivers flexible, responsive, and cost-effective services. The Chief Executive is responsible for the continual monitoring of service and corporate effectiveness to ensure that the organisational objectives are met. As head of the Borough's paid service, the Chief Executive chairs the corporate management team of the Borough's four directors, who are jointly responsible for developing policy options for eventual submission to members.

The Chief Executive's Department is comprised of seven divisions. Community and Member Services is the first division and are responsible for press and public relations and the mayor's office. Human Resources is a division that deals with all the issues concerning personnel. The IT Services Division is responsible for monitoring system operation and operating the service help desk. Legal Services deals with commercial, environmental, and corporate law. The Scrutiny and Policy Division is

responsible for assisting the Best Value and Race and Equalities Teams. The Partnership Division develops partnership strategies to promote the economic, social, and environmental well-being of Merton. Finally, Electoral Services administers elections (Private Merton Document, 2003).

2.2.1.2 Financial Services

The director of Financial Services is the principal financial advisor to the Borough. The Financial Services Department is responsible for the development, evaluation, and implementation of strategies which ensure that Merton's finances can respond to changes in both local need and government policy. The director is also responsible for ensuring that the Borough's finances are properly administered and the administration of Council Tax and Housing Benefits is efficient.

Financial Services is divided into six divisions who rectify all issues the department faces. The Revenue and Support Division is responsible for payrolls and council tax. The Audit, Risk, and Compliance Division handles the Internal Audit and Fraud Team, the Risk and Insurance Team, and the Financial Appraisals Team. The Corporate and Finance Division controls central and corporate finance and training for use of financial systems. The Financial Services Department has three other divisions that control the finance for three other departments. They handle Housing and Social Services Finance, Environmental Services Finance, and Education Leisure and Libraries Finance (Private Merton Document, 2003).

Financial Services has numerous priorities for 2003. Their first priority is to improve their services for the public by building on their success of Chartermark, an award for quality of service given by the British Government for Local Taxation

Services. They are making their financial documents, such as the general ledger, accounts payable, and accounts receivable easier to read. The department is also carrying out Best Value Reviews of the Revenue and Benefits Team and Accountancy Services Team. The Financial Services Department is making their services more accessible through the Internet, the call centre facility and Merton Link. The department provides the Borough's financial management framework. They are providing the lead in introducing an ongoing three-year plan for Borough services and their funding. They are also rigorously monitoring the yearly budget to help managers control expenditure. Finally, they are continuing to collect all dues to the Borough and minimise its debts (Merton, 2003e).

2.2.1.3 Environmental Services

The goal of Environmental Services is environmental regulation, maintenance, and enhancement. The department plans land use and gives site and project based initiatives such as the town centre and industrial estate regeneration proposals. The four divisions that comprise the department engage in issues from regulation, environmental maintenance, environmental enhancement, land use and transport planning policy, site and project based initiatives, and services on behalf of other departments. In all of these areas, the department sets the policy framework through the Unitary Development Plan, the Interim Local Improvement Plan for Transport, and the Asset Management Plan. This ensures the provision of local services within these frameworks. Environmental Services also contributes and responds to national and London-wide strategies that impact on the Merton area (Private Merton document, 2003).

Environmental Services has seven key goals for 2003. Their first goal is to improve the quality and safety of the local environment by focusing on maintenance, including dealing effectively with cleaning, fly-tipping, graffiti, noise, nuisance vehicles, and repair of fabric. Next, they look to deliver and develop high quality statutory and regulatory services, building controls, highways, parking enforcement, environmental health and trading standards, and make all these services more accessible to the public. Environmental Services is going to develop and implement a holistic strategy for sustainable waste management. They want to increase their efforts in waste minimisation and recycling and examine different forms of service delivery to meet the challenging national targets set by the government. Tackling congestion is the highest priority identified by local residents and is another goal of the department. Implementing traffic management schemes, particularly those designed to control parking, encourage the use of public transport, cycling, and walking.

Another goal is to continue the progression of economic regeneration in the Borough. This will be accomplished by working towards a vibrant economy through employment creation and inward investment and initiatives to regenerate their town centres and industrial estates. Environmental Services particularly encourages appropriate development on key sites through the use of planning briefs and through early discussion with potential developers. They are looking to achieve more productive use of the Borough's land and properties. This will be accomplished by undertaking a thorough examination of the effective use of all of the Borough's land and property assets through their Asset Management Planning process and also maximise capital income, both for the schools reorganisation process and for future corporate reinvestment. The

last goal of Environmental Services is to develop a strong and transparent performance management framework. Finally they strive to make services increasingly accessible to the public and extend performance measures to all service areas so that their service and financial performance is measurable and transparent (Merton, 2003d).

2.2.1.4 Education, Leisure and Libraries

The department of Education, Leisure and Libraries (ELL) provides, promotes, and maintains the means to meet the aspirations of both individuals and communities in life long learning and well-being. The department has four main divisions: Schools Reorganisation, School Effectiveness, Access Opportunity and Inclusion and Community and Cultural Services.

The School Effectiveness Division enables and assists pupils aged three through sixteen to receive their entitlement to education. The Schools Reorganisation Division determines the school zones, and monitors the school size. The Community and Cultural Services Division provide services for life-long learning and well-being, economic regeneration, community development, and cultural enrichment. The Access Opportunity and Inclusion Division provides services to help the schools in the Borough and the managers in the other two divisions. These services include finance, personnel, information and communications technology, marketing, external funding, complaints, and research and statistics (Private Merton document, 2003).

Education, Leisure and Libraries' priorities for 2003 are to achieve standards of excellence in their schools and colleges and provide inclusive access to learning, arts, and sports. They want to work in partnership with schools, community education, and youth leisure and libraries services to raise standards of achievement. Ensuring equality of

opportunity for all through the services, ELL provides its commitment to inclusion and its contribution to the social and economic regeneration of the Borough. ELL wants to provide, promote, and maintain the means to meet the aspirations of both Merton's individuals and its diverse communities for life-long learning and well-being (Merton, 2003c).

2.2.1.5 Housing and Social Services

The Housing and Social Services Department (HSS) is comprised of five distinct areas. Community Care Division is the first of the five divisions. It provides a range of social work services covering field social work for adults, children, and people with physical, learning, and mental health problems. This division includes the Community Care Purchasing and Commissioning Team, the Community Care Children's Services Team, and the Provider Team. The Provider Team supplies a range of residential and day care services for adults, and homecare services for the elderly. The second division, Housing Services, deals with the management and maintenance of the Borough's housing stock including housing lettings, homeless families, housing sales, and rent arrears. The Housing Policy Division is responsible for housing strategy and policy development, inspection and performance review, and commissioning and tenant participation. They are also responsible for all IT provisions and developments within the department. The Information and Business Support Division is responsible for reviewing social services policy, strategic planning, collection and interpretation of statistical data, and performance review of the social services area. They are also responsible for all IT provisions and developments within the department. Finally Children's Services arrange

services to support and promote the well being of children in need and their families (Private Merton document, 2003).

Housing and Social Services has six key goals for 2003. First, the department aims to ensure that the management infrastructure is in place to enable effective service delivery and management of all resources. Second, they want to establish a performance management culture that will enable the department to account for its operations, audit its performance, and tackle areas of service under-performance and maintain a programme of continuous improvement. Third, they aim to undertake a comprehensive audit of services in preparation for the joint review and housing inspection and to develop a sustainable plan for organisational improvement. Fourth, HSS is looking to develop timely, consistent, and inclusive communication methods enabling staff to feel valued and informed especially through this phase of major cultural and organisational change. Fifth, they aim to agree upon and implement new improved working arrangements with partners, especially in the health and housing system, and to progress better understanding of joint working. Finally, Housing and Social Services aspires to develop a comprehensive workforce plan that underpins the business with all staff meeting the core competencies of the department (Merton, 2003f).

2.2.2 Overall Business Goal

Education is the first goal of the Borough as it looks to achieve standards of excellence in their schools and colleges, and provide inclusive access to learning, arts, and sports. The second goal the Borough of Merton is looking to achieve is the creation of a more caring community by giving support for vulnerable children and adults that meet the children's and adults' needs while maximising their independence. They will

accomplish this by executing an implementation plan from that includes support of such voluntary sectors as Vestry Hall. They will also provide additional support to children and vulnerable adults by reorganising Legal Services.

The Borough of Merton's third goal is to create a safe, clean, and green Merton. They hope to accomplish this goal by implementing the first year in a three-year Youth Justice Plan, and also implementing the first year in a three-year Crime and Disorder Strategy. The Borough wants to work with health authority organisations to agree to a new Health Improvement Plan. Regenerating the town centres and neighbourhoods to provide an attractive environment is another goal of the Borough; they look to accomplish this by adopting a multi-agency Neighbourhood Regeneration Strategy. An equal opportunity Merton is the last goal for the Borough. They are striving for full and equal access to learning, employment, services and cultural life, and the celebration of diversity. The Borough is looking to deliver an integrated Customer Service objective to include Merton Link, which is designed to help resident's access services from one single point. The Borough is seeking to adopt new Equality Standards, work from the Disability Discrimination Act, and develop the Chief Executive's Department racial equality plan (Merton 2003b).

2.3 Operational Specifications of the Borough of Merton

In order to identify the operational specifications of the Borough of Merton, it is necessary to first define the business, technical, and design requirements specific to the Borough. By utilising research and contact with managers in an organisation, researchers can recognise the "stakeholders" of a business system, and evaluate the characteristics of

databases that will provide the business with an effective data management system (Nasi, 1996 p. 73).

Each department in the Borough handles its own unique information contained in independent databases. In order to be successful in recommending the best-fit program or system for the Borough, we had to take a "policy-oriented approach" in analysing the current system (Stamoulis and Georgiadis, 2000 p. 158). This approach forced us to be aware of the type and amount of information contained within each department's databases. We also had to identify the problems that the Borough faces with the current information system and its objectives for a new system.

2.3.1 Research Questions

The importance of classifying the goals and methodologies of a system strongly influences its performance. Poorly or "incorrectly defined objectives and strategies will result in an ineffective IT system" (Khosrowpour, 1994, p. 56). Therefore, in preparation of assessing any particular database structure or package, there are certain questions we had to ask in order to be confident in our recommendation. These questions asked why the proposed system is necessary and what it will be used for. We considered the present problems the system will help solve, the expected capacity and scope of the proposed system, and how the purpose of the system enhances goal attainment at organisational and business unit levels (Khosrowpour, 1994). We also sought the expectations of the proposed system and the capabilities of the system, given the particular business situation (Blitsch et al., 2002).

We answered these questions in our research and determined the Borough's need for a new system, the consequences of that system, and the system's performance. We

also identified the government's IT needs and prioritised the characteristics of the current system that Merton utilises. There are certain factors that reflect on the types of systems that the Borough of Merton is able to use as it handles diverse information and has a large flow of data. Based on the Borough's current situation, our task was to find a flexible, user-friendly system that provides concurrent access and the ability to contain a large amount of different information (Volkoff, 2002). At the same time, it is necessary for us to keep the policies governing the Borough of Merton, including the Data Protection Act of 1998. We also considered the size, speed, and backup power that the Borough requires in a database system.

2.3.2 Problems with Current System

A feasibility study is a detailed analysis of a presently operative system. The study identifies the problems of the system and examines a range of alternative ways of working out these problems. For each of the alternative methods, a list of the costs and benefits are compiled and a "recommended solution" is presented to management (Avison, 1985, p. 6). Although we did not focus on the costs of this project, we were able to consider the benefits of a solution and present the Borough with a recommendation based on efficiency and feasibility.

A recent Best Value Review (BVR) done on the Borough of Merton revealed the problems with the organisation, specifically the issues with its information system. A BVR evaluates an organisation and lists the findings from the evaluation. It outlines "recommended actions" to address these results (Pateman, 2001, p. 69). The purpose of a BVR is to ensure that all stakeholders are aware of the findings and that the organisation seeks direction to improve based on the review's suggestions. In reading the review, we

discovered the major points that needed to be addressed in Merton's current system and the concerns that must be considered when creating a new system. According to the review, the four major issues with the information system are: inefficiency, communication with all stakeholders, hidden end-user effort, and inconsistent management of projects (Pateman, 2001).

The issue of poor communication within the Borough has led to decreased efficiency and increased tension amongst the departments. The gaps in communication occur on corporate, department, and inter-department levels, and have led to individuals creating their own databases. This presents a problem as it inhibits the effort of the IT Services Division, who is responsible for creating and implementing databases into the system. The independent creation of databases is one of the causes of redundancy and difficulty in using the information system. It has also led to a split between central and departmental IT, which has caused the Borough to utilise a complicated system.

Suggested solutions were made in the Best Value Review. We used these solutions to direct our analysis of ways to improve the efficiency and usability of Merton's information system. These solutions included having more open and frequent meetings with the stakeholders of the system, and increasing the level of staff training within the organisation.

The effort necessary for utilization of a database in the Borough of Merton has increased due to the complicated system. Stemming from this is the problem of hidden end-user effort. Compared to the other boroughs in London, Merton has a relatively small staff. The BVR revealed that although their staff is productive, it requires too much time to access and handle data. Not only does this hinder productivity, it takes up

time that could be used to support new projects. As a result, the service delivery and the amount of staff resources in the organisation are reduced.

Managing projects in the Borough of Merton has also been inconsistent according to the Best Value Review. There have been many different projects implemented with the hope of improving Merton's information system. However, the people responsible for monitoring the projects have not developed an effective system for measuring a project's success. The purposes of the projects have been lost or ignored, causing management to be unaware of the effectiveness of a project. This has nearly defeated the purpose of implementing a new project and has hurt the development of a new information system. The Borough cannot make conclusions on the strengths and concerns of the current system if the new projects have not been examined or monitored. It is left to guess whether or not to input an existing method if the success or failure has not been observed. The organisation must define quality standards to ensure the projects are applicable and that the information contained in the system is "fit for purpose" (Pateman, 2001, p. 23).

2.3.3 System Objectives

The definition phase in creating a new information system must align the strategy aims with the organisation's goals (Eastlake, 1987). The business objectives of the organisation discussed in section 2.2.2 achieve the organisation's business plan and make functions more efficient. System objectives are derived from the business objectives. The system objectives should concern the "total system," that is to design, develop, and implement the system for the organisation as a whole (Avison, 1985, p. 45). This method

ensures that the functions of the organisation are kept in mind during the entire process of developing a new information system.

The Borough of Merton's information system can be broken down into two specific subsystems: independent and dependent systems. Independent systems are stand-alone systems that contain unique data and require no further breakdown. Dependent systems are formed by overlapping, nesting, or common data and cause the system to hold redundant data. Further breakdown is required for dependent systems until a complete list of subsystems is established. Once the list is created, the subsystems are ranked based on their effects on the overall system. We aimed to combine the dependant systems and eliminate the amount of data overlap in the information system.

System objectives can be divided into application and technical objectives. Application objectives identify areas for improvement for a new information system, the enhancements to the existing system, and the areas of the system that do not need improvement. The technical objectives are the guidelines for designing a framework for a new information system.

Specific objectives are identified and explained in the analysis of our data. However, as a background, we were aware from the Best Value Review that the objectives of the new system include reducing end-user effort, improving service delivery, and reducing redundancy. The Borough of Merton also aims to ensure the system will be easily updated and useful for future use and that the system is manageable and can be monitored for success.

2.4 Data Protection Act of 1998

In the creation a new information system, large quantities of data will be handled and shared. This information must be handled in accordance with the Data Protection Act of 1998 (DPA 1998). The protection of information is extremely important for all major corporations, government organisations, and private citizens. Every company has information that is sensitive and could be damaging to its competitiveness, its image, and its customers. Privacy has always been an issue, but as new technology is developed, the need for privacy increases. In an effort to increase privacy, a number of data protection acts have been ratified. In the United Kingdom, the most recent has been the Data Protection Act of 1998.

2.4.1 Implications of the Data Protection Act of 1998

When the Borough of Merton implements a new information strategy, it will have to allow sharing of information among the divisions, and yet keep unauthorised users blocked from accessing it. All of the following requirements will have to be considered in the creation of the strategy. This will be a task for the experts who implement the system or systems that the Borough chooses.

2.4.2 Definition of Data

There are official definitions of data as defined by the British government. First, data is something that can be stored in a form capable of being processed by computer or other automatic equipment such as computer files (including word processor files), database files, and spreadsheet files. Second, data includes information recorded in any form for later processing by a computer or other automatic equipment such as information collected from registration forms, or CCTV pictures. Data can also be stored

as part of a relevant filing system or intended to be included in one in the future; including card files or filing cabinets structured by name, address, or other identifier. Data is also part of an accessible record according to section 68 Data Protection Act of 1998, such as a set of doctor's notes relating to a named patient and certain educational records (Crown, 2002).

Existing institutional personal data management systems, such as student record systems and personnel records, may well have met the criteria for compliance with the 1984 Data Protection Act, the predecessor to the 1998 Data Protection Act. However, the Borough's older documents are still required by law to be compliant to the 1998 Act. The law applies to anything done to personal data or processing, including collection, use, disclosure, destruction, and holding data.

2.4.3 Requirements

The British Parliament used the DPA 98 to deal with specific issues and requirements regarding information security. The Parliament addressed the nature of any data that institutional systems hold in any situation, including whether it is necessary to hold certain types of personal data, particularly sensitive personal data. Sensitive data are about a person's ethnic origins, political opinions, religious beliefs, trade union membership, health, sexual life, and criminal history. The government wanted to keep track of the accuracy and security of manual filing systems, particularly where these duplicate data are held elsewhere in the institution.

The Borough of Merton has a need for effective disposal of personal data, whether held manually or digitally. Its staff must be able to deal with subject access

requests to obtain the necessary material needed to compile an accurate response from the records of different sectors of their institution.

Evaluations need to be done of current personal data collection systems to ensure they inform the data subject why the information is being collected, what it will be used for, and to whom it may be passed. An evaluation of current personal data collection systems ensures that adequate consent is obtained for existing and proposed uses of personal data. It also ensures that future data protection issues are adequately considered when planning future institutional developments (Joint Information Systems Committee, 1999).

2.4.4 Individuals' Rights

The Borough's databases not only contain public information, but they also have databases on private citizens of the Borough. The Data Protection Act of 1998 strengthens individuals' rights to gain access to their data and seek compensation. It creates new express rights for individuals to prevent their data being processed in certain circumstances, "opt-out" of having their data used for direct marketing, and "opt-out" of fully automated decision-making about them (Crown, 1998, p. 1).

2.4.5 Punishment

If the Borough does not follow the laws outlined in the Data Protection Act of 1998, it could face litigation. If violated, directors, managers, secretaries, or similar officers of a corporate body can be held liable for offences committed by their institutions. Individuals can go directly to court if they believe that their rights under the Act have been breached.

2.4.6 Exemptions

Due to the risk of violating the Data Protection Act of 1998, the Borough needs to be aware of the exemptions that the Act bestows. The Act provides wide exemptions for journalistic, artistic, or literary purposes that would otherwise be in breach of the law. These exemptions apply if the processing is with a view to publication and the data controller reasonably believes that publication would be in the public interest. Publishers must also comply with the relevant data protection provisions that would be incompatible with the special purposes. However, it is likely that both the Data Protection Commissioner and the courts will interpret the three categories narrowly to prevent abuse of the exemptions. Thus, it should not be assumed that academic research and publishing will automatically be covered by this set of exemptions (Joint Information Systems Committee, 1999).

2.5 Conclusion

This chapter has described the many considerations that an organisation must consider when creating a new information system. The first stage of this process is to define the information strategy that will be used to create the new system. In our project we organised the strategy into three phases: definition, construction, and implementation. We then went through the steps that were outlined in the first phase, which included gathering data, defining the requirements, and conducting a feasibility analysis. The perspectives and approaches that will affect the focus of the system must also define the information strategy. However, before an information system can be created, an in-depth exploration of the business structure and goals must be identified. Another part of the research process includes identifying the requirements for a new system by evaluating the

strengths and weaknesses of the current system. Understanding the system objectives and business objectives are essential to creating an effective information strategy that fits the needs of an organisation. The creation of a new information system must also follow government regulations such as the Data Protection Act of 1998.

3.0 Methodology

The purpose of this project was to conduct a needs analysis of the Borough of Merton's information systems that examined areas for improvement and provided specifications for a new system. We accomplished our goal by conducting surveys and interviews. We developed two different surveys, one for the divisional managers within each department, and one for the end-users of Merton's information system. The purpose of distributing two surveys was to get a generalised understanding of the problems that are common in different divisions according to the managers, and to get a more specific point of view regarding the information systems from the users. We also conducted fourteen interviews, three with the Business Systems Managers (BSMs) and eleven with the divisional Heads of Service. The purpose of interviewing the BSMs was to obtain a generalised view of each department; in comparison the Heads of Service provided a more specific divisional view. This way we analysed the organisation's systems on two different levels.

The methodology chapter describes the goals of each method we used, the rationale, and our data collection instruments. We also discuss our methods of analysis and include the necessary background material for each method.

3.1 Surveys

We conducted surveys as our first data collection method. We created two surveys, one for a portion of the managers across the five departments, and one for a sampling of six hundred staff members at the London Borough of Merton. We first used purposive sampling to choose our subjects. Purposive sampling is when researchers use

their own "knowledge of a group to make decisions on whom to survey" (Berg, 2001, p. 32).

Through meetings with our liaison and background research of the organisation, we learned the names and positions of 1100 London Borough of Merton employees who work in the Civic Centre. We created a comprehensive database that included approximately 920 staff members, 140 managers, five Business Systems Managers, and thirty-five Department Heads. We used the BSMs and the Department Heads as subjects for interviews so they did not receive our surveys. Once the people were divided into separate databases according to their position in the Borough, we used random sampling to determine the employees and managers who would receive the survey. We chose to distribute surveys to 600 employees and 120 managers. Both surveys provided us with access to a large amount of information without having to interview every employee of the Borough.

3.1.1 Employee Surveys

We distributed the employee surveys systematically via electronic mail. Prior to delivering the surveys, we discussed the questions with our liaison, Mr. John Butler, and sent a test survey to the employees of the IT Services Division. The test survey helped us understand the effectiveness of our questions and where we needed to change the wording. After observing the responses, we modified the questions for clarity.

The survey for the employees was aimed at giving users the opportunity to voice their opinions about the Borough's current system and their ideas of an ideal system. We sought to understand how the Borough of Merton could implement a more user-friendly system for its employees. The employee survey asked questions specific to database

users regarding the amount of time they spend using a computer, the information they process in a database, and the problems they face when using different databases. The original employee survey is shown in Appendix C. Some of the questions were open-ended and required longer answers. Although this made it harder for us to analyse the responses, it was necessary to determine the users' opinions of the strengths and weaknesses of the database system they use on a daily basis. This information was vital for our recommendations to the Borough of Merton on how they could improve the usability of their system.

Out of the 920 staff members, we used random sampling to choose the 600 who would receive the survey and then moved them into a separate database. According to Fowler (1993), the sample size is not as important as total response rate. Therefore, we had to consider the number of replies we would receive when we chose our sample size. The typical response rate for a mail survey with follow-up is between 20-40% (Fowler, 1993). According to Berg (2001), a response of 100 people in a survey distributed to approximately 500 people (20%) would be an effective sample size in which to draw conclusions. We surveyed two-thirds of the staff members because we needed the opinions of a large enough sample to ensure our results were representative of the entire population. Thus, we expected 120 responses for a response rate of 20%. This method proved to be successful, as we received 137 responses out of the 600 surveyed, yielding a response rate of 22.8%.

We delivered the surveys via email on Monday, January 20, 2003. By Tuesday, January 28, we had received approximately fifty-five surveys. At this time, we delivered a reminder with an updated survey. We updated the survey because we noticed many

employees misunderstood the terminology "on-line data system" (Borough of Merton Employee Survey, Appendix C). We changed the phrase to "any data source that can be accessed from a computer" (Employee Survey First Revision, Appendix D). This updated survey produced more accurate responses, but again yielded ambiguous responses as employees were not correctly identifying what database software that they used. On Monday, February 3, 2003, we sent out a final reminder with a final updated survey (Appendix E). When we finished collecting the surveys on Monday, January 10, 2003, we had collected 137 surveys. Thus, we met our goal for employee survey responses.

3.1.2 Managers Survey

The survey for the managers consisted of questions aimed at helping the group understand generalisations about the data systems in each manager's division. We asked questions to determine the data processing needs of each division, the number of databases each division uses, the type of information contained in the databases, and the problems with data processing and sharing that the divisions face (see Appendix F for Borough of Merton Manager Survey). The results of the survey provided us with an understanding of the size and capacity of a database management system that would be applicable to the Borough.

The surveys were delivered to 120 managers, randomly spread across all five divisions. After we had learned the names and positions of approximately 1100 employees who work for the London Borough of Merton, we chose the managers through purposive sampling. We identified 140 prospective managers to survey and then randomly chose twenty who would not receive the survey. We wanted to survey as many

managers as possible, as increasing the sample size increases the reliability of the results (Fowler, 1993). Again, we expected at least twenty percent of the managers to respond. The minimum number of survey responses necessary for statistical significance is twenty-four, and we hoped at least thirty managers would respond.

We delivered 120 manager surveys on Tuesday, January 21, 2003. We received approximately 20 surveys before we sent a reminder with another survey on Tuesday, January 28, 2003. At that time, we had surpassed our goal with thirty-nine surveys and did not need to deliver another reminder.

3.1.3 Survey Analysis

As we collected our data, we first organised the results of each survey in an Access database, categorised according to the question. The survey found "naturally occurring" variation as we had collected information about the same set of characteristics from multiple cases (de Vaus, 1994, p. 3). This allowed us to organise the data by different sets, such as department, division, and system.

The next step was to analyse the survey answers. Quantitative and qualitative analyses were necessary. Questions such as the number of hours per day employees use a computer and the number of systems a division utilises were quantitatively analysed. Open-ended questions, however, such as the employee's responsibilities in their team and their perspective on the strengths of and weaknesses of the data systems they use, had to be analysed qualitatively. These questions allowed us to gain a general perspective of the employees' and managers' opinions about their current database management system. Once we had collected, coded, and analysed the results, we divided the data by several parameters, such as department, division, and system, and created a matrix for each.

These matrices presented our data in an organised fashion, which enabled us to make reasonable recommendations to Borough on how it can improve its data management system.

3.2 Interviews

Our second research method was to conduct interviews. We conducted a total of fourteen interviews, three of the Business Service Managers (BSM), and eleven of the Division Heads of Service. We decided to utilise interviews to provide flexibility, supplementary information, and a better response rate than just sending out surveys. The interviews allowed us to have "face-to-face interaction" with each person and observe any "non-verbal cues" like facial expressions and tone of voice that are also unavailable with surveys (Keats, 2000, p. 1). All interviews were conducted between January 25, 2003 and February 13, 2003 with each one lasting approximately thirty minutes.

We contacted each interviewee via email to ask for their participation. The interviews were scheduled in a response email according to the managers' convenience. We used a consent form to ask for permission to tape record the interview, and also to ensure each interviewee's confidentiality (refer to Appendix G). Because of our confidentiality form we cannot provide the names of the interviewees. Two group members conducted each interview; the moderator directed the questions and the note-taker observed and noted the body language of the interviewee (Eastlake, 1987).

We chose to use a "focused interview" as our format. A focused interview consists of four characteristics: it takes place with respondents known to have been involved in a particular experience; it refers to situations that have been analysed prior to the interview; it proceeds on the basis of an interview guide specifying topics related to

the research; and it is focused on the subjects' experiences regarding the situations under study (Frankfort and Nachmias, 2000, p. 215). This method applies to our project because we addressed issues that arose in the Best Value Review, we based the structure of the interview on our interview guides, and the people who we selected to interview all have experience regarding information systems.

3.2.1 Interviews with Business Systems Managers

A Business Systems Manager is responsible for providing IT services in their respective department. We chose to interview the BSMs to gain information regarding the goals of each department and to help reconcile those goals with the objectives of a new information system. The interviews with the BSMs helped us understand the specific concerns of their department, the requirements of each department's information system, and the department's basic IT needs.

The interview guide for the BSMs was designed to discuss topics such as the information each department handles, problems that occur, and the technical requirements for a new information system. The complete BSM interview guide is shown in Appendix H. We asked the same questions to all the BSMs we interviewed in order to prevent bias and to make coding our results effective (Keats, 2001). The questions were open-ended which gave the BSMs complete freedom to reply, but yielded a broad range of responses. The interviewer then probed the managers for more clear and specific responses and explored the reasons behind the answers (Keats, 2001). This allowed us to compare the results of each department and conduct a qualitative analysis of each department's needs and concerns.

3.2.2 Interviews with Division Heads of Service

A Head of Service is concerned with the business requirements of a single division in the Borough. The interviews performed with the Heads of Service were used to identify the strengths and weaknesses of the system on a divisional level. We chose to interview the Heads of Service to complement the results of the BSM interviews. The Heads of Service provided a more specific perspective on the needs and requirements for a new information system as they specialise in the performance of the subdivisions within the five departments.

The interview guide for the Heads of Service outlined issues such as the type of information the division handles, common problems that occur in the division, and responsibilities of that division (see Appendix I). We asked the Heads of Service open-ended questions, as we did of the BSMs. This format enabled us to connect the results of each division and provide tools for a qualitative analysis. The information that was derived from the Heads of Service interviews was useful as it provided an overview of the divisions' responsibilities within the Borough. It also helped us understand the business requirements of the divisions and locate their problems with the current information system. The intention of the Heads of Service interviews was to gain specific information on the characteristics of the current information system that were still necessary and to define their vision of an ideal system.

3.2.3 Analysis of Interviews

After we conducted each interview, we transcribed the tape into text. We then selected and highlighted any relevant information produced from the tape. Coding was the next step after transcribing the tape. One group member coded all the interviews to

ensure consistency while another member analysed the coding process to better understand the results that were given. With closed format questions such as "what division do you work for," items and categories were pre-set in the question. With open-ended questions the researcher has to set up the coding system from two points of departure, the theoretical range, and the actual range of responses.

3.2.3.1 Theoretical Range

The theoretical range includes all possible types of answer. The content could include either scale positions on one or more dimensions or categories of responses based on the literature review and hypotheses. This process also allows the possibility of an 'other' category if needed.

If a single dimension is expected, the responses can be coded into positions on a scale ranging from extremely low to extremely high. A simple four-point scale provides sufficient discrimination for practical purposes. The four-point scale avoids a midpoint which is open to many abuses such as using the midpoint for evasive answers (Keats, 2001, p. 78). This was helpful when coding the opinions of the BSMs and Heads of Service in pertaining to how they felt about the current information system, and how they felt about The IT Services Division implementing an information strategy.

3.2.3.2 Actual Range

Although theoretically the response categories must cover all possible types of replies, in practice the actual range of responses obtained may be relatively small. These responses may not fit along a single dimension but fall into distinct categories. To code for analysis, it is essential that the categories be independent of one another. Where it appears impossible to separate more than one aspect of such responses, a combined

response type can be allocated to a category of its own. These categories can be grouped later according to their frequency, combining them in such a way as to make rational groupings, not merely grouping them on the basis of the small numbers in the cell (Keats, 2001). We used actual range to code what database systems they currently use and their specific views on those systems.

3.3 Conclusion

The surveys and interviews complemented each other as we received general observations from the surveys and more specific, elaborate answers through probing in our interviews. From our research we discovered the strengths and weaknesses of each method. Surveys can yield a weak response rate and with a topic such as information technology, it is hard to write a succinct answer that fully describes one's feelings on a topic. However, interviews are flexible, allowing an interviewer to observe what is said and how it is said, and encourage more elaborate answers (Frankfort and Nachmias, 2000). The weaknesses of interviews, including lack of anonymity and tendency for bias, are resolved by the confidentiality and fairness of surveys.

The purpose of using interviews and surveys was to gain the knowledge of each division's and each department's current data management system. We discovered, on a divisional level, what kind of data was used, and how it was processed. The specific problems and technical requirements of the divisions within the five departments were also exposed. We then discovered the strengths and weaknesses of the current system on a departmental level. This blend of general and detailed information was carefully analysed and used to develop a strategy that integrated the Borough's current information system into the total system.

4.0 Results and Analysis

The methods described in the last chapter yielded results that reiterated the need for an information strategy for the Borough of Merton. Our research has discovered three main topics for the Borough to address in implementing a new information system. These topics include the following: the functions of the main systems, the problems of these systems, and management of the systems.

This chapter describes the main systems that the Borough uses for data access and storage. We discuss the major problems with the systems which include inefficiency and communication. Our research has also analysed the management of these systems and how training and usability can be improved in the organisation. Finally, we conclude this chapter with a summary of our results and analysis. The quantitative data from our survey is present in Appendix J, and for a complete list of all systems refer to Appendix K. Our transcribed interviews can be found in Appendix L. Appendices M through S show the divisional usage charts for the main systems in the Borough.

4.1 Systems

The London Borough of Merton utilises over seventy database systems across its five departments. There are three major financial systems that are shared among all five departments. The other systems are each used by a maximum of three departments. Many departments utilise more than one database system. According to the manager survey, twenty-seven percent of the departments uses three different database systems, and fifty percent use three or more database systems (See Figure 2).

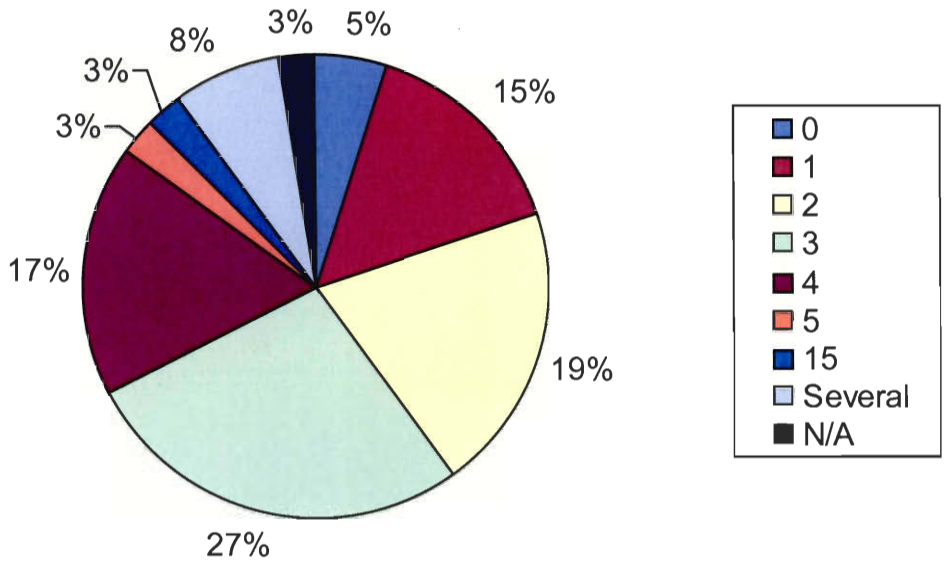

Figure 2: Number of Database Systems per Department

The interdepartmental financial systems are the Financial Management Information System (FMIS), ASH Debtor's System, and the Payroll Human Resources Information System (PaHRis). The Chief Executive's Department, Housing and Social Services; Education, Leisure, and Libraries; and Environmental Services Departments all have Financial and Human Resources divisions use these systems. Table 1 shows the purpose of each of these systems.

Table 1: Description of Systems Used by All Departments

System	Description
FMIS	Financial management information system
ASH Debtor's System	Borough's debt recovery system
PaHRis	Payroll information system

Thirty- two managers and employees said they use FMIS. Figure 3 shows how these respondents use FMIS. Although this is a financial management

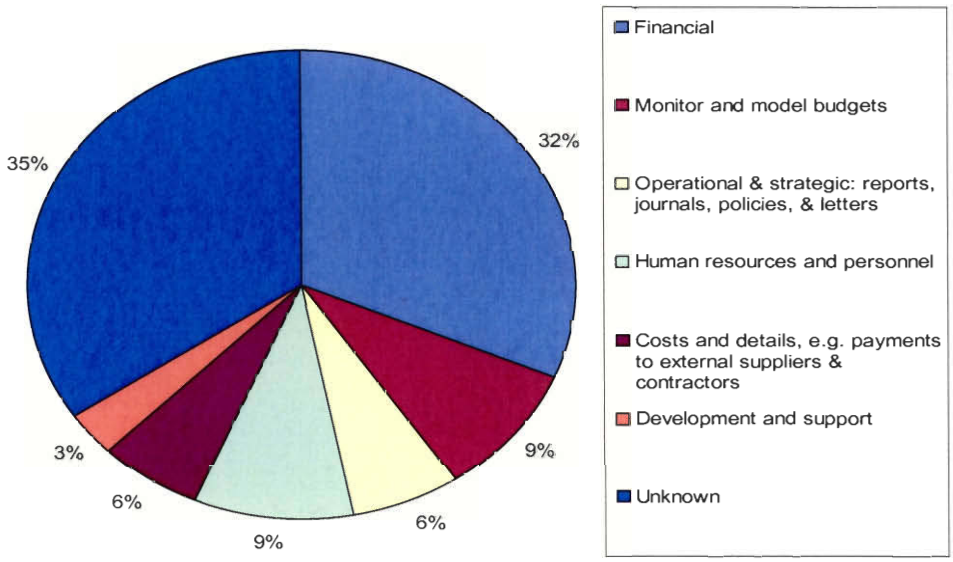

Figure 3: Information that 32 Respondents Store in FMIS

information system, fifteen respondents (35%) specifically mentioned that they utilise it for types of financial data. The other uses for FMIS include storing personnel data as well as generating reports, policies, letters, and journals. Similarly, although ASH Debtor's system is for data concerning debts owed to the Borough, it is used for much more than that. As seen in Figure 4, other uses of this system are to store code structures and descriptions, client records and invoice details, and unspecified information. Thirty percent of employees who use ASH Debtor's use it to sore miscellaneous financial information not held in FMIS.

PaRHis is utilised by fifteen of both employee and manager respondents. It is a payroll system that stores data for Human Resources, such as payroll, absences, recruitment, and training. Figure 5 shows the other uses the respondents listed.

In addition to these interdepartmental systems, the Financial Services Department utilises other financial systems, shown in Table 2. CTax, or Council Tax, covers the entire Borough's tax records. The survey results included two managers and two employees who use CTax. The type of information they process with this system it includes financial and payment details, and rent and property data.

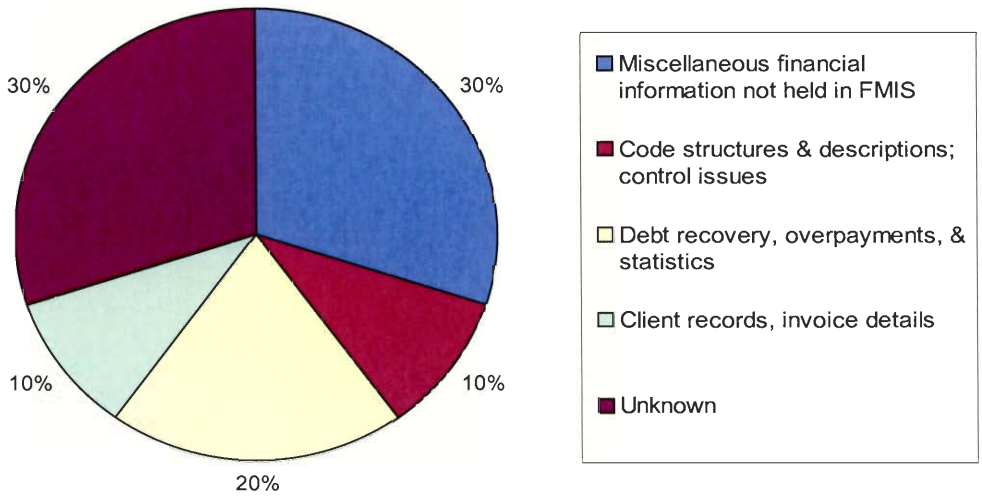

Figure 4: Type of Information Ten Employees Process in ASH Debtor's System

The ICLipse system is specifically used by the Housing Benefits Team inside the Revenues and Support Division for claimant details; it exists on the Housing Benefits Information System (HBIS) Mainframe. ICLipse is the document imager for all of the documents held within CTax and HBIS. The type of information HBIS contains, according to eleven manager and survey responses, is detailed in Figure 6. The known information, which accounts for only five responses, falls within the categories of

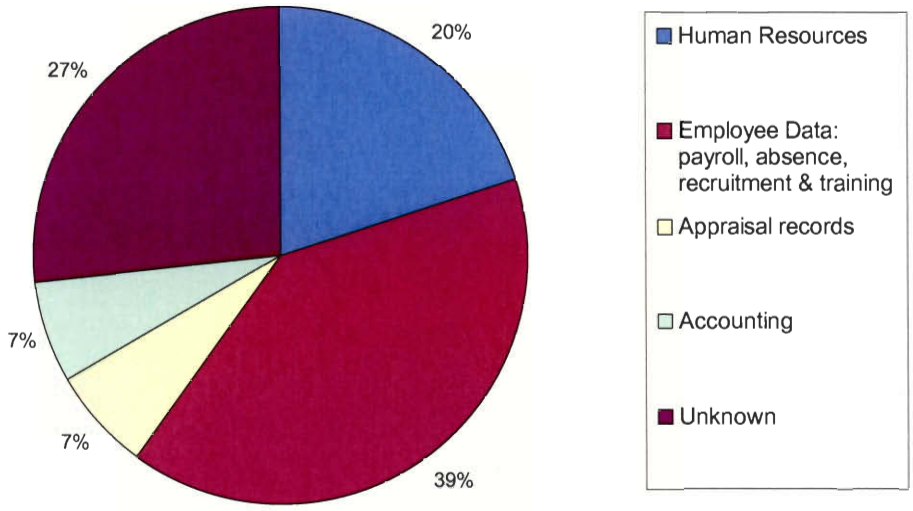

Figure 5: Survey Responses of Uses of PaRHis

financial information, such as claimant details, and contact information for landlords and benefits agencies.

Table 2: Description of Systems the Financial Services Department Utilises

System	Description
CTax	Council Tax – record of Borough's tax and rent collection
ICLipse and HBIS	ICLipse: document imaging within Revenues and Benefits - tied to Housing Benefits Information System (HBIS)
VBAF	Verification of Benefits Administration Framework: fraud investigation database
B-RATE	Business Rates
Axis	Pensions Database

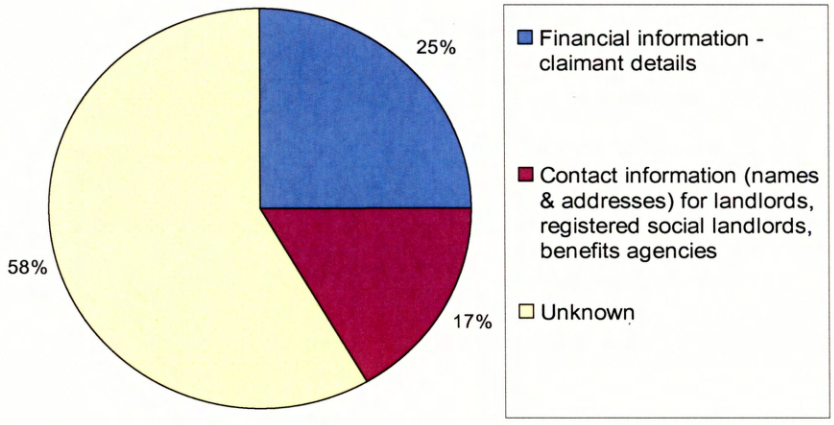

Figure 6: Survey Responses for Information Contained in HBIS

VBAF is the fraud investigation system for the Financial Services Department. One employee from the Benefits Team inside the Revenues and Support Division responded to the survey but answered unknown for the type of information processed. B-RATE contains business revenue data. One employee from the Corporate and Strategic Finance Division responded to the survey, but answered unknown for the information they process in B-RATE. Lastly, Axis is a Pensions database. One person from Corporate and Strategic Finance responded to the survey and listed personal, payroll, and pension data as the information processed in Axis.

The Chief Executive's Department has many systems specifically for the IT Services Division's software support. Those systems are explained in Table 3. SEAgent is the telephone system used in the Call Centre and it contains the statistics for call management. One employee listed SEAgent as a system they use and described IT support as the information it contains.

Table 3: Systems for IT Services Software Support

System	Description
SEAgent	Telephone system: statistics for call management
IMPALA	Impact Analysis and Change Requests: examining potential impacts from prospective changes to particular IT systems
Centennial	Snooping software: statistics regarding the software installed on every computer on the intranet
Intrepid (Intrepop)	Service Request Form system (in-house)
Exchange	employee e-mail accounts: names, e-mail addresses, and passwords
Blue Flag Help Desk	IT Services Support call management system: service call details
IT Time Manager	Time Recording (In house): record of time spent on each file and details of: sales, income received, land certificate deposits, notices, and other required information

IMPALA, or Impact Analysis, is the system for change requests to specific IT systems and analysing their potential impact. Two managers who use IMPALA listed unknown for the information they process in it, while the third listed impact analyses and change requests. According to one manager survey, Centennial is snooping software that records the location and statistics of software installed on every computer logged into the Borough's intranet. Intrepid, also known as Intrepop is the Service Request Form system; all of the departments access Intrepid to send their IT services support requests to the IT Services Division. Three employees and two managers discussed Intrepid in their survey responses. Three respondents use Intrepid to access the Service Request Forms and one is on the development and support end for the system.

Exchange is the Borough's e-mail account server. The two survey respondents who utilise Exchange process all information concerning user e-mail details, including account names and passwords. Blue Flag Service Desk is the IT Service Desk's call management system and asset register.

Four respondents use Blue Flag for service desk calls, while one is on the development and support end. IT Time Manager is used for time recording and document management. Seven employees who utilise it responded to the survey. Six of those responses were grouped into time recoding, which included a record of time spent on each file, sale details, income received, land certificate deposit details, notice details, and other required information. The seventh response was from an employee who is on the development and support end for the system.

The other divisions within the Chief Executive's Department also use a broad range of systems, as shown in Table 4. The VIP system is used by the Call Centre, which manages all of the calls the Borough receives. According to two manager survey responses, it is used by the Special Projects and IT Services divisions. One manager stated they process call details in the system, while the other listed personal and property data for the information VIP contains. The Partnership Division utilises MPAC, Merton's Partnership against Crime. According to one manager, it stores the details and statistics of crime committed within the Borough that the division utilises to "identify local hot-spots." The Partnership Division also uses Profunding, a system for funding and statistics data. According to one manager survey, it contains the details of external funding regimes, Borough and ward statistics from the National Index of Multiple Deprivation, census data, and projections. The Legal Division has a customised version of Time Manager for their purposes. One employee surveyed stated that they use it to process financial, accounting, and invoice files. According to an employee survey from the Scrutiny and Policy Division, the MTS system is a customised database that runs on Oracle. It stores the translation service bookings, the allocations of the sessions to

freelance staff members, and the payment the freelance staff receive. The Q-Matic system is the queuing system for Merton Link. According to one manager in the Special Projects Division, Q-Matic contains personal and property data.

The Environmental Services Department also utilises several systems, which are displayed in Table 5. Confirm is their major system for contracts, work management, and customer services. According to twenty-three manager and employee survey responses, every division except Amenity Services utilises Confirm. Figure 7 shows the type of information it contains. Confirm was originally purchased as a database for complaints, but as Figure 7 shows, it contains other information as well. It holds details of all the customer service letters, e-mails, and phone calls the Environmental Services Department receives concerning enquiries, requests, and complaints. In addition, Confirm contains includes property, budget, and task data, as well as the dates of walk patterns.

Table 4: Systems Utilised by the Chief Executive's Department

System	Description
VIP	Call Centre management system: call details
MPAC	Merton's Partnership Against Crime: crime statistics to identify local hot-spots
Profunding	Funding and Statistics: details of external funding, Borough and ward statistics, census, and projections
Legal Time Recording	Time Manager (in-house): File location for financial, accounting, and invoicing
MTS	All bookings for translation service, allocations of sessions to freelance staff, and payment to freelance staff
Q-Matic	Queuing System for Chief Executive's Department (Merton Link)

Table 5: Systems for Environmental Services

System	Description
Confirm	Contracts and Works Management; Customer Service: details of all correspondence, enquiries and complaints, e.g. graffiti and property defects
Greenly Property and Tax database	Asset register of council property: property and tax data
I Specialist	Property database
EHTS	Environmental Health and Trading Standards: infectious disease data
Dictaphone	transcripts of phone conversations: enquiries and complaints
Dataflex	Record of commercial premises: date of inspection, risk assessment, and enforcement action

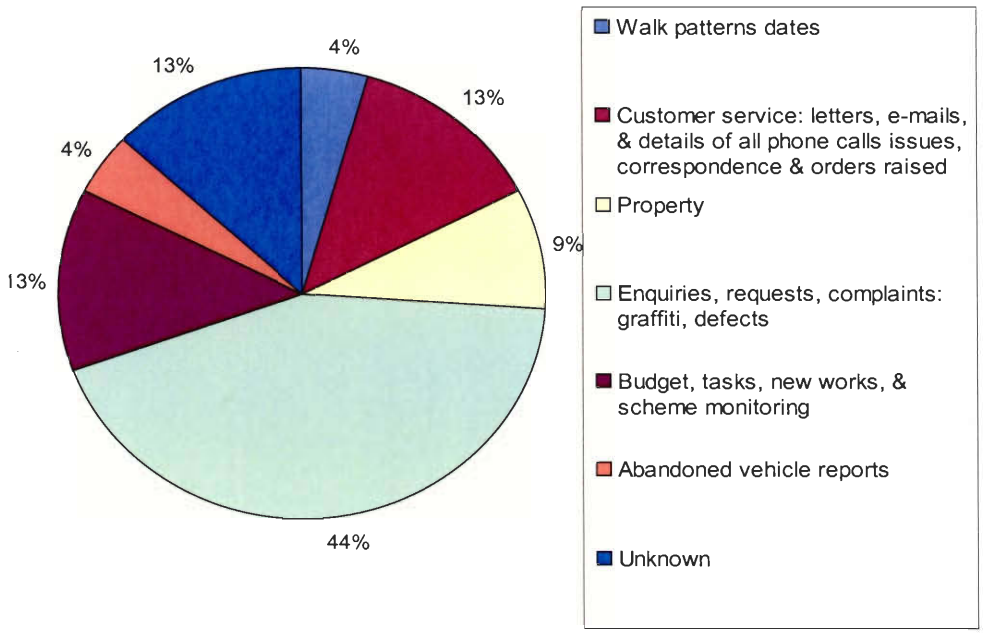

Figure 7: Information Contained in Confirm

The Greenly system is the asset register of Council property. According to one survey from the Service Development Division, the system holds the Council's property and tax records. The I Specialist system also contains property data that the Planning and

Public Protection Division accesses, according to one manager from that division. One employee from the Planning and Public Protection Division utilises the Environmental Health and Trading Standards (EHTS) to process information regarding infectious diseases. Dictaphone transcribes the customer service phone calls the Service Development Division; according to one manager it normally receives enquiries or complaints. Finally, Dataflex is utilised by four employee survey respondents from the Planning and Public Protection Division. The information contained in Dataflex is shown in Figure 8 below. Seventy-five percent of the results can be grouped into complaints regarding commercial premises and the details of the premises' inspections, including the date, risk assessment, evidence, and any enforcement action taken.

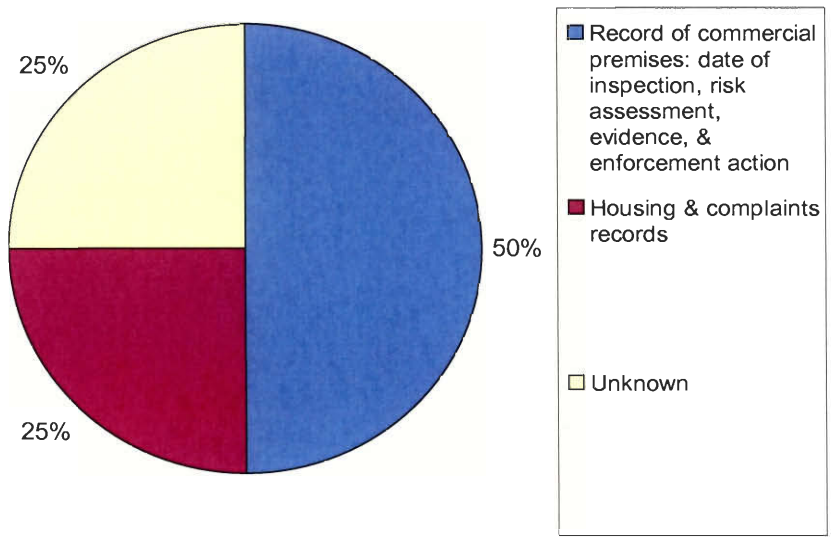

Figure 8: Information Processed in Dataflex

A description of the systems that only the Education, Leisure, and Libraries Department utilises is shown in Table 6. The largest system, Impulse, is used by seven

employee and two manager respondents for special education data, such as course records, pupil data, educational psychologists visits with children, statistical analyses on the pupil's progress, and school data. Figure 9 shows the specific information the respondents process in Impulse. LEAwards is the Educational Awards database of children who have received awards. Two employees from the Finance Division responded to the survey; however one did not specify the type of information they process in it, while the other stated LEAwards contains student data.

Table 6: Systems used by Education, Leisure, and Libraries Department

System	Description
Impulse	Personal data for special education pupils, including school admissions, guardians, and educational statistics
LEAwards	Pupil data on those who've won educational awards

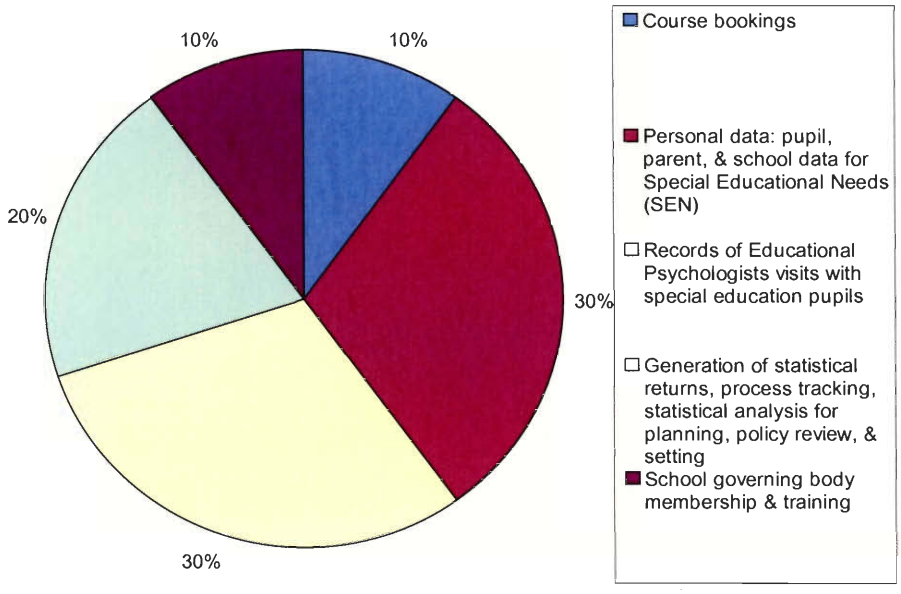

Figure 9: Survey Results for Information Processed in Impulse

The systems the Housing and Social Services Department utilises are described in Table 7. Academy and Respond are accessed by the Housing Division, while CareFirst is utilised by the Social Services Division. Academy is used to control the main housing functions. It allows the Housing Division to manage and allocate property, as well as to oversee their housing stock and rent. According to four managers and four employees, Academy contains details about the Council's property, including rents, addresses, enquires, and complaints, as well as performance data about property management. The statistics of the survey responses for the information processed in Academy are shown in Figure 10.

Respond is a complaint system for the Housing Division. According to one manager in the Information and Business Support Division, it contains service provision data. CareFirst is an integrated database for divisions pertaining to Social Services. The employees who responded to the survey and stated they utilise CareFirst, were from each of the following divisions and teams: the Community Care

Table 7: Systems Utilised by the Housing and Social Services Department

System	Description
Academy	Controls main housing functions: contains details of Council-owned property, e.g. rents, addresses, enquiries, complaints, repairs, and maintenance
Respond	Complaint system for Housing and Social Services that contains service provision data
CareFirst	Social Services Integrated System that contains client and financial data, e.g. a register of children in the Council's care

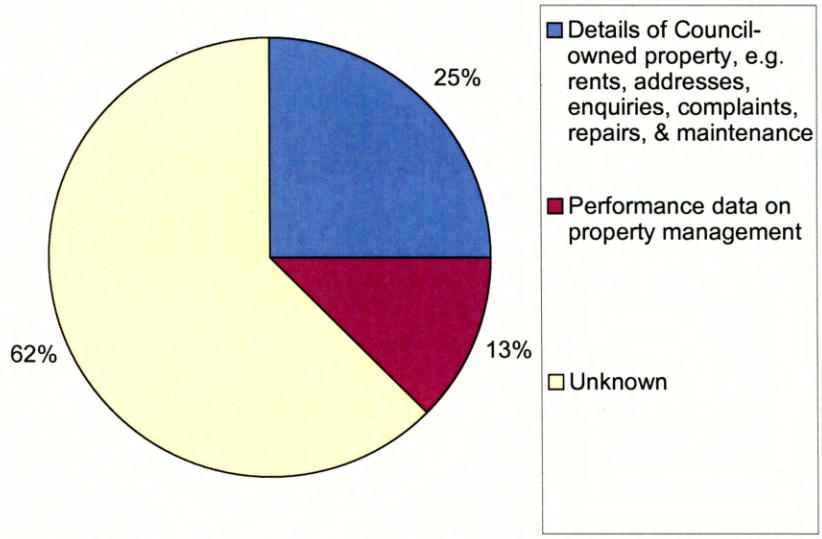

Figure 10: Information Processed in Academy

Division, the Children's Division, and the Information and Business Support Division and the Client Financial Affairs Team. The information CareFirst contains are abuse cases, register of looked after children, and client and financial data. In addition, one division in the Financial Services Department, Housing and Social Services Finance, has read-only access to CareFirst accounts for queries.

In addition the aforementioned systems, there are several systems that are utilised by two or more departments. A description of these systems, and the divisions that utilise them, are listed in Table 8. The Contractor's Health and Safety Scheme (CHAS) is the in-house software for health and safety inspections. Two survey respondents, one manager from the Human Resources Division and one employee from the Street Management Division, utilise CHAS. One stated CHAS contains data from Health and Safety inspections, while the other did not specify the type of information they process in the system.

Table 8: Description of Systems Utilised by More than One Department

System	Description
CHAS	Contractor's Health and Safety Scheme: Health and safety inspections
Panorama	Planning, Building Control, Property and Land Charges
Data Map	Corporate GIS System: Borough maps and neighbourhood statistics
Teacher's Pensions	Teachers' salaries and service returns

Panorama, a database for the Council's property and land charges, is also utilised by the Chief Executive's and Environmental Services Departments. Four employees and three managers who utilise Panorama responded to the surveys. The information it contains is described in Figure 11. The known information includes planning and building control data, property and statistics, and statutory local land charges.

Data Map is the corporate GIS, which provides information about the Council's streets and highways. Nine survey respondents, three managers and six employees, from the Chief Executive's Department; Education, Leisure, and Libraries; and Environmental Services Department access Data Map. The known information that Data Map holds includes neighbourhood statistics and maps of premises. Lastly, the Teacher's Pensions database contains data concerning teacher's services and salaries. Two employees who utilise it stated they do so to update teachers' salaries and service returns.

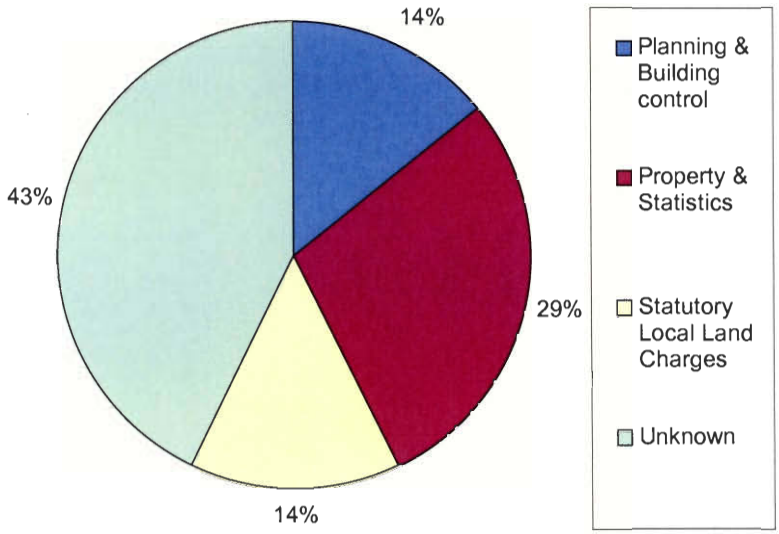

Figure 11: Information Processed in Panorama

4.2 Inefficiency

Our research has uncovered the problems with efficiency and redundancy in the Borough of Merton's information system. In this section we address the opportunities for data and system sharing within and across the five departments. We expect that by encouraging data and system sharing, communication and up-to-date information would be improved in the Borough's system. Figure 12 shows that 49% of the divisions update their data either hourly or daily, with 19% updating hourly and 30% daily. This exemplifies the fast pace of data and policy change in the Borough. However, the organisation needs to ensure that all of the divisions are updating data regularly. This would create an organised system by reducing discrepancies and ensuring the organisation as a whole is using the same information.

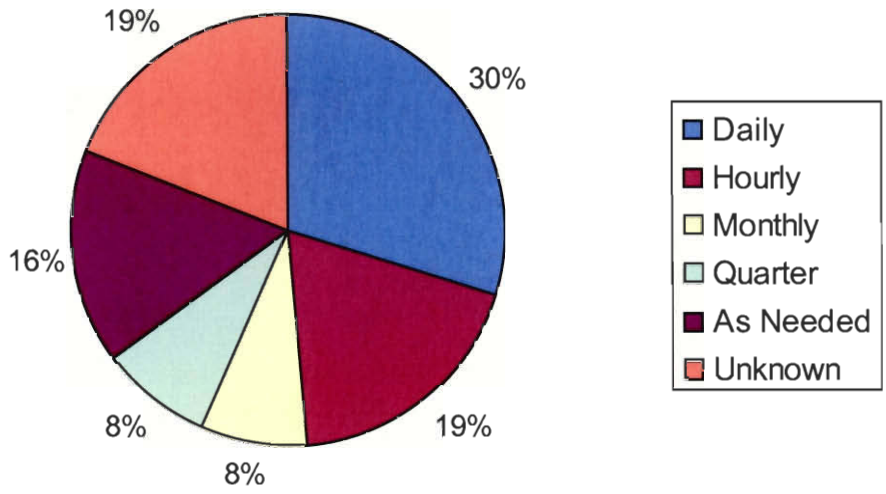

Figure 12: Manager Survey Results on Frequency of Updating Databases

The results that pertain to inefficiency in the Borough of Merton's information system can be categorized into two main topics: data sharing opportunities and opportunities for shared system access. These are the major issues that affect efficiency and redundancy in the Borough's total system as they negatively affect communication and cause a time lag in receiving information.

The opportunities of sharing data are prevalent in the current information system. There is a great duplication of data throughout the Borough due to the individual streams of data. Our interviews with managers from Housing and Social Services, Financial Services, and IT Services revealed that the organisation uses thirty-nine separate databases for personal information. According to the managers, such a large number "guarantees" the duplication of information, especially personal addresses which are included in almost all databases. The five departments that make up the Borough handle, for the most part, personal and property data. We have located the links between the

departments, and the areas where sharing this information would be appropriate in a new information system.

4.2.1 Data Sharing

There is a large amount of information that is currently not distributed across the Borough. This information could be accessed and shared by many other divisions and provides an opportunity for data sharing. Currently 62% of the employees surveyed use shared databases with 53% using a shared database and 9% using both shared and personal databases. Figure 13 displays the use of personal and shared databases in the Borough's total system.

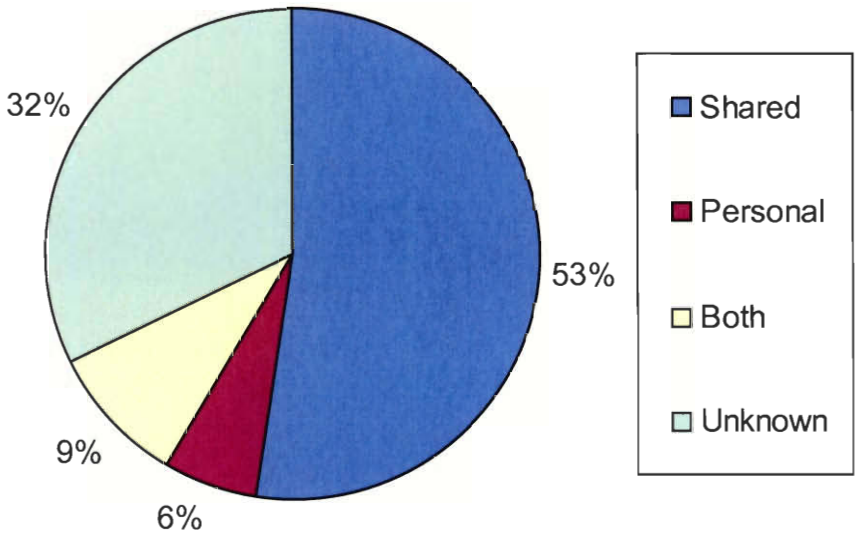

Figure 13: Personal and Shared Databases

Although over half of the databases in the current system are shared, our interviews discovered specific examples of where more data could be shared. An example of this can be seen between Amenity Services, in the Environmental Services Department, and Social Services, in the Housing and Social Services Department. Although Amenity Services has no need for the knowledge of social problems of the

people that Social Services deals with, they do need to know how many people are living in a particular household. According to an interview with a manager from Amenity Services, this information is currently contained in the Social Services databases and would make identifying the amount of waste produced by the household easier for Amenity Services. The manager explained that household information has been accessed by Amenity Services; however, the process of accessing this information has been tedious. The data have been sent through email or personal delivery, but the process has been too slow, often not getting to Amenity Services for weeks. The results of this interview placed high on the theoretical range scale and convinced us that sharing information electronically encourages efficiency by reducing the time and effort in accessing data.

In a discussion with a member of management in the Environmental Services Department, we discovered that the Parking Team within the department has a need for information handled in the Financial Services Department. The Local Taxation Team, within the Financial Services Department, has a database that contains information on the taxes citizens of the Borough pay to the Borough. The Parking Team in the Street Management Division has a need for this information as it provides proof of residence and is necessary in order to send an invoice to citizens who pay for parking permits. The same interview with the manager from Amenity Services also revealed a need for this information. The waste services provided to the citizens are funded by the council tax. In order to ensure the correct homes are receiving this service, the division needs to know who is or isn't paying their council tax. The results from these two interviews were compared on an actual range since it included a smaller range of possibilities for data

sharing. Our analysis determined that allowing shared access to this information would save all the divisions and teams time and money and reduces costly mistakes in their daily operation.

The interview with a manager of Amenity Services described another opportunity for data sharing within the Borough. The Highway Team in the Environmental Services Department accesses information that is useful to Waste Services. The data that Waste Services desires is the location and number of bins used for trash on the streets. The information is necessary to determine inventory of assets owned by Waste Services and to keep track of the division's expenses. The nature of this data would make sharing it a legal and manageable task, as it is not sensitive data.

4.2.2 System Sharing

We found that Housing and Social Services Department has a need for the information contained in the Environmental Services Department's databases. The gazetteer used in Environmental Services is a large database that contains personal address information. An interview with two managers of the Housing and Social Services Department claimed that the addresses in the database are appropriate for their use. They stated that interface with the gazetteer would reduce the effort of transferring information between the departments and increase efficiency in data manipulation. Our qualitative analysis determined that sharing systems saves time and effort, and provides uniform information to both divisions. However, this issue of data protection must be addressed here as it concerns people's personal addresses.

We discovered a strong correlation of data in the Social Services Division and Legal Services within the Chief Executive's Department. Currently the court diaries in

the Legal Services databases are shared with Social Services in an Outlook date book. Although this has made access to information more efficient for both divisions, there are still more opportunities for increasing communication between the two. In interviews with managers of Legal Services, the interviewees all expressed interest in having read-only access to CareFirst, the Social Services' main system. The managers explained that the instances where social issues become legal issues are common to the Borough of Merton; therefore the information in the CareFirst system concerns both divisions. Instead of delivering this information via email or hand delivery, the divisions could share access to systems. By sharing access to systems, the time lag of information would be reduced and the communication between the two divisions would be more accurate and the data would be better protected.

Our research uncovered another example of a system sharing opportunity. According to an interview with a member of Housing and Social Services, the Council Tax, Council Housing, and CareFirst systems all use the same information. This information is not shared in these systems and results in an opportunity for consolidation of the systems. CareFirst is the largest system of the three; therefore the data in the smaller systems could be incorporated into CareFirst. By consolidating these systems, the Borough of Merton reduces redundancy and shares uniform information between the divisions.

4.3 Management

The effective management of information technology in any organisation is important because it can save both time and money. Within the Borough, there is no corporate strategy or policy regarding the implementation of an information system,

which has resulted in what one interviewee called "a piecemeal system." As computer technology has been introduced and evolved, organisations have rushed to implement these tools in their own work. Systems and programs have been implemented one at a time, making the Borough's total system both disorganised and inefficient. Through surveys we discovered that operating systems are not standardised throughout the Borough, with four different versions of Windows being used. Figure 14 shows the percentage of respondents that use each of the different Windows programs.

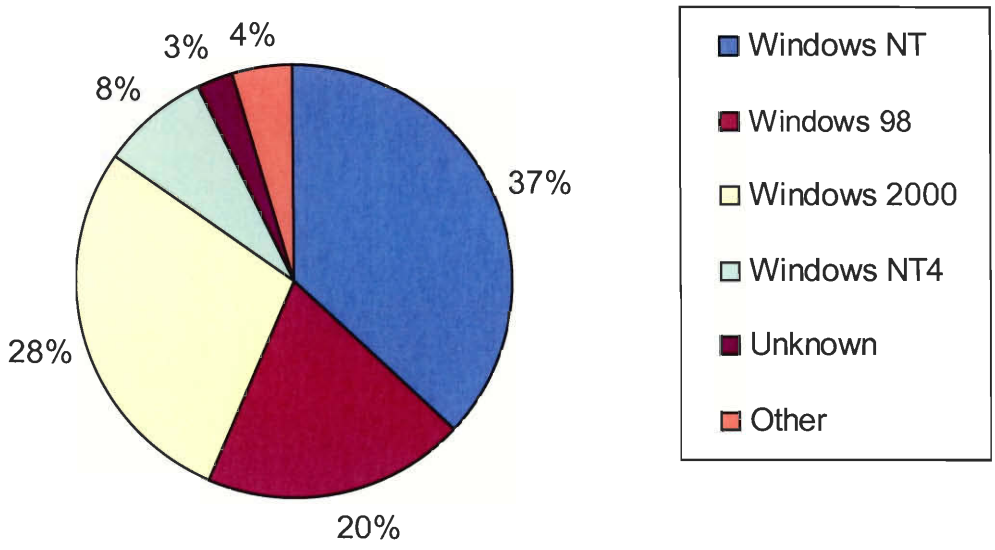

Figure 14: Operating Systems utilised in the Council of Merton

The management of information systems can be broken up into two sections, system structure and employee interface. System structure refers to the way in which systems have been implemented, which department uses what system, and how the system has been monitored. The employee interface describes the interactions between the users and the computer systems. This includes both usability of systems and proper end-user training.

4.3.1 System Structure

The general organisational structure of Merton contains five departments with twenty-six divisions working under them. IT Services has been structured in numerous ways. Currently they are based in the Chief Executive's Department. Without IT Services located in each department, part of the organisation's structure is a link between each department and IT Services. The Borough of Merton created a position called the Business Systems Manager (BSM). This person works as a liaison between IT Services and their independent department. Through interviews we discovered that the tasks of the BSMs are varied. These jobs include the basic tasks such as ordering new computers or printers to tasks that are more involved with the information needs of the department.

The information system structure of the organisation is extremely departmentalised. This means that each department exists as a single unit. Previously each department has implemented software specific to its needs, which has encouraged the departmentalised structure. This has lead to incompatibility of systems and data across the Borough. The structure of the system has made it difficult to access data. According to an employee survey from Housing and Social Services, the search functions are unreliable and the format of the databases needs reconstruction. Reconstruction is a common theme in the results of our surveys and interviews. A manager interview from Environmental Services claimed that one of their aims is towards accessing broad base data.

Through analysing our surveys, we found that there are a few systems that are accessed by more than one department. There are three systems that are used in every department; these include FMIS, ASH Debtor's, and PaHRis. Another system that is accessed by many employees is Data Map, the corporate GIS system that is used in

multiple divisions of the Environmental Services and Chief Executive's Departments, and in one division of the Education, Leisure and Libraries Department. CareFirst is another system utilised by the Borough of Merton. This system is used by the Housing and Social Services Department, and the Housing and Social Services Accountancy Division that is a part of the Financial Services Department. Finally, the Academy system, which is used to control the main functions for housing is used by the Housing and Social Services Department, and the Housing Benefits Division of Financial Service.

Through an interview with a manager in the Chief Executive's Department, we discovered that there are systems that all complete the same tasks in the Borough. An example is the complaints processing software that exists in the Borough. Confirm was implemented initially to process complaints about street cleaning, trash pick up, and abandoned vehicles. Within the last year, a new complaints processing software, called Response, was implemented. This created a dispute between end-users over which software is more effective.

Having multiple systems within the Borough has caused difficulties in sharing and processing data between departments. There are instances where management has created an interface to link two systems together. It takes a lot of effort and money to create an interface between two systems which has made this a tedious and ineffective method. In response it has become easier for employees to receive information through e-mails or paper copies from employees in other departments. This is an outdated, inefficient, and insecure method of sharing data.

Another discrepancy in management of information system is the relationship between IT Services and other departments in the Borough. Managers from the Chief

Executive's Department discussed their concern with support of systems as there are two systems that are unsupported by IT services, CareFirst and Panorama. CareFirst is a major system used in the Housing and Social Services Department. Recently implemented, it is supported within the department rather than through IT Services. This continues to support the departmentalised structure of the Borough's IT systems. The second system, Panorama, is used in the Environmental Department by the Local Land Charges Division. This system was purchased outside of the Borough and as a result IT Services does not support it.

IT Services plays a large part in the management of information technology within the Borough. The Best Value Review revealed that project management was an issue with IT Services and the management of IT resources in the Borough. An interviewee from the Chief Executive's Department responded that their interaction with IT Services had always been positive. A manager from the Chief Executive's Department described IT Services as helpful, quick, and good at managing projects.

4.3.2 Employee Interface

Usability affects the efficiency of any system. Poor user-computer interfaces cost time and money for an organisation. Seventy two percent of the employees that we surveyed use a computer five hours a day or more, with 24% of users spending seven to eight hours on the computer, 20% spend six to seven hours and 28% spend 5-6 hours. In that time employees spend the majority of that time inputting and accessing data. Figure 15 shows how much time employees use computers during a normal working day. A more efficient system will allow them more time to get other work done.

Usability describes the employee's interaction with a system, including the ease of accessing appropriate data. The most widely used system in the Borough is the FMIS system. One interviewee from Housing and Social Services described FMIS as "a nightmare." FMIS has a poor user interface and runs on a non-Microsoft compliant black and green screen. Employees that responded to our survey discussed a number of positive aspects of the FMIS system including that the system is custom made by section (e.g. department or division), the system is efficient at monitoring budgets, and the system is able to send payments to creditors. According to a manager from Housing and Social Services, many users have memorised steps they take in order to complete different tasks, rather than understand the program.

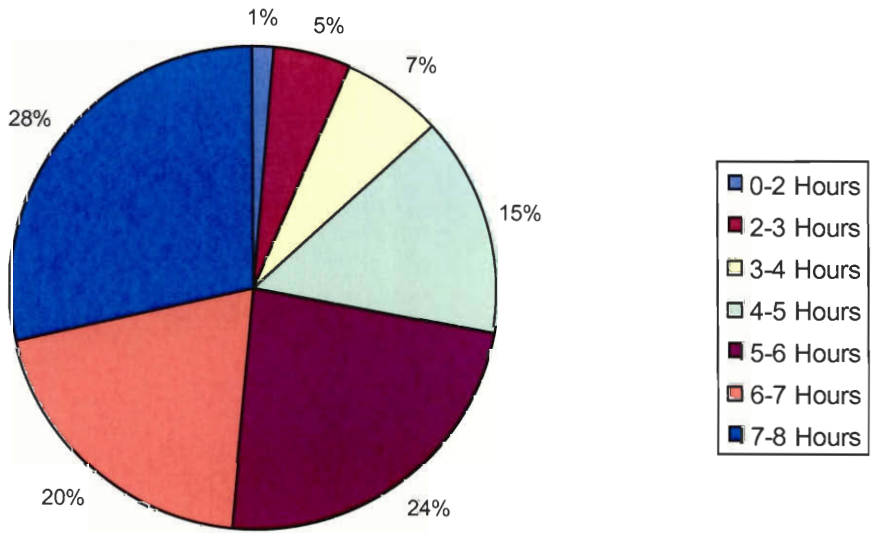

Figure 15: Computer Usage by Hours

Survey respondents said that the ASH Debtor's system is easy to use and that the processes are simple and work. This system was implemented within the past year and was a top of the market product. PaHRis has been described similarly as being easy to

use and understand. Confirm is used for different environmental services. Two users answered that the system was easy to use and fast; they were the only respondents to this question from the Environmental Services Department. However there is a need to update the Confirm software to the newest package and ensure that it is being used in all the divisions of the Environmental Services Department. Impulse is a system used in Housing and Social Services. Two users said that it was quick, user friendly and contained the appropriate data. However, two users claimed that the system was slow and it was difficult to access data when it froze.

IT Services uses a time recording system, a system that logs the time spent in each program accessed, in their division of the Chief Executive's Department. This software was designed in-house, and because of that is simple and easy to use. Some problems with the software include the need to update the system, and change the user interface (screen components). ICLipse is used by financial services along with their HBIS system. The strengths of the system include easy to access documents, and that it saves paperwork. The weakness that was revealed was that it is slow and needs to be updated to a newer version.

4.4 Conclusion

The examples of data and system sharing opportunities have raised awareness of the occasions of redundancy in the Borough of Merton's information system. Management of information systems ensures high performance levels of the system by implementing a concrete policy for organisation and training. This information provides those responsible for implementing the new system with an understanding of the needs for data and management in the organisation. The knowledge gained from our research

can be used in reorganising the way data and systems are shared in the organisation, and provide a strategy for an efficient system.

5.0 Conclusions and Recommendations

The results described in the previous chapter have been analysed to derive conclusions on the Borough of Merton's information system. We determined that the Borough of Merton needs a corporate strategy that defines the manner in which data is entered into its systems, the proper training techniques for using its systems, and the role of the Business Systems Managers. We have also identified the areas of duplication of data, where data sharing is available, and the opportunities for system sharing. All of our conclusions were analysed to develop our final recommendations to the Borough of Merton. This chapter highlights the conclusions we made based on our results and the final recommendations to the Borough of Merton concerning the development of a new information system.

5.1 Systems Recommendations

For all three inter-departmental systems (FMIS, ASH Debtor's System, and PaHRis), we recommend that at least some of the data should be processed centrally, rather than by department. This is because the systems are custom-made for each division; as a result, changes made from one division are not automatically updated for the other divisions. This has been a major source of inaccurate data.

Three systems that the Financial Services Department utilises, HBIS, B-Rates, and CTax, can be consolidated into one. They are currently being integrated into Pericles, a new package that the Financial Services Department has recently purchased. Although HBIS, B-Rates, and CTax are different systems, they hold repetitive data. The process must be handled delicately, so the systems can be cleaned without data loss or

further replication. Based on the input from the managers, Heads of Service, and BSMs, we agree this consolidation is a good idea and recommend that it be continued.

The IT Services Division of the Chief Executive's Department is also in the process of consolidating three systems into one. Intrepid, Centennial, and Blue Flag Helpdesk are being integrated into a new software package. Although these three systems contain different types of information, there is data overlap concerning the software the employees utilise. The consistency of this data among the three systems currently has to be maintained manually. When the three systems are integrated into a new package, however, this will no longer be a problem. According to one employee survey response from the division, IT Time Manager also needs to tie into these systems. After discussing this possibility with managers in the Division, we have concluded all four systems should be integrated.

The Chief Executive's Department utilises Profunding, which contains data on social deprivation. According to one manager survey response from the Partnership Division, this data needs to be shared among the Council departments, as well as with external agencies. We recommend that this data is included in a central database that all of the departments will be able to access.

The Environmental Services Department utilises Dataflex, which contains a record of commercial premises, including the date of inspection, evidence, risk assessment, and enforcement action taken. An employee survey response from the Planning and Public Protection Division suggested that this should be a Council-wide database so that the Environmental Services Department will know what actions other departments have taken before their inspectors arrive at the premises. The Greenly

Property and Tax database and the I Specialist system also contain property information. We recommend that all three systems access centralised information, as this will also increase data accuracy.

The Housing and Social Services Department mainly utilises Academy for control of the main housing functions. Currently this system is used to half of its full potential. The department is currently trying to utilise more of its modules, and in doing so, is determining which stand-alone systems within the department can be eliminated. They are also looking for a single integrated system for the department and have created a three-year plan for achieving this. Systems that may end up being eliminated include Lifespan, Prelude, and various Access databases that are already being integrated into Academy because Access is no longer supported by IT Services. Also, Academy and Respond contain housing complaints. Managers in the Housing and Social Services Department may need to access some of the complaints held in Confirm. If they had access to Confirm, Respond would be redundant. We recommend that the Housing and Social Services Department provide more training to users, thereby allowing Academy to be used to its maximum potential and eliminating all stand-alone databases. We also recommend that either the Housing and Social Services Department obtain access to Confirm, or that the complaints currently processed in Respond be transferred to Academy to eliminate a system.

Environmental Services; the Chief Executive's Department; and the Education, Leisure, and Libraries Department all utilise Data Map, the corporate GIS System. These departments require a corporate strategy for coordination of this system. Also, the Education division of the Education, Leisure, and Libraries Department accesses data

from addresses outside the Borough. Therefore, we recommend that the information entered into Data Map come from a centralised source and that the Impulse system, used in the Education, Leisure and Libraries Department, be tied incorporated into Data Map.

Panorama, which is used by the Environmental Services Department and the Legal Division of the Chief Executive's Department, lacks IT support. There are also problems with data accuracy, system response time, and physical features of the system. We recommend IT Services help the Environmental Services Department find a system they will support and will better fit their requirements.

5.2 Improving Efficiency

The instances of data overlap and system redundancy were explained in section 4.2. These examples show that the Borough of Merton's current information system has opportunities to increase efficiency and communication. We discuss the examples of data overlap and opportunities to consolidate data and systems. The data that is needed by other departments is explained; along with which department has the information, which department needs the information, and the reasons why this data should be shared. We created tables to develop recommendations to decrease duplication of data, ensure uniform information is used across the Borough, and encourage communication of systems.

Our analysis of the Borough of Merton's information system concluded that by sharing data electronically, the Borough can increase the accuracy of information in its databases, reduce the time lag of information delivered across the Borough, and increase efficiency of each division that currently uses an information system. We have also concluded that allowing shared access to systems in the Borough is beneficial to the

entire organisation. If the Borough allows shared access to the departments or divisions that have a need for a particular system, communication between departments would be improved, the effort in transferring data would be reduced, and security of data would be strengthened.

5.2.1 Data Sharing Recommendations

There are many examples of individual streams of data in the current system that could be shared. Sharing data encourages communication, data uniformity, and improves efficiency in the total system. Table 9 shows the cases where data can be shared between departments and the reasons for sharing the information. As shown in Table 9, the Environmental Services Department needs much information contained in other departments. Currently the department accesses this information through email or hand delivery. This process is inefficient and increases the effort of the departments by taking time to deliver information. Based on our research, we recommend that the Borough examine this table and allow the Environmental Services Department to access its desired information.

Type of data	Contained in Division or Team	Needed in Division or Team	Rationale
# of persons per household	Social Services	Amenity Services (ENV)	determine production of waste per home
citizens who pay Council Tax	Local Taxation Team (FIN)	Parking Team(ENV)	determine who to issue permits and tickets
citizens who pay Council Tax	Local Taxation Team (FIN)	Amenity Services (ENV)	determine who to provide waste service
# and location of trash bins	Highway Team (ENV)	Amenity Services (ENV)	inventory of assets

Table 9: Data Sharing Opportunities

5.2.2 Data Standardisation Recommendations

The issue of data standardisation has been discussed throughout the report. The Borough has yet to set a concrete policy on data uniformity. The manner in which data is entered into the information system is not consistent throughout the Borough and has caused much confusion and aggravation to its users. The telephone directory used in the Borough is an example of non-uniform data. From our research and own experience, we encountered this complicated list. The directory gives contact information for the employees of the Borough. However, the names of the employees are not entered in any particular order. We discovered that some employees were listed by last name, first name; others were listed first name, last name. We recommend that the Borough select one form of entering data into its databases.

Our research discovered another example of poor data standardisation. The IT Services Division and the Human Resources Division refer to people data in different ways. This lack of uniformity causes errors in payment of the Borough's employees and makes payment a difficult process. Again, we recommend that the Borough choose one distinct manner in which to refer to data and how it is entered into the system.

5.2.3 System Sharing Recommendations

The stand-alone systems used in the Borough's information system do not communicate with each other. This lack of communication has caused systems to hold duplicate and incompatible data, and has led to a departmentalised information system rather than a centralised system for the entire Borough. Table 10 displays the shared need for systems between departments. By sharing access to these systems, the Borough increases efficiency in the total system, encourages the use of uniform data, and improves

communication across the Borough. However, when consolidating these systems the Borough needs to ensure compliance to the Data Protection Act of 1998. This may be a difficult task but is necessary to provide data security. Based on our research, we recommend that the Borough examine this table and allow shared use of these systems.

Name of System	Used in Department	Needed in Department	Rationale
Confirm Gazetteer	Environmental Services	Housing and Social Services	attain personal addresses
CareFirst	Environmental Services	Legal Services	read-only access to client information
CTax, HBIS, CareFirst	Financial and Environmental	All Departments	same information contained in all 3

Table 10: System Sharing Opportunities

5.3 Management

Examples of the structure hindering the functions of the organisation were discussed in section 5.2, when defining opportunities for sharing information. Another example is different departments containing systems that may do similar things. The system Confirm was bought initially to process complaints in the Environmental Services Department. The Housing and Social Services Department has a similar system called Respond used to process complaints as well.

As a result of the departmentalised structure of the Borough, the role of Business Systems Manager was created as a contact between the different departments and IT Services Department. There has been no corporate definition for the job function for the BSM and because of this employees in each department may have different job functions and titles.

In the Borough there are many systems that have been implemented in various departments. Some of the more common systems include FMIS, CareFirst, PaHRis and ASH Debtor's. From the surveys and interviews, there are no obvious policies concerning training and usability for employees. Each employee has different set of computer abilities, which was noted from different responses about the strengths and weaknesses of each system.

5.3.1 System Structure Recommendations

Based on the research of the organisation, our recommendations include the creation of a corporate policy to define certain elements of the system structure. By incorporating the needs of all the departments, the Borough could create a comprehensive corporate policy. This would involve organising meetings between employees from different departments, specifically Business Systems Managers, Heads of Service, and employees from the IT Services Division. This corporate policy would define the role of the BSMs across the Borough. This policy would also regulate the implementation of systems in the Borough. The goal of the corporate policy will be to cut down on systems that are redundant and focus on creating a more efficient total system through sharing systems between departments.

5.3.2 Employee Interface Recommendations

From the results of the surveys and interviews it is obvious that employees have varying skills regarding the use of different information systems. There is a gap in corporate policy when it comes to the training of employees. Our recommendation is that the Borough communicates to the employees through seminars and meetings concerning

different IT products and how to use them. This would help the Borough to utilise systems to their full potential and make employees more comfortable in their daily tasks.

5.3.3 Conclusion

We suggest that the Borough of Merton examine its data flow across the departments, the usability of its current programs, and the management of the total system when implementing a new information strategy. We presented our findings and recommendations on these individual issues. These issues need to be addressed and incorporated into the effort of implementing a new information system. The Borough has room for improvement in its current system: sharing data, consolidating redundant systems, and managing and training its employees is a start to developing a better, more efficient system for the future.

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Appendix A: Borough of Merton Key Objectives

The Borough of the London Borough of Merton is organised into five departments:

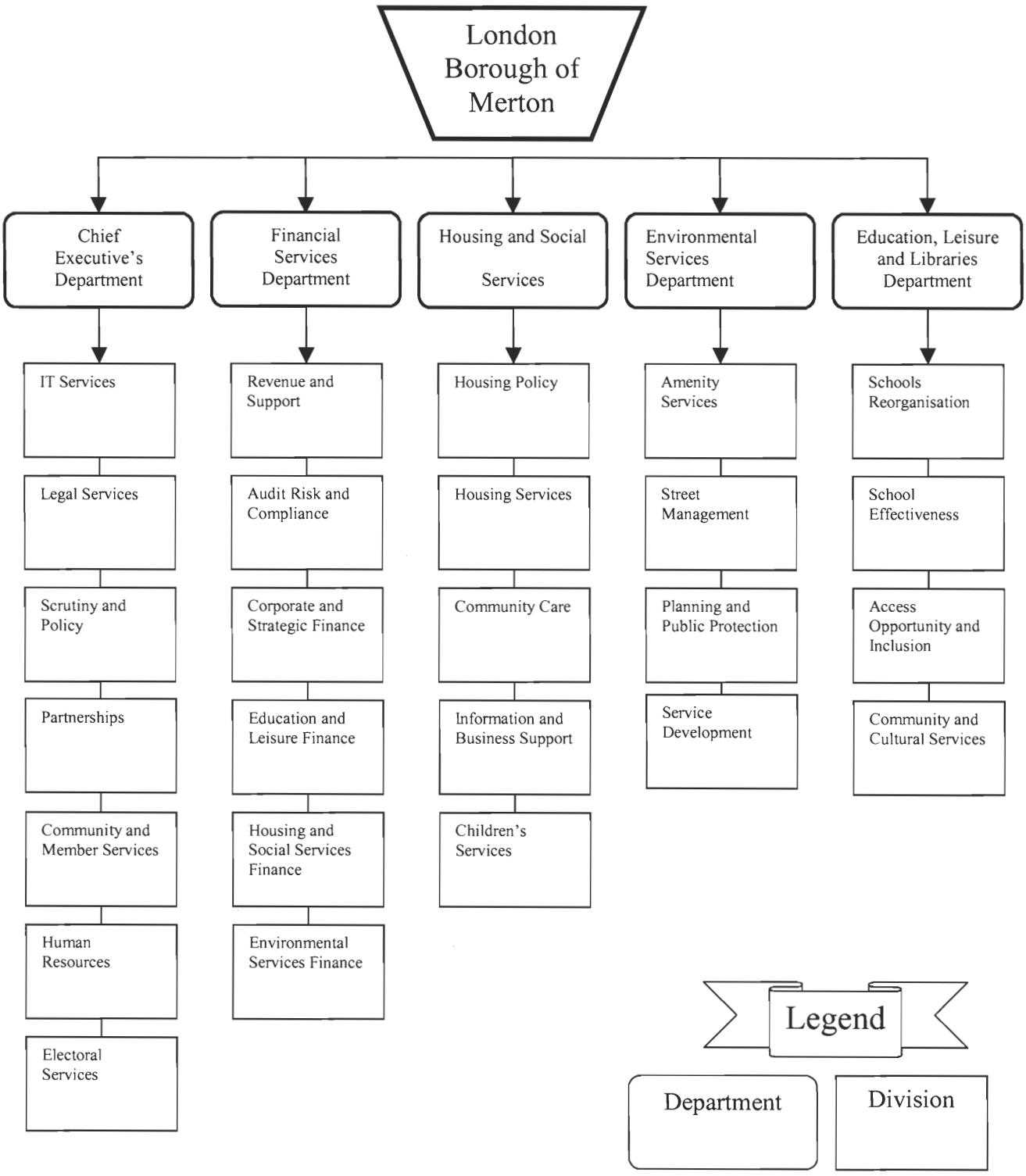
1. Chief Executive's Department – Roger Paine heads this department. The department handles the urban and environmental planning for the Borough and aims to improve the quality of life of citizens in Merton.
2. Education, Leisure and Libraries – The director of this department is Sue Evans. This department seeks to raise standards in Merton's schools by ensuring quality and equal opportunity.
3. Environmental Services – Richard Rawes is the director of this department. The goals of the department are to reduce pollution and congestion, and maintain a clean and healthy living environment in the Borough.
4. Financial Services – Mike Parsons heads the Financial Services Department. This department is concerned with taxation services for Merton's citizens and aims to strengthen the economy in the Borough.
5. Housing and Social Services – The director of the Housing and Social Services Department is Rea Mattocks. The key priorities of this department are raising standards in social housing, reducing the number of vacant units in Merton, and providing community services for the disadvantaged.

There are a total of sixty Councillors in the Borough of Merton with over five thousand regular employees. Our liaison, John Butler, works in the Information

Technology (IT) Department, which is a subdivision of the Chief Executive's Department.

The Borough of Merton requires an Information Strategy. This was identified in a recent Best Value Review of ICT provision. The need for a corporate approach to information is being taken by IT Services. This need has been realised because of the many small databases with high duplication that the Borough utilises (Merton, 2001a).

Appendix B: Organisation Structure of the London Borough of Merton



Appendix C: Borough of Merton Employee Survey

Thank you for filling out this survey. We are students from Worcester Polytechnic Institute in Massachusetts, U.S.A. Currently we are working in the Information Technology Services division in the London Borough of Merton. Our goal is to understand specific aspects of the systems that can be improved and those that we should use as a basis for a new system. It is also important to understand the needs and uses of the current system from the users. This will assist the IT services division in its efforts to better manage data manipulation and storage within the Borough of Merton.

1. What department do you work for?
2. What division do you work for?
3. What team do you work for?
4. What are your responsibilities in the team?
5. How many hours per day do you typically spend working on a computer?
6. What applications do you use on your computer (e.g. Microsoft Word, Excel)?
7. In your daily work, do you utilise an online data system?
    a. Is this a personal or shared online data system (please specify)?
    b. What software do you use for this online data system?
    c. What type of information do you process in this online data system?
    d. Name specific aspects of the online data system that you like?
    e. Name specific aspects that you would like to see changed?
8. What desktop do you use (i.e. Windows 98, 2000; Macintosh, UNIX, etc.)?

Appendix D: Employee Survey, First Revision

Thank you for filling out this survey. We are students from Worcester Polytechnic Institute in Massachusetts, U.S.A. We are working in the Information Technology Services division in the London Borough of Merton. Our goal is to understand specific aspects of the computer systems that can be improved and those that we should use as a basis for a new system. It is also important to understand the needs and uses of the current system from the users. This will assist the IT services division in its efforts to better manage data manipulation and storage within the Borough of Merton.

1. What department do you work for?

2. What division do you work for?

3. What team do you work for?

4. What are your responsibilities in the team?

5. How many hours per day do you typically spend working on a computer?

6. What applications do you use on your computer (e.g. Microsoft Word, Excel)?

7. In your daily work, do you utilise any data source that can be accessed from a computer, e.g. MS Access or Excel?

    a. Is this a personal or shared data source (please specify)?
    b. What software do you use for this data source?
    c. What type of information do you process in this data source?
    d. List aspects of the data source that you like? (please specify)
    e. List aspects that you would like to see changed? (please specify)

8. What desktop do you use (i.e. Windows 98, 2000; Macintosh, UNIX, etc.)?

9. Do you use your own Access database?

Appendix E: Employee Survey, Second Revision

Thank you for filling out this survey. We are students from Worcester Polytechnic Institute in Massachusetts, U.S.A. We are working in the Information Technology Services division in the London Borough of Merton. Our goal is to understand specific aspects of the computer systems that can be improved and those that we should use as a basis for a new system. It is also important to understand the needs and uses of the current system from the users. This will assist the IT services division in its efforts to better manage data manipulation and storage within the Borough of Merton.

1. What department do you work for?
2. What division do you work for?
3. What team do you work for?
4. What are your responsibilities in the team?
5. How many hours per day do you typically spend working on a computer?
6. What applications do you use on your computer (e.g. Microsoft Word, Excel)?
7. In your daily work, do you utilise any data system that can be accessed from a computer, e.g. MS Access, Excel, or FMIS (excluding Outlook and Word)?
    a. Is this a personal or shared data system (please specify)?
    b. What software do you use for this data system?
    c. What type of information do you process in this data system?
    d. List aspects of the data system that you like? (please specify)
    e. List aspects that you would like to see changed? (please specify)
8. What desktop do you use (i.e. Windows 98, 2000; Macintosh, UNIX, etc.)?
9. Do you use your own Access database?

Appendix F: Borough of Merton Manager Survey

Thank you for filling out this survey. We are students from Worcester Polytechnic Institute in Massachusetts, U.S.A. We are working in the Information Technology Services division in the London Borough of Merton. Our goal is to understand characteristics of the existing computer systems in this organization. This will assist the IT services division in its efforts to better manage data manipulation and storage within the Borough of Merton.

1. What department do you work for?

2. What division do you work for?

3. What team do you work for?

4. Approximately how many database systems does your team use each day (e.g. Microsoft Access)? What types of systems software does your team use?

5. What types of data do these systems contain?

6. What are common problems that your team faces when accessing and handling data (data quality, consistency, usability, etc.)?

7. Who updates your online database systems? How often is it updated?

Appendix G: Interview Consent Form

We are conducting this interview as part of our research of database management in the Borough of Merton. You have been chosen for this interview because of your position in the Borough and your ability to describe the situation of your respective division. Questions in the interview will concern the performance of database processing in your division. We will use this information to guide our research in providing the Borough with an effective data management system. Your participation in this interview is voluntary and greatly appreciated by the group. This interview will be tape recorded by the IQP Group. To ensure confidentiality, we will not use your name in any of our reports.

I have read and acknowledge the terms of the form above.

_____ _____/_____/_____

Print Name Date

_____

Signature

Appendix H: Business Systems Managers Interview Guide

Manager Name:
Department:

1. How do you feel about the Borough looking to implement a new information strategy?
2. What are your responsibilities in the department?
3. What are you objectives as a department?
4. What computer stored databases does your department use?
5. Current applications/performance... problems with performance
6. What are the limitations of your current system?
7. What are strengths of the current system?
8. What are your objectives as a department?
9. Do you access data contained in other department's databases?
10. Does data flow out of your department into another department?
11. Have you faced problems with data standardisation?

Appendix I: Heads of Service Interview Guide

Manager Name:
Department:

1. What are your department's business objectives and current business plan?
2. How do you feel about the Borough looking to implement a new information strategy?
3. What are you responsibilities in the division?
4. What are the functions of your service? To what extent do you use data sources to support these functions?
5. What are the strengths of the systems that your service uses?
6. What are the limitations of the system that your service uses?
7. What are your requirements of the future system?
8. How does data flow out of your service?
9. What are your ambitions for improvement in the organization and its future development?

Appendix J: Quantitative Results for all Surveys

Response Numbers: Manager Survey and Employee Survey

Managers Response Numbers per Division	Sent	Received	Percentage
Chief Executive	30	17	56%
Education Leisure and Libraries	15	5	33%
Environmental Services	19	3	16%
Financial Services	36	7	19%
Housing and Social Services	20	7	35%
Total	120	39	32%

Employee Response Numbers per Division	Sent	Received	Percentage
Chief Executive	148	40	27%
Education Leisure and Libraries	83	19	23%
Environmental Services	165	31	19%
Financial Services	118	19	16%
Housing and Social Services	87	26	30%
Total	601	135	22%

Response Rates per Division

Division	Employee Response Rate	Manager Response Rate	Total Response Rate
Chief Executive	27%	56%	32%
Education Leisure and Libraries	22%	33%	24%
Environmental Services	18%	16%	18%
Financial Services	16%	19%	17%
Housing and Social Services	30%	35%	30%
Total	22%	32%	24%

Manager Survey

How many database systems does your division use?

Number of Systems	Responses
0	2
1	6
2	8
3	11
4	7
5	1
15	1
Many	3
NA	1

How often are your databases updated?

Time	Responses
Hourly	7
Daily	11
Monthly	3
Quarterly	3
Unknown	6
As Needed	7

Employee Surveys

How many hours do you spend working on a computer per day?

Hours	Responses
0-2 Hour	2
2-3 Hours	7
3-4 Hours	9
4-5 Hours	20
5-6Hours	32
6-7 Hours	27
7-8 Hours	39

In your daily work do you utilise a database system?

	Responses
Yes	97
No	32
Unknown	8

Is that database a personal or shared database?

	Responses
Personal	8
Shared	70
Both	12
N/A	42

What Operating System do you use?

Operating System	Responses
Windows NT	51
Windows 2000	38
Windows 98	27
Windows NT4	11
Unknown	4
Other	6

Appendix K: Comprehensive Results by System

The following list is a comprehensive list of all the systems our research has uncovered. They are sorted by alphabetical order. The information included consists of Manager Survey Results, Employee Survey Results, and Interview Transcriptions.

Information is separated by the following categories.

System – Name of the system
Table – Organisational Table
Purpose – What the system does
Information – Information the system holds
Strengths – The strengths of the system
Weaknesses – The areas for improvements
Manager Comments – General comments made by the managers
Manager Complaints – Complaints made by the managers
Interview Comments – Comments made in the interviews
(#) – The number of responses per answer (no number designates 1 respondent)

System: Academy

Department	***Divisions or Teams***	
Housing and Social Services	Secretariat Team	Housing Services Division (3)
Financial Services	Housing Benefits Team (4) (only division that uses because works closely with Housing and Social Services)	

Purpose: Controls main housing functions
Information:

- Details of Council-owned property, e.g. rents, addresses, enquiries, complaints, repairs, maintenance (2)
- Performance data on property management
- Unknown (5)

Strengths:

- In process of integrating stand-alone Access database with Academy so Academy will be sole repository
- Unknown (3)

Weaknesses:

- Unknown (4)

Manager Comments:

- Data accuracy and Maintenance: unreliable information due to lack of reliable and easily accessible systems
- Data retrieval speed
- None
- Unknown

Interview Comments:

- Allows HSG/SS to manage housing stock and rent, property management, allocate property (focal point of housing)
- Have many small databases and are debating whether to incorporate into Academy, e.g. gas services databases with all addresses Borough services, Lifespan, and Prelude (leasehold management)
- Academy has many modules not being used - goal is to have data integrated system in housing: 3 year plan to integrate all stand-alone databases into Academy
- Weaknesses: not good at doing special reports and IT lag in affecting changes onto system
- Sharing: strong link between Council Tax, Housing Benefits, and council Housing; Housing might use Confirm because they might need to access abandoned vehicle reports, etc
- Integration: HBIS (ICLipse) and Council Tax to be integrated

System: Ash Debtor's System

Department	***Divisions or Teams***			
Chief Executive's	Scrutiny and Policy Division			
Financial Services	Corporate and Strategic Finance Division(2)	Housing and Social Services Finance Division	Housing Benefits Team (2)	Education, Leisure, and Libraries Finance Division
Housing and Social Services	Children's Services Division	Community Care Division		
Environmental Services	Planning and Public Protection Division			

Purpose: Inter-departmental system for Debt's owed to Borough

Information:

- Miscellaneous financial information not held in FMIS (3)
- Code structures and descriptions; control issues
- Debt recovery, overpayments, and statistics (2)
- Client records and invoice details
- Unknown (3)

Strengths:

- Easy to use (2)
- Processes simple and work

- Unknown (8)

Weaknesses: Unknown (10)
Interview Comments:

- No complaint with system itself – actually reduces debt
- Data relies on individuals and locations
- Lacking data accuracy

System: Axis

Department	***Divisions or Teams***
Financial Services	Corporate and Strategic Finance Division

Purpose: Pensions Database
Information: Personal, Payroll, and Pension data
Managers Comments: Data Accuracy: data changes to input to pension systems from payroll can be inaccurate, irrelevant, or missing

System: Blue Flag Help Desk

Department	***Divisions or Teams***
Chief Executive's Department	IT Services Division (6)

Purpose: Help Desk call data management system and asset register
Information:

- Service desk calls (4)
- Development and Support
- Unknown

Strengths: Unknown (5)
Weaknesses: Unknown (5)
Manager Problems:

- Integration: merging SRF, Helpdesk, and Centennial – consistency among all 3 has to be updated manually
- Data Accuracy: currency and change control; latency with IT database systems

System: B-RATE

Department	***Divisions or Teams***
Financial Services	Corporate and Strategic Finance Division

Purpose: Business Rates: data from business revenues
Information: Unknown
Strengths: Unknown

Weaknesses: Unknown

System: CareFirst

Department	***Divisions or Teams***			
Housing and Social Services	Community Care Division	Client Financial Affairs Team	Children's Services Division	Information and Business Support Division (2)
Financial Services	Housing and Social Services Financial Division			

Purpose: Social Services integrated system
Information:

- Abuse cases
- Register of looked after children
- Client and financial data
- Housing and Social Services Accountancy has access to accounts receivable for queries
- Unknown (2)

Strengths:

- Usability: ability to import Excel worksheets and query them with tables in database
- Unknown (4)

Weaknesses:

- Usability: should be able to query Excel sheets more thoroughly in business objects
- Unknown (4)

Manager Comments: Maintenance: improve speed of access to system

System: Centennial

Department	***Divisions or Teams***
Chief Executive's Department	IT Services Division

Purpose: Snooping Software
Information: Statistics on location of software on every computer on the intranet
Manager Problems: Integration: in process of merging Centennial, HelpDesk, and Intrepid

System: CHAS

Department	***Divisions or Teams***
Chief Executive's	Human Resources Division
Environmental Services	Street Management Division

Purpose: Contractor's Health and Safety Scheme
Information:

- Health and safety inspections
- Street Management

Strengths: User-friendly
Weaknesses: Maintenance: processing division not happy with CHAS
Manager Problems: None

System: Confirm

Department	***Divisions or Teams***		
Environmental Services	Street Management Division (15)	Service Development Division (5)	Planning and Public Protection Division(3)

Purpose: Contracts and Works Management; Customer Service
Information:

- Walk patterns dates
- Customer Service: letters, emails and details of all phone calls issues, correspondence and orders raised, Council help (3)
- Property (2)
- Enquiries, requests, complaints: graffiti, defects (10)
- New works; Budget, tasks, and scheme monitoring (3)
- Abandoned vehicle reports
- Unknown (3)

Strengths:

- Usability:
    - All aspects of street scene can be accessed from any PC on the system without endless phone calls (2)
    - Fast

    - Easy to use (2)
    - Sort fields, formulas
    - Data retrieval and reports available
    - Performance indicators can be sourced from data when appropriate
- Irrelevant: replaces filing cabinets
- Unknown (9)

Weaknesses:

- Usability
    - More user friendly
    - Not easy for people who don't use it all the time
    - Needs to be quicker and easier to use
    - Attribute more accurately and more obviously named
- Maintenance:
    - Update to newest version available
    - Quicker, more reliable and stable systems
- Data Accuracy: more information, e.g.
    - doesn't show possible duplicates
    - searches only outstanding entries
- Sharing:
    - Make sure all sections and divisions of department utilise Confirm
    - Restricted to certain Departments and can't transfer details to another department not on the system
    - Unknown (9)

Manager Problems:

- Data Accuracy
- Lacks specific search engine
- Unknown

System: CTax

Department	***Divisions or Teams***	
Financial Services	Corporate and Strategic Finance Division	Housing Benefits Team

Purpose: Council tax collection

Information:

- Financial
- Council tax and rent data
- Payment Details
- Unknown

Strengths: Unknown (2)

Manager Problems:

- Maintenance: long log-in procedure and logs out quickly
- Maintenance: speed of data retrieval

System: Dataflex

Department	***Divisions or Teams***
Environmental Services	Planning and Public Protection Division(4)

Purpose: Part of larger system
Information:

- Record of commercial premises: date of visit, risk assessment, and enforcement action; Inspection, evidence
- Housing and complaints records; unknown

Strengths: Unknown (3)
Weaknesses:

- Usability: larger fields to permit useful entry, more reliable and user friendly
- Sharing:
    - Council -wide database so know actions other departments have taken before environmental services visits premises
    - Letters are written in Word but still filed in hardcopy and still lost
- Unknown

Manager Comments:

- Unknown

System: Data Map

Department	***Divisions or Teams***		
Chief Executive's	Partnerships Division	Legal Services Division	
Education, Leisure, and Libraries	Schools Effectiveness Division (1)		
Environmental Services	Service Development Division	Street Management Division (3)	Planning and Public Protection (2)

Purpose: Corporate GIS System
Information:

- Neighbourhood statistics
- Maps of premises (2)

- Unknown (6)

Strengths: Unknown (6)
Weaknesses:

- Maintenance: GIS growing but lacks corporate coordination and strategy - badly needed
- Unknown (5)

Manager Problems:

- Usability: system response time slow for accessing, Saving, and retrieving
- Unknown (2)

System: Dictaphone

Department	***Divisions or Teams***
Environmental Services	Service Development Team

Purpose: Transcribes phone conversations – obsolete
Information: Enquires and Complaints
Manager Problems: Unknown

System: EHTS

Department	***Divisions or Teams***
Environmental Services	Planning and Public Protection Division

Purpose: Environmental Health and Trading Standards
Information: Infectious disease data
Strengths: Usability: straightforward, quick, and easy to use
Weaknesses: Unknown

System: Exchange Administrator

Department	***Divisions or Teams***
Chief Executive's	IT Services Division(2)

Purpose: Everything for e-mail accounts
Information: E-mail accounts: user data, names, account details (2)
Strengths: Ability to query live Data
Weaknesses: Usability: interface "clunky"
Manager Problems: Data Accuracy (Communication)

- Many Temp staff don't have accounts set-up
- People use others accounts
- People move equipment themselves

- Staff start and leave without informing IT Services

System: FMIS

Department						
Chief Executive's	Scrutiny and Policy Division	IT Services Division	Partnerships Division	Human Resources Division (3)	Systems and Projects Team	
Financial Services	Corporate and Strategic Finance Division (4)	Housing and Social Services Finance Division(3)	Housing Benefits Team(2)	Revenue and Support Division	Internal Audit Team (2)	Education Leisure and Libraries Financial Department
Housing and Social Services	Housing Services Division	Community Care Division	Directorate Team	Housing Policy Division (3)	Client Financial Affairs Team	Human Resources Team
Environmental Services	Planning and Public Protection	Service Development Team				

Purpose: Financial Information Management System
Information:

- Financial (10)
- Monitor and model budgets (3)
- Operational and strategic: reports, journals, policies, and letters (2)
- Human Resources and Personnel (3)
- Costs and details, e.g. payments to external suppliers and contracts (2)
- Development and support
- Unknown (11)

Strengths:

- Section systems custom-made
- Budget monitoring
- Like to model budgets
- Quick way to make payments to creditors

- Too many to mention
- Unknown (21)

Weaknesses:

- Usability: more user friendly (4)
    - not easy to get Bespoke Reports, monthly details should match with fiscal year, easier to move around within system, quicker to amend
    - more information displayed (2)
        - source of data or originator of request
        - date on top of page
- Training: I'm ignorant
- Not specific: A lot
- Unknown (16)

Manager Comments:

- Data accuracy: data changes to input to pension systems from payroll can be inaccurate, irrelevant, or missing
- Usability: not user-friendly
- Unknown (2)

System: Greenly

Department	***Divisions or Teams***
Environmental Services	Service Development Division

Purpose: Property and Tax Database
Information: Property and taxes
Strengths: Usability: straightforward and easy to use
Weaknesses: Unknown

System: ICLipse

Department	***Divisions or Teams***	
Financial Services	Housing Benefits Team (10)	Audit and Risk Compliance Division

Purpose: tied to HBIS Mainframe and CTax

Information:

- Financial information - claimant details (3)
- Contact information (names and addresses) for landlords, registered social landlords, and benefits agencies (2)

- ICLipse for enquiry of document types
- Unknown (7)

Strengths:

- Usability: easy to see documents
- Irrelevant: saves paperwork
- Unknown (6)

Weaknesses:

- Usability: need to open documents faster
- Maintenance: need an updated system - looking to change
- Unknown (5)

Manager Problems:

- Data Accuracy: details updated regularly, not aware when information changes so outdated quickly
- Maintenance: server and hardware too old and inadequate to cope
- Usability: freezes and quite slow to open documents; long log-in procedures and quick to log out, retrieval speed of data

Interview Comments: Integration: HBIS (ICLipse) and Council Tax to be integrated

System: IMPALA
Purpose: Impact Analysis Information System
Information: Unknown (2)
Change requests and impact analysis
Manager Comments: Unknown (2)
Currency and change control; latency with IT database systems

System: Impulse

Department	***Divisions or Teams***				
Education, Leisure, and Libraries	Schools Effectiveness Division (2)	Educational Psychology Service Team	Statutory Services Team	Access, Opportunity and Inclusion Division(2)	School Effectiveness Division (2)
Financial Services	ELL Finance Division				

Purpose: Pupil data for Education Division
Information:

- Course bookings
- Personal data: pupil, parent, and school data for Special Educational Needs (SEN) information (3)
- Records of Educational Psychologists work and visits with special education pupils (2)
- Generation of statistical returns, process tracking, statistical analysis for planning, policy review, and setting (2)
- School governing body membership and training

Strengths:

- Easy to use; quick, user friendly, detailed data
- Network settings, security and backup network
- All ok, no especially good parts
- Unknown (2)

Weaknesses:

- Runs too slowly
- Difficult to access when system freezes
- GIS to be integrated to prevent re-keying of data
- GIS Data Map pool to be extended to cover non-Merton addresses
- No comment
- Unknown (2)

Manager Problems:

- Impulse new and currently working with supplier to refine
- Corruption of data from import of data from schools
- Software difficulty – having reports produce accurate and useful information (2)

System: Intrepid (Intrepop)

Department	***Divisions or Teams***
Chief Executive's	IT Services Division (5)

Purpose: Service Request Form (SRF) System - other departments have access to it to raise requests; IT services controls it
Information:

- Service Request Forms (3)
- Development and Support
- Unknown

Strengths: Unknown (3)
Weaknesses: Unknown (3)
Manager Problems:

- Maintenance: Intrepid unreliable so migrating to SQL
- Data Accuracy: currency and change control, latency with IT database systems

Interview Comments: Integration: in process of merging Centennial, Help Desk, and Intrepid

System: I Specialist

Department	***Divisions or Teams***
Environmental Services	Planning and Public Protection Division

Purpose: Oracle database with property data
Information: Property Data
Manager Problems: Data accuracy

System: IT Time Recording

Department	***Divisions or Teams***
Chief Executive's	IT Services Division (7)

Purpose: Time Manager
Information:

- Time Recording (6): record of time spent on each file, sale details, income received, land certificate deposit details, notice details, and other required information
- Development and Support

Strengths:

- Usability:
  - Simplicity (2)
  - Customised to suit their needs
  - Quick retrieval of information and capability of search functions
- Irrelevant: Saves keeping paper forms
- Unknown (2)

Weaknesses:

- Integration: needs to tie into SRF system (Intrepid)
- Maintenance: upgrade to newer software versions
- Usability: doesn't cater to working pattern
- Unknown (3)

System: LEAwards

Department	***Divisions or Teams***
Financial Services	Education, Leisure, and Libraries

	Finance Division(2)

Purpose: Education Awards
Information:

- Student Information
- Unknown

Strengths:

- Usability: easy to use
- Unknown

Weaknesses: Unknown (2)

System: Legal Time Recording

Department	***Divisions or Teams***
Chief Executive's	Legal Services Division

Purpose: Time Manager
Information: File location for financial, accounting, and invoicing
Strengths: Simple to use
Weaknesses: Usability: changes in details on some screens aren't automatically updated on others

System: MPAC

Department	***Divisions or Teams***
Chief Executive's	Partnerships Division

Purpose: Merton's Partnership against Crime
Information: Data to identify local "Hotspots"
Manager Problems: Unknown

System: MTS

Department	***Divisions or Teams***
Chief Executive's	Scrutiny and Policy Division

Purpose: Custom-built Database
Information: all bookings for translation service, allocations of sessions to freelance staff, and payment to freelance staff
Strengths: Usability: user friendly, easy to operate, ability to enhance
Weaknesses: Maintenance: frequent server problems!

System: PaHRis

Department	***Divisions or Teams***	
Chief Executive's	Human Resources Division	
Financial Services	Revenue and Support Division	Corporate and Strategic Finance Division
Housing and Social Services	Human Resources Team	
Education, Leisure, and Libraries	School Effectiveness Division	School Reorganisation Division
Environmental Services	Recruitment Division	

Purpose: Payroll Human Resources Information System
Information:

- Human Resources (3)
- Employee Data, Payroll, Absence, Recruitment and Training (6)
- Appraisal Records
- Accounting
- Unknown (4)

Strengths:

- User Friendly
- No Comment
- Unknown (9)

Weaknesses:

- Usability: hold more information, write-off permissions on user profile need refining, more Human Resources friendly
- Irrelevant: sickness reasons
- No Comment
- Unknown (6)

Manager Problems:

- Communication: management report
- Training: lack thereof
- Data accuracy:
    - more effective if at least some data processing handled centrally rather than within departments due to lack of system expertise
    - data changes to input to pension systems from payroll can be inaccurate, irrelevant or missing; slow machines and lack of processes and documentation

System: Panorama

Department	***Divisions or Teams***
Chief Executive's	Legal Services Division (4)
Environmental Services	Planning and Public Protection Division (3)

Purpose: Planning, Building Control, and Land Charges
Information:

- Planning and Building control
- Property and Statistics (2)
- Statutory Local Land Charges
- Unknown (3)

Strengths: Unknown (4)
Weaknesses:

- Usability: more mandatory fields to ensure comprehensive information on planning applications is recorded
- Unknown (3)

Manager Problems:

- Maintenance: system response time can be slow at times for accessing, saving, and retrieving
- Data accuracy

System: Profunding

Department	***Divisions or Teams***
Chief Executive's	Partnerships Division

Purpose: Funding and Statistics
Information:

- Details of external funding regimes
- Borough and ward stats from national Index of Multiple Deprivation
- Census data and projections

Manager Problems:

- Training: need to familiarize oneself with the domains on databases
- Research: information is at borough or ward level but sub-ward research most valuable for lobbying and bidding
- Integration: need to integrate data on social deprivation across Council departments and with external agencies
- Maintenance: updating Merton-specific stats is chronic problem and needs extra staff resources

System: Q-Matic

Department	*Divisions or Teams*
Chief Executive's	Special Projects Division

Purpose: Queuing System for Chief Executive's Department (Merton Link)
Information: People and Property
Manager Problems: None

System: Respond

Department	*Divisions or Teams*
Housing and Social Services	Information and Business Support Division

Purpose: Complaints system
Information: Service provision data
Manager Problems: Speed of access to data
Interview Comments: Access to Confirm would make Respond redundant

System: SEAgent

Department	*Divisions or Teams*
Chief Executive's	IT Services Division

Purpose: Telephone system - used in Call Centre; stats for call management
Information: IT Support
Strengths: Unknown
Weaknesses: Unknown
System: Teacher's Pensions

Department	*Divisions or Teams*
Chief Executive's	Human Resources Division
Education, Leisure, and Libraries	School Effectiveness Division

Purpose: Teacher's salaries
Information: Update teacher's salaries, service returns (2)
Strengths:

- Usability: Able to update teachers salaries and service returns
- Unknown

Weaknesses:

- Not User-friendly: crashes after 10 minutes if not continuously updating; needs to not log out so soon and update quicker
- Unknown

System: VBAF

Department	***Divisions or Teams***
Financial Services	Benefits Team

Purpose: Verification of Benefits Administration Framework - fraud investigation
Information: Unknown
Strengths: Unknown
Weaknesses: Unknown

System: VIP

Department	***Divisions or Teams***	
Chief Executive's	Special Projects Team	IT Services Division

Purpose: Call Centre Management System
Information:

- People and Property
- Call Details

Manager Problems:

- None
- Unknown

Appendix L: Interview Results

Due to confidentiality statement signed by the interviewee all traces of their identity have been removed. The following transcriptions have been paraphrased from a tape recording.

Interview 1:

Interviewer: How do you feel about the Borough creating an information system?

Interviewee: We've been aiming towards a broad base data system. We have a lot of databases for parking and other divisions. We need to be careful though. Yes we should be consulted before this.

Interviewer: What data sources support these functions?

Interviewee: Parking totally. We issue 40,000 penalty charges a year and there's probably hundreds sitting there in paper form. We're totally relying on data and the processing of it. These are stand-alone systems. While internal IT will support parts of it, it's mainly supported by the software people we buy it from. The penalty charges are entered into a handheld computer and then entered to our system by downloading. Systems have to have systems to support them. It's hard when you have an old system.

We have many databases in highways, streetlights, and highway condition. Confirm we use heavily. We deal with complaints and graffiti in Confirm. We also have stand-alone systems for the highway. We need to establish databases for street furniture.

Interview 2

Interviewer: How do you feel about the borough implementing an information system?

Interviewee: I think there is a need for it, but it has to be borough wide and not compartmentalized. That tends to be a problem. And there needs to be a common commitment.

Interviewer: How do you use information system to support those technologies?

Interviewee: With all those functions its key, you cant administer council tax, housing benefits and debt recovery with out major IT support unless you increase the amount of staff. It still may not be possible, especially with housing benefits. It is extremely complicated. I would say the Council Tax and Housing Benefits have some of the biggest systems. Council Tax (the system), one of the biggest, collects the most money, and it also gives out the most money. Debt recovery is not a big system, and deals with all the Councils income, which is 20 million a year. Internal audit needs to be able to access those systems.

Interviewer: What are the actual names of the systems that you use?

Interviewee: HBIS, CTAX, ASH, B-Rate, which is business rates, and FMIS. Audit uses every system; the only one we don't use is the social services system at the moment, because the information could be used for fraud. We got V-BAF, FIMIS that's fraud investigation system

Interviewer: Do you have personal and property data?

Interviewee: Yes, the Council Tax system and the housing benefit system, rely on knowing on where the property is and who lives there. The Housing Benefits system contains extremely detailed personal information. Since there are discounts for single people, you need to know that personal information and you also need to know the location of the property. The ASH system relies on information about the individuals and their locations, and that information could be a load of rubbish. The accuracy is not as good as the other systems and it is not as detailed.

Interviewer: What do you feel about standardization of data?

Interviewee: Yes, that is quite a problem we are moving from 3 systems; business rates, council tax and housing benefits into one system called Pericles. One of the issues is that they are all different databases and they must be cleaned so that we don't loose or replicate data. In addition to that we must link in with the revenue service. We need to know how they work with data so we can feed in data with out mucking around with it.

Interviewer: What are the strengths and weakness of your current systems?

Interviewee: The strength of the housing benefits, the council tax, and the business rate system is that they work. They hardly ever go wrong, those products are very reliable, but are expensive, and they haven't kept up to date with the technology (they don't run off of Windows). They are expensive in terms of time, because they have to shut the system down for two weeks to update it, where as a new system would take only two days. We are right now just on the edge on the leading edge. ASH system is extremely good, I have had no complaints, and it does exactly what we need it to do. The debtors system actually will reduce our debt, which is a desirable thing to do. All the other stuff is on Microsoft Office and they have their own bugs. Audit has a few Access databases. This is done without proper IT support. IT services does not offer enough help in the right time frame.

Interviewer: Do you have any data that people want to access?

Interviewee: They all do but we have to be careful because of the Data Protection Act (DPA). Housing rents links in with housing benefits, antifraud links in with housing benefits, debtors links in with housing benefits, and Audit has access with all the databases. I think that's about it, its very tempting to let people have access but we have to have rules.

Interviewer: How do you feel about Environmental Services pushing to have Confirm throughout the entire Borough?

Interviewee: Confirm is used for complaints but now they are using Respond, and it's a corporate problem that needs to be looked at. There needs to be someone that says this needs to be corporate infrastructure, because departments solve their problems on their own and it's not always the best for the entire structure.

Interviewer: You said that audit has access to everything how easy is it for them to find the appropriate information?

Interviewee: What it means is that once the systems are set up, it is the initial set up that is the problem. Getting all the applications on the computer, and getting a high level of training so that people can go in and get the information that they need to do their work, because they will have access to entirely different packages. We just bought a package called IDEA, which is an audit interrogation database package. What we do is when we have an order in a certain area; they go and get the training they need to access the information they need. The big problem when you get a new system, is putting it in, or when they get a new program and they don't tell you.

Interviewer: What could be done in the future development of an Information Strategy?

Interviewee: I think we should have one computer service centre. We currently have three, one in HSS, IT services, and one in Environmental. However, that one is starting

to run down. The systems development should be an IT thing. The HSS have tons of people down there and tons of applications that aren't run by IT. It is ok for IT doing everything. They need to supply the support in a timely manner. You can fall out of your time frame because you have to wait for the help to come.

Interview 3

Interviewer: How do you feel about the borough looking to implement a new information strategy?

Interviewee A: It's about time. It's long overdue. It will cut down on duplication, because you have lots of people working with similar data and its not being shared. We need to get a grip on it definitely.

Interviewee B: The same.

Interviewee A: For example, we do education, environment, housing, social services, regeneration, and finance. We also have to collect tax from people; we have to make sure they pay their rent, protect children, and ensure that children have opportunity for education. We do core work taking children into care from their parents. We deal with children with disabilities, and on the environment side we do control, parking permits, extensions to houses.

Interviewer: You handle a lot of information contained in other departments?

Interviewee A: Yes we do.

Interviewee B: The other side of the division is local land charges. If anyone wants to buy a property then they'll ask for our service. You'd like to know if the house was going to be affected by train lines or civic building that may happen in the region before you buy it. That's important, that's a service that uses Panorama.

Interviewee A: Its front line for people in the Borough that pay for that service. I have a statutory role under legislation, which is called the monitoring officer. I have the responsibility to ensure that everything the Council does is legal. Since we are a government organisation, we have very defined function of what we are allowed to do under Parliament.

Interviewer: Do you handle personal and property data? Approximately how many systems do you use?

Interviewee B: FMIS, Intrepop, Panorama for land charges, Panorama is used in other departments, Environmental Services for example. Environmental Services bought it and IT doesn't support it. They've had it for two years and IT still doesn't support it. CareFirst is a local system as well. We would like to use certain systems. CareFirst should be accessed by our Social Services Division because they can get the personal data about the clients. Then we don't have to trace it ourselves afterwards. They could access Soscis, which is the old system. However, it's a cost issue. We should have read-only access to the social services system, that way we could get the data first hand and

not by email or hand delivery. Which we receive a long time after it's needed. It would make our work more efficient and social services more efficient.

Interviewer: What are your strengths in terms of your IT management?

Interviewee A: It is helpful; they're quick and good at managing projects.

Interviewee B: They're very good. It is rare that the service goes down. We do have issues because we save a lot of stuff to the H drive. There are issues with security. It is important to the lawyers. People save to the C drive but it could get lost. But if you save it to the H drive because anyone can access it. This is a weakness to the system.

Interviewee A: We are worried about security; that is my biggest worry.

Interviewer: Is managing projects a problem?

Interviewee B: IT Services manage projects well. They've done a good job. They worked with us before with data installation.

Interviewer: Is hidden end user effort is a problem?

Interviewee B: Often we can't find data but usually because we forgot where we put it. I use FMIS and it's not user friendly. You can see transactions but you cannot trace it back to the base. I can't really think of anywhere else we tried to access data and we couldn't get it

Interviewer: How does data flow in and out of your department?

Interviewee B: We have diaries, which can be read by other departments. An example is the court diaries, which are read only.

Interviewee A: We send copies of court orders to Social Services for their files. We don't receive a lot of data electronically from other departments. What were trying to encourage is to instruct legal services electronically. We're trying to develop our intranet pages with instructions on it, so we don't waste time.

Interviewee B: There not many systems that actually talks to clients

Interviewer: Is that an area for improvement?

Interviewee A: Yes, but they're something that you can't send by email because of security issues

Interviewer: What are you ambitions for improvement?

Interviewee A: To check out land charges system. It is a computerized local land charges system and it has to be improved for the customer. The government wants customers to be able to sit at their computer, access certain details, collate the information, and file it electronically. IT needs to look at the system and see if can be done and the fact they don't support the system is a problem.

Interviewer: Is that a Geographic Information System (GIS)?

Interviewee B: Its part of it. Environmental Services, the planning side, and the building control.

Interviewee B: We've got GIS to a fashion. You should talk to Mick Bird, just go to his desk, and Ade Adebayo. Speak to him.

Interviewee B: The batch printing for land charges is a problem. We can't print multiple copies of documents. They are not able to resolve this issue, but it should be able to be done. IT gives us a good service and the examples that we've given you are real ones.

Interview 4

Interviewer: What is your opinion of the IT department building a new system?

Interviewee: Hurry up! Have you tried to use the telephone directory? If someone could rebuild that I would be very happy. It has a life of its own. There are some IT superstars and some IT dummies in this department. Every bit of IT that you use, like a telephone directory, you have to get everything right or else you don't get that person's details up. Where as in our CareFirst database you can put in a % mark and are more likely to find the information because there is a range of stuff. So every time they use a different system there's different ways of getting it.

Interviewer: How is IT used in your division?

Interviewee: We use a database system on which we work with, why we work with them, etc. We have to report performance information to central government, including; how many children are in care and how many register, these are performance indicators. Our database collects that data, helps our business delivery to know who's got what case at what time and eventually we'll know what the person did in their last visit. We just implemented it. For Social Services we use CareFirst, which is not supported by the IT department. We look after it and the data is like a dream.

We have about 5 different databases, Soscis, contained personal information. CareFirst had pulled them all together.

Interviewer: Is that your only system?

Interviewee: It's the main system. CareFirst is quite easy to use. Soscis was basic but hard to work, it was worse than the telephone directory. Our goal is to allow people to put the correct data in and use that system to help manage the work. So it is the combination of Outlook in a database really. We've got potential, and in 5 years we'll use CareFirst to 90% capacity.

Interviewer: What other systems have you implemented?

Interviewee: FMIS? We use FMIS. We have care data on one database and the cost on another. We want to use CareFirst for financial information management because it would link the activity to money. Even though FMIS is the database of the century. We have a project looking to see how much we can move over into CareFirst, like invoices.

Interviewer: Are they hard to use?

Interviewee: FMIS is a nightmare.

Interviewer: Limitations?

Interviewee: Now with CareFirst, we are in the early stages. The software was designed for Social Services department. It has got many different applications that can do many things. It's taken 9 years to get this far and to put all the data into one place.

Interviewer: How does data flow in the organization? Do you have personal or property?

Interviewee: We record people's names and addresses. The difficulty with that is the data is sensitive. People only get referred to Social Services if there is a problem so there is a stigma attached. Data protection issues arise. Subsections for our department makes our life difficult. We hope to hold loads of our own information on a computer rather than in folders. The data needs to be on a machine all in the same place.

Interviewer: Do you have any data that other departments would like to use?

Interviewee: Resource directory. That could be data that everyone in the council has. It's not unique to Social Services, which would be useful. The intranet seems to be getting big. We have our policies on the intranet and that is beginning to take off.

Interviewer: Read only access between legal and social services?

Interviewee: We do a lot of work with legal. We want a CareFirst link with them. On the H drive we have a shared diary that contains court dates. Those are really good. They are hard to find because the H drive has so many things on it. There are some security issues with that.

Interviewer: Keeping data on the H drive isn't secure. Anyone can access that.

Interviewee: That's one of the reasons why we wanted CareFirst to our own. People can have a link to our service if they are legitimate users.

Interviewer: Where do you see the system improving?'

Interviewee: It is very piecemeal. It is not the best way of organizing the data. It doesn't come out very easily. It doesn't always bring up the right thing. The search function isn't very reliable. The format needs to be reconstructed. There is a bit that we can see and the public can see. The public website is very easily accessible. Sort of like the telephone directory. Human Resources' database will have the people's names differently.

Interviewer: What about data standardization?

Interviewee: Yes that's a problem all over the place. People need to think which version of my data code that people are going to use. So it needs standardization in that way.

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IQP/MQP SCANNING PROJECT

George C. Gordon Library
WORCESTER POLYTECHNIC INSTITUTE

they are. The debtors system is a mixture of people and business, but that's also based on property.

[Showing diagram that is on wall]

Interviewer: What are the strengths of the system that you are using right now?

Interviewee: That's hard to say. FMIS is old, character based, but pretty reliable. We are looking to extend the contract. Confirm is run by the Environmental Services Department. The biggest strength is that people are used to them and they help people do their job, but I can give you a long list of things wrong with them. ASH was installed last April, it's fairly new, best for the money, and people are always happy in the beginning.

Interviewer: Is there something that you would change?

Interviewee: There isn't much of a need. Most people need the system for the job they are doing. There are programs for special jobs, CTax and HBIS are being replaced by a system called Pericles. That's an intergraded database, it may be better, but it's hard to say. Right now, they talk to each other and that is good, because people that pay rent are influenced by Housing Benefits.

Interviewer: Do you have issues with data standardisation?

Interviewee: We don't really have problems with standardisation in my section, but we are really not a public section area. The systems that we have been in control of are straight forward and there hasn't been a problem.

Interviewer: What would you like to see in the future?

Interviewee: I would like to see all the databases login though the NT login, because the NT login is the most stable, so it should be used for everything. PaHRis needs to be used in a better manner. IT refers to people in one way and Payroll does it in another way. The telephone list should all be from one list, the human resource system. Everything needs to be tied together, even the card code system. We could do with a good time recording system for location, as there are bubbles on that system, though not big ones. That would be useful for parts of the organisation, as there would be better communication between applications. There aren't many people who have to use many different applications, but for those who do, you could make it easier for them. Programs are not geared toward managers that have to only access, do small amounts of processing, and want to be in and out in 30 seconds. It's really difficult to do that with passwords and everything else. We could make better use of the internet. Integrated data at the moment is the way it should be. I'm amazed that the phone system is not integrated into the computer system. And little things such as voicemail should be integrated as well. I think the issue of content management, in a web context, is keeping track of what is out of date, such as removal or updating that information. There is no way to tell what is old or new. I think that's about all.

Interview 7

Interviewer: We are going to give you a quick rundown of our project. IT Services decided to create a 5-year plan to create an information system. Our task is to research the databases with other systems and identify data overlap with other departments.

Interviewee: Our division has 3 sections. One section is called transport operations and includes the Workshop Council's fleet of about 230 vehicles and a transport operation for busses to transport children to school and elderly from home to adult day centres.

In that operation, we would maintain a database for the vehicles. That database is shared with the Financial Services Department because the vehicles are purchased through it in a process called leasing. They would have a record of when it was purchased, how many years we are going to have it, and when the lease expires. We have a shared database with them. We have another database that tracks the vehicle's life; that has information such as when it should come in for maintenance, when it should come in for MRT, and the vehicle's tax. All of that information is programmed in and the driver is informed about the vehicle.

The information comes in mixed up and goes out such that there is a separate database connected to the transport operation. We are looking at improving that. We are speaking to software companies about types of systems that would suit us better to improve record keeping. The head of the transport system, Helen Ketling, is the operator's license for the board authority. That license has been given to us by the department of transport. They check to see if we maintain proper records so our software system needs to be good enough to satisfy them. They also check that all the checks are in place and that they work efficiently. They make sure the drivers carry out their checks and the vehicle has been tested and is safe on the road; that information is contained in one system.

In addition to that, there is a database that is shared with the personnel section and has recently been quite an issue with changes in legislation. These drivers and escorts transport wonderful children because these kids have learning disabilities. In the United States, there are bus systems that transport all kids to school. We have buses that specifically transport children with special needs. Therefore, we have to make sure that the drivers don't have a record; that is another database we have. That is a sensitive database and we have a record for our driver, but we also have drivers who don't work for them. We have to make sure that they have been checked as well. Therefore, we maintain a separate database for them. It is a collective database: that information is available to our clients who are responsible to children and that information is available to the human resource section, so those would be the databases in the transport section.

Waste services is a section that looks at all of the management issues concerning spring cleaning, refuse collection, recycling, and civic community side. Thus, we would have a record of where all of our vehicles go. We also have a record of each street and the number of houses on that street. We have a system called Confirm, which should be used across the council; it was originally only used by two sections. That system keeps track of all complaints and service requests.

I'm also the lead officer for this department on the contact centre. You know that, right?

Interviewer: Yes.

Interviewee: As part of that we have been developing A to Z services. We started with the Waste Services first. The purpose is if some one rings in and says, I have a problem with my refuse, the contact centre can say what kind of problem? My refuse wasn't collected. They can check the page and see if blah road has been collected on Monday. If it doesn't, sorry your collection is not on Monday it was on Friday. Sorry it wasn't collected; it is possible that she came out with the trash later on. They would then record a complaint that would go straight to the department. At the other end, the information is checked and action is taken straight away. Then, the Confirm ticket is updated on a shared and separate system.

Apart from that, we have a commercial waste operation so if you're a citizen in the Borough of Merton, your refuse is collected because you pay your Council Tax, but if you own a business; a Business Rate goes to the government. The council only acts as conduit; we collect it and give it to the government. The Business Rate does not allow a shop keeper to get a free refuse collection, so the business has the responsibility to make sure that the refuse is taken away in a safe manner. We also provide that service to the businesses; they don't have to use us but if they need us, we have to have it and they can use it. We charge for it and I would like to see it build up. We have in the last two years and we make 1.7 million pounds from various sources by including this waste management. We have a database on all the shops that we collect from.

There are great opportunities for this database to be refined and shared because we are sending out the rates demands to the business from the Council, so we must know how many people who receive it. There is an opportunity for their database and our commercial database to become one. There is some legislation in the Data Protection Act that says we can or we can't share certain information. That is one area we feel is an opportunity for sharing to occur. Again, we will build a database there and how we sell it to the invoicing process should also be shared in the same database. We do that right now, but the invoicing system is a different counting system and the two systems don't talk to each other so we have to do reconciliation. We should do reconciliation every year; at least, because we may have a customer who has stopped using our service because they were not happy with our service or they moved on and someone gave them a better price, so we know that customer should be taken out of the database. I'm not quite sure that information gets to the Financial Services Department in time so they can send an invoice. They cannot be bothered with it because they have a new contraction and they are just chucking them in. Our Financial Services Department is still expecting them to pay up, so there is an accounts receivable that is being lodged, which is a waste. They would never realise it, so it's not real accounting, and there needs to be a common database or a system that talks to each other.

We also have a database that provides various services, e.g., if you have an old city couch you want to get rid of, or a fridge or a bed, it wouldn't be collected normally, you could book that service. If you ring us up and we would charge for that service, five items for fifteen pounds. They call us and we'll give them a date to when we are coming

to pick it up. We've got a record for picking up a settee and a sofa from Mrs. Gray's house on so and so road, and they'll be in that area on a Monday and if it's not that house, there are more houses that they'll pick up at the same time; that's also a system we have. We have a similar booking system for green waste. For example, if residents have large gardens they want to get rid of and don't want to compost themselves, they ring us up and we come and pick it up. We use Confirm to keep track of that information as well. We are working on the Confirm system to be able to link it in because the Confirm system already has a database for customer service. When the person rings up, you type in what road, house number, and bingo its all there. That's the way it's going to work so it shouldn't be a problem. We also have a clinical waste service. For example, we collect clinical waste from domestic houses and commercial premises. Domestic houses, someone is old and incompetent, waste is collected in clinical bags. For diabetics, we collect their needles, syringes, etc., so that's a clinical waste service, which has its own database. It might not be on Confirm, but I can be wrong. We have a dentist and doctor service, for which there's a small database. We have a small database for the bins we deliver. When we deal with commercial contracts that produce stuff in a large volume, we might give them a large container. We need to keep a record of those assets. Where are they, are they numbered? They're not. Where did you put them? We have recycling bags; there's a database for those. There needs to be a database for recording where those assets are. We have a skip. A skip is a dumpster. Builders have a large container. We provide for them a service. Buy the skips. They are assets. Keep a record of where you last put the skips. Record where the drivers went and where the skips are. Again another connection the Confirm system is able to do. There's another one. We have street furniture. A computer system records the street furniture; it's within the highway section. It is a digital mapping system. You can see the street. We have a street light here, column here, railing, litter bin. My interest is in the litter bins. How many do we have, where did we place them? We need to keep a record of where they are. I guess that is connected to waste operation. The information given to you is a mixture of waste services and waste operation. Waste services is the kind, waste operation is the contractor. We also have a pest control service, when people call and they have rats, or wasps. We should be able to do that using the Confirm system. We remove dangerous dogs, and dogs that have been abused. Connected to the same database, we have a record of dog bins. There's a lot that needs to be looked at like where are these things and they need to be organized. And I feel that we should be pulling that together with the digital mapping system. That information should be there.

Interviewer: There are a couple places where data overlies with another department, mostly in finance. Do you see any opportunities for consolidation?

Interviewee: Yes. The digital mapping street system. Street management, the database would overlap with that. It's possible that the same database could be used for the property section. It's probably the same system. There has been some work on improving our systems.

We need more information on the houses. Databases need to be more versatile to be able to do that. Even if it means for the time being we don't need to see that part of it should be there for the future. I think it should be there for the entire department maybe

Social Services needs that information and maybe we'll need it later. We don't necessarily have to know the social problems with that house but we do need to know how many people are living there and how much waste are they producing.

Interviewer: Clinical waste: is that personal data?

Interviewee: We need to know by law what the clinical waste is. If the waste is contagious it needs to be stored in a clinical manner. Storage arrangements of that sort of waste need to be different. It could be someone who is incompetent they may have a disease that may be transmitted. Yes there is sensitive information there.

Interviewer: Are there any more systems?

Interviewee: No. The main system that were using is the Confirm system. The other one is a database in terms of staff. These are the two biggies in terms of sensitive data and in terms of volume. The others are smaller systems. The transport system is Trace. We are looking to change it anyway. Most of the smaller systems are Excel products. They're not that complicated. There are certain issues on the data protection act. I feel that there is plenty of opportunity for us to get this right and for us to be able to share the information. All it needs is a few screens to prevent sensitive data from people who have no need for it. We do have PaHRis which is a Human Resource system. That holds a lot of information on personnel. We have access to some of that system and again it's been a tortuous process that Human Resource system. They didn't plan it properly. They say its working but I have my doubts.

Interviewer: Do you have any ambitions for improvement in your information system?

Interviewee: I'd like to see a simple, straight-forward system. Which allows us to call up a property on a screen or a street and identify items of street furniture and be able to say how many houses, how many flats, because a lot of houses have been converted to flats…tape dies.

Interview 8

Interviewer: How do you feel about the borough implementing an information strategy?

Interviewee: It'd be excellent. After the BVR there are issues with current systems and issues for improvement. Housing is a little bit different. Most of the council is linked up with one budget, the general fund. The council tax is for residents. The system in housing is different because it's a separate account, the housing revenue account. IS still goes through this so-called single council arrangements in terms of requirements of council. The housing has its own IS. And here's the 3-year plan that gives you the feel of the direction were going and the main resources, budget factors and success measures, that's the best summary of housing.

Interviewer: What systems do you use?

Interviewee: The main system is Academy. It controls the main housing functions. It allows us and the landlords to manage the housing stock, rent, property management, and allocating property. There are modules in Academy that we are looking to take up. Check the packet.

Interviewer: Do you have any subsystems?

Interviewee: For the moment were using decent homes for the government national agenda for landlords to have decent homes. It's a fixed way of looking at decent homes. Some property software we've found is Lifespan. That database tells us about decent and non-decent homes. There's an issue there about whether to keep it stand-alone or integrate it into Academy. Academy has its own way of keeping improvements and that would be rubbing two parallel systems together and there'd be a dilemma with that system and confidence in that information. There may be a number of other smaller databases like Excel but there in smaller formats. They contain information on gas services in databases that each district offers. That information is not held on Academy. It contains all the addresses that we service, the issue is to keep it separate or inside Academy. There are a few issues like that.

Interviewer: Does your department contain personal and property data?

Interviewee: Yes. The council tax database, the housing database and CareFirst might have all the same information on addresses. There's an issue there on the sharing of that information and who should have access to it. That's an issue within the council. The data streams at the moment are individual and don't share or feed into each other. In Social Services, it doesn't update the housing database. If housing affects the household, it doesn't automatically cross into the CareFirst database. Then there are issues on data protection. On the other hand there should be a greater flow of information in the council.

Interviewer: Are there any opportunities for data sharing?

Interviewee: Environmental Confirm is one, it's a complaints based database, abandoned vehicles, etc. It could be that we need access to that. There was an agreement to put Confirm on the computers in housing. We do have limited access to the housing benefit system but that will be integrated with council tax soon. That's a big issue for us because it seems that in council tax and housing benefit we have a real interest in that and an equal interest if they come off housing benefit and they're liable to pay rent. There are arrangements where we need to be able to report abandoned vehicles on properties in Merton.

Interviewer: What are the strengths of Academy and Lifespan?

Interviewee: They are well-established databases, there is a user group, and the modules are sort of comprehensive and provide a housing service. However, housing doesn't use all the modules. The development of that program stopped, we could get more from Academy. We're embarking on using Academy more. For leasehold management we used to have a system called Prelude, stand-alone system. We need to work more with Academy. Academy is the main focal point of housing. Academy is as strong as we make it but I think it's been weak in the past because we haven't used all the functionality. My goal is to have a data integrated system in housing. So if something happens in one division it will be picked up in other division's databases.

Interviewer: Any weaknesses?

Interviewee: I don't think it's very good at reporting data. It's not good at doing special reports. If you want a special report you have to go to an IT person to run it for you. Other systems have a more extensive fleet of reports. I think that's a drawback of the system. It lags behind in policy development. There's an IT lag in affecting changes onto the system so it changes with policy. That's the company responsibility. There's a fast policy change but the company is slow in incorporating those changes.

Interviewer: What would be your requirements in creating a new information strategy?

Interviewee: Increasing our use of Academy. It's the number one strategy in 3-yearplan. There may be other systems that will deliver a better project in 3-4 years. Have a feasibility study on a new product that will move faster than Academy. It costs money for training and there needs to be justification for implementing a new system right now.

Interviewer: Does any data flow out of your department?

Interviewee: I don't think so. I'm sure there's data that other departments would like to access, like Social Service, there's a strong link between council tax and housing benefits and council housing. Some of the homelessness data that we have also.

Interviewer: What are your ambitions for improvement?

Interviewee: Greater degree of confidence in databases. We've got a lot of information out but sometimes it's not aligned with our performance indicator so we have to finesse our information needs with our performance needs. That's hard because the performance needs change all the time. Also I'd like more mobile IT needs. Keeping a modern and progressive match of data to the service. I'll give you this thing but note it's a draft. It is two parts too, maintenance and improvement of the system.

Interview 9

Interviewer: How do you feel about the new information system?

Interviewee: It's good to get new stuff but we need proper training. If it works I'm all for it.

Interviewer: What are the goals of your department?

Interviewee: To setup to two-tier systems in grade school and secondary school. We carry forward the tying up role.

Due to the lack of relevant information that Interview 9 contains the rest of the interview will not be transcribed in the interests of time.

Interview 10

Interviewer: What are your feelings on creating a new information strategy?

Interviewee: I heard that there were 39 different databases then a system that manages the interaction between those with out going into 39 different databases is overdue and welcome.

Interviewer: 5-year plan, should heads of service be involved with creation?

Interviewee: I could see that argument but it's pretty insulting to IT. Yeah it's probably part of the 5-year plan then what have they been doing for the last 5 years?

Interviewer: What are your department's business objectives and current business plan?

Interviewee: We run vestry hall caretaking and management of that and the youth offending service, 26 people are dealing with young offenders.

Interviewer: What are you looking to do as a business what are your objectives?

Interviewee: The difficulty with giving you a few objectives the is that they are so diverse they have there own directives but most fall within neighbourhood renewal, drive the improvement and regeneration of the borough whether that be by sustaining communities by reducing crime and neighbourhood ordinances or CCTV initiatives with police. We fund support or we can improve life because we have partnership with health authorities external funding in neighbourhood renewal. The things that stick out is youth offending service because that is dealing with youth crime because we get young people who are sentenced by the courts to do various programs.

Interviewer: How would you use databases to use those functions?

Interviewee: Hardly at all I'd say, that we use personally. I use the FMIS system which is the financial system, I use Word and Excel, but the Youth Offending Service uses Asset which is rolled out nationally from the national board and its software to log offenders and offences and frequency etc.

Interviewer: Do you use any personal finance databases of your own?

Interviewee: No.

Interviewer: Do you use any personal data property data?

Interviewee: No.

Interviewer: You use FMIS and Asset, any strengths or weaknesses?

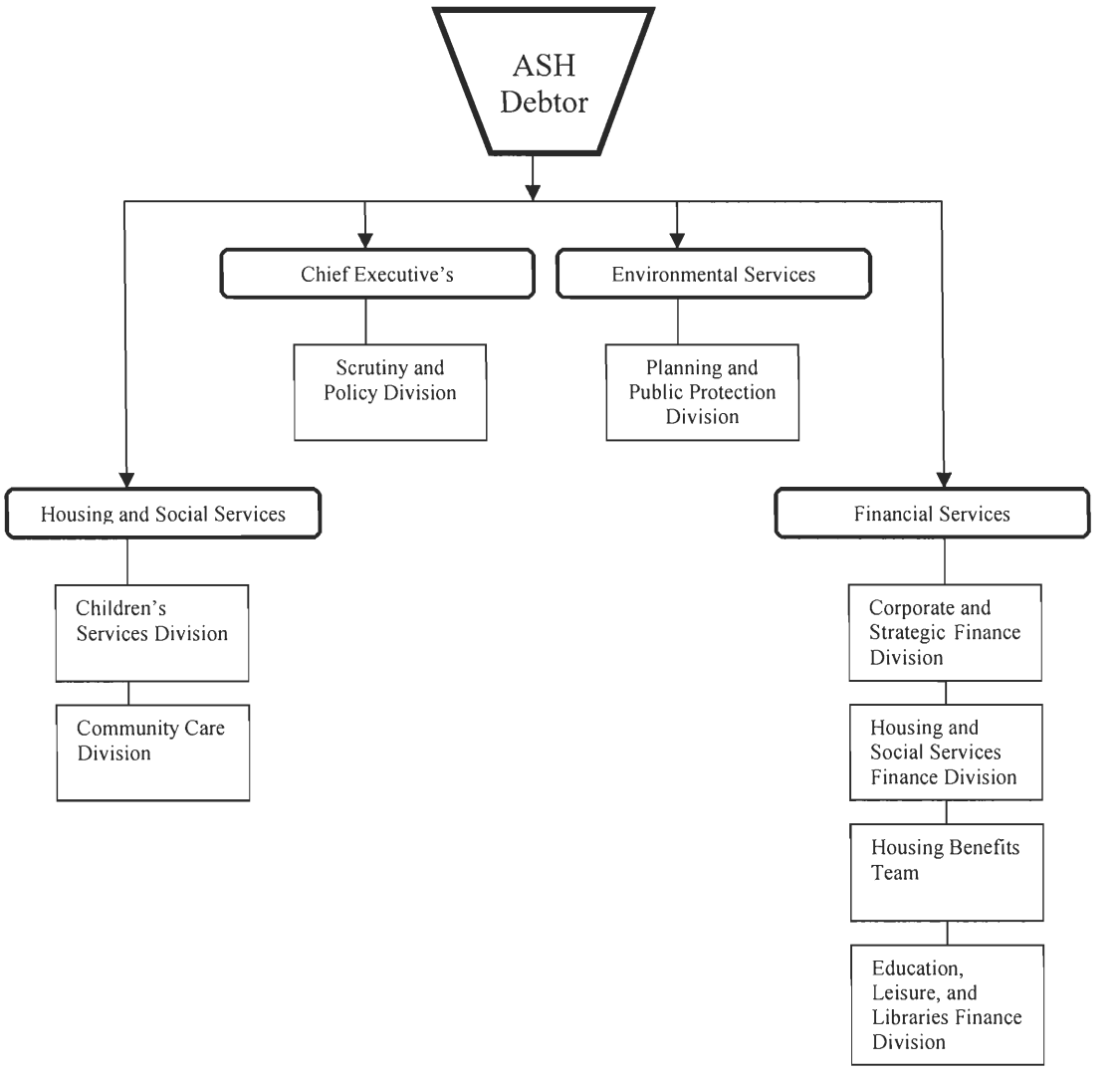
Interviewee: FMIS is a very old system not as user friendly as it might be. There is a lack of training in general but if I wanted to I'd spend more time and learn it.

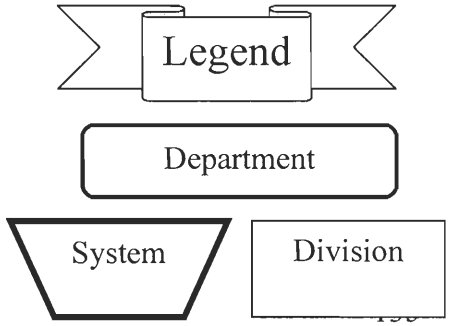
Interviewer: What would you like to see in a new system?

Interviewee: I think the best thing considering that Merton is prescribed area and it has 90000 households it shouldn't be beyond our wit to actually get a database that has 90000 households. There aren't people living in the street they are all in accommodations somewhere.

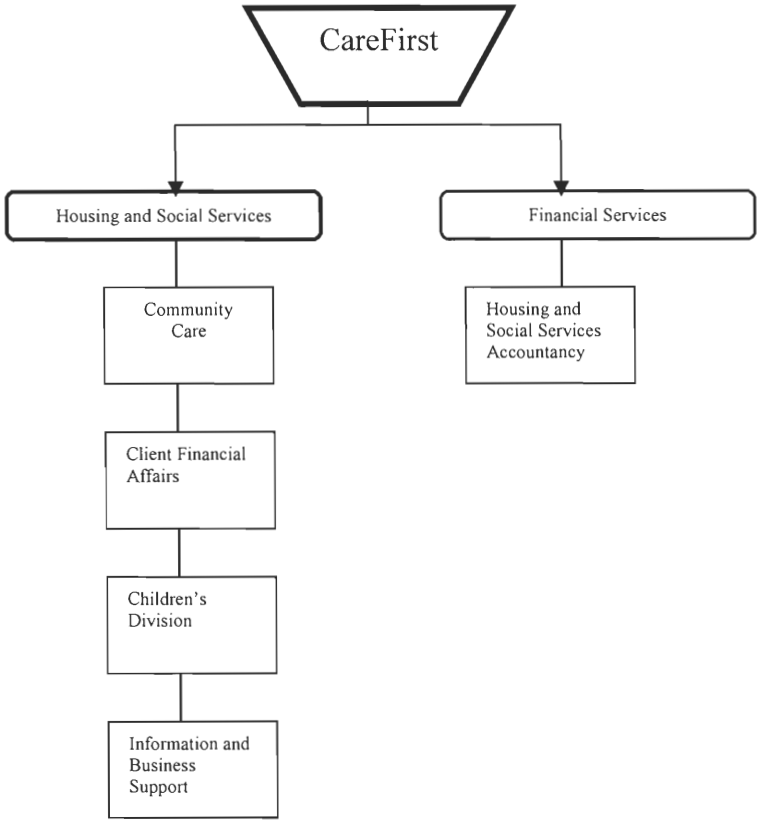
If you can get a database with an address database and a property database then you can attach any personal data that live in those houses and if they move out you delete it or if they move with-in the Borough then you just move it.

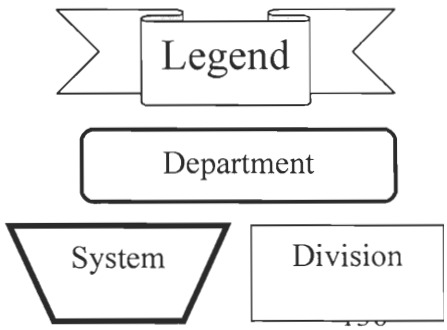
Appendix M: Divisional Usage of the ASH Debtors System



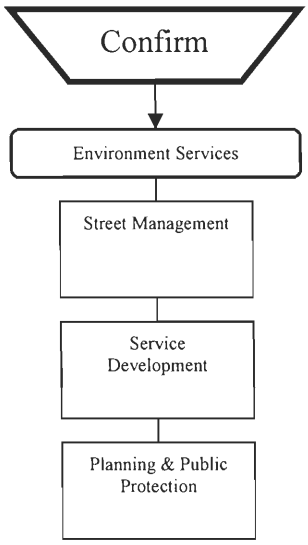


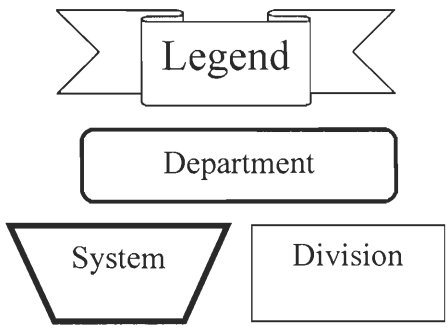
Appendix N: Divisional Usage Chart for CareFirst



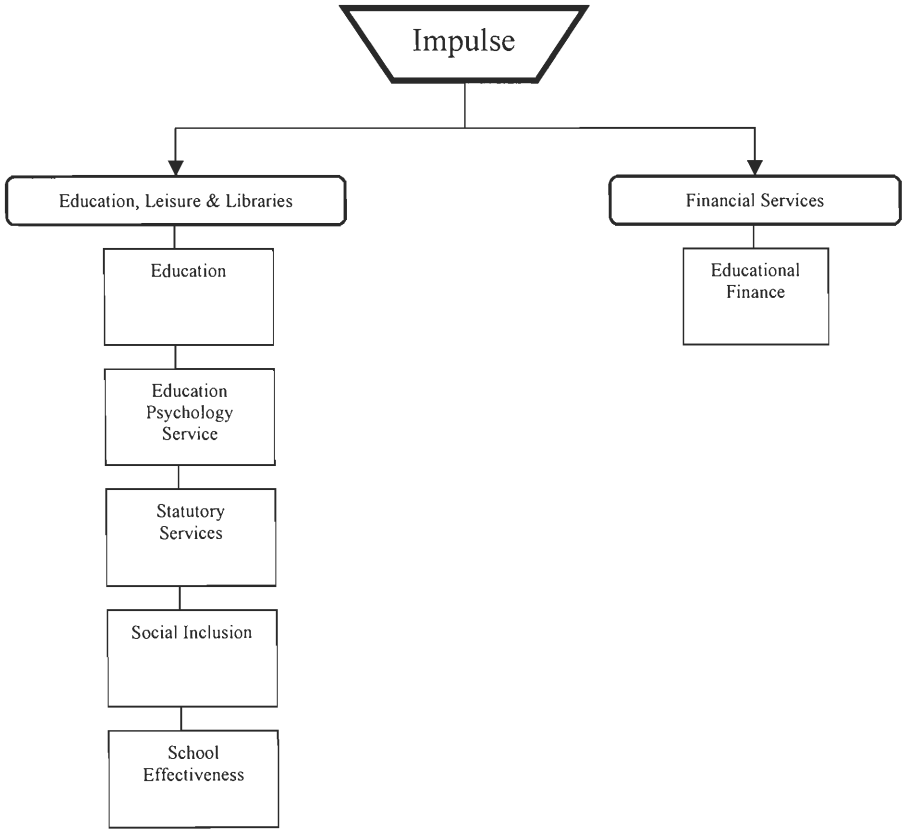


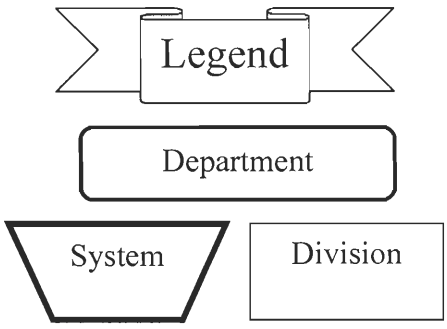
Appendix O: Divisional Usage Chart for Confirm



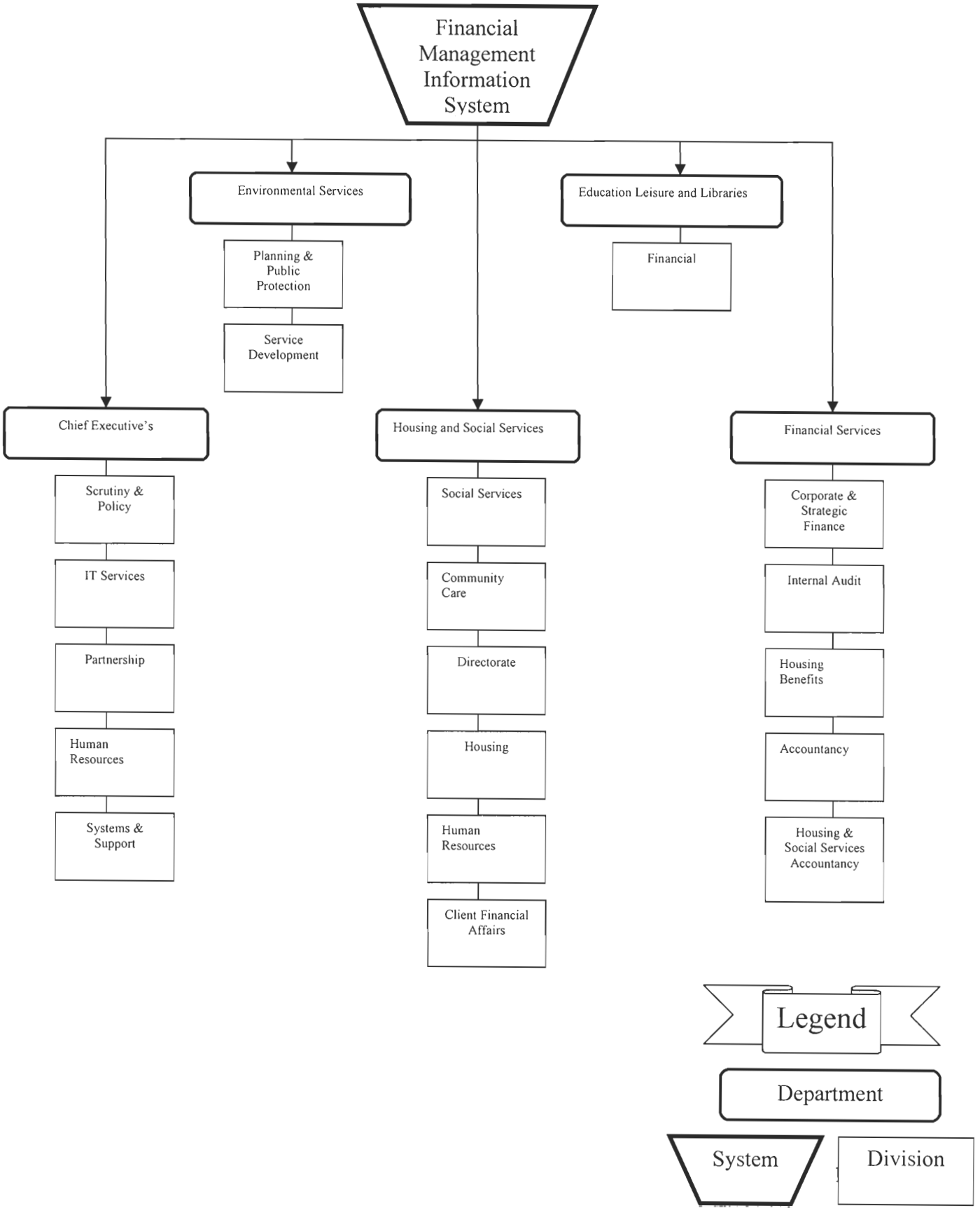


Appendix P: Divisional Usage Chart for Impulse

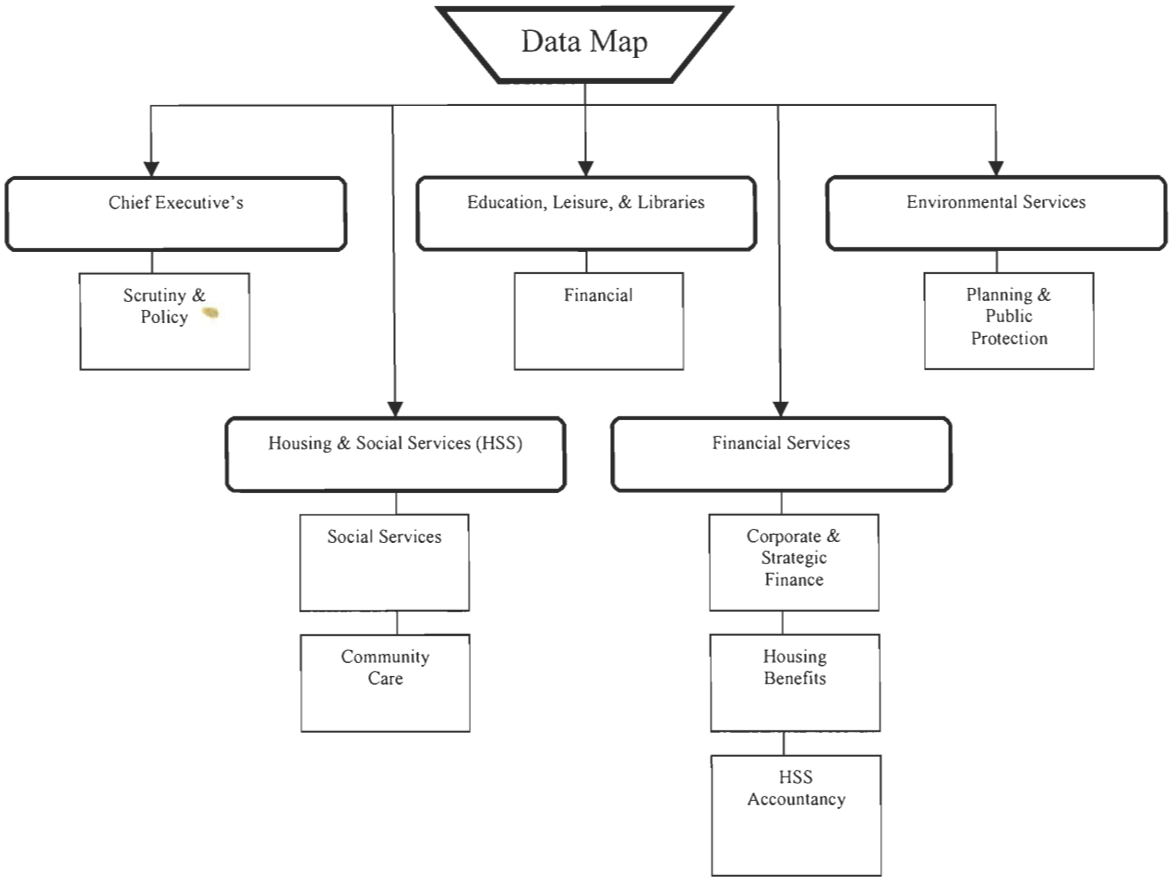


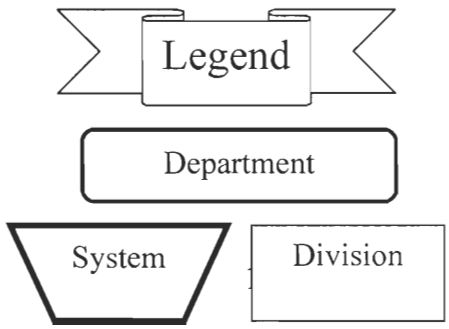


Appendix Q: Divisional Usage Chart for FMIS



Appendix R: Divisional Usage Chart for Data Map





Appendix S: Divisional Usage Chart for PaHRis