IT Strategy 2007 - 2008

Executive Summary and Recommendations

Introduction

The attached document is the IT departments' proposed strategy for 2007 – 2008 and onwards. It details the key objectives, the main areas of work and what we intend to develop within IT over the next few years. Some items stretch beyond the existing workplan.

Decision

The Committee is asked to discuss the proposed workplan and agree it's contents.

Background information

This document is intended to supplement the Council's strategic intent document and sits alongside other departmental level strategy and workplan documents such as Communications, Registrations, Projects, Policy & Standards, Human Resources and Fitness to Practise.

It is a working document and is therefore always under review.

Resource implications

No additional.

Financial implications

See workplan and IT budget.

Appendices

IT Strategy 2007 - 2008

Date of paper

21 March 2007

HPC's IT Strategy

Finance and Resources Committee

Park House, 184 Kennington Park Road, London

21st March 2007

Roy Dunn, Director of Information Technology

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Development projects vs. Support – the key balancing act

- **IT Department activity includes**
  - IT Helpdesk, supporting existing systems and their use within HPC and the users of the HPC register
  - IT Project development, creating new or improved systems to allow better use of resources or carry out new functions
  - Information Services, collating information for internal reporting, responding to information requests, directing the storage and use of archived or new information

- **Projects vs. Support**
  - With limited resources, a finite number of projects can be undertaken, whilst offering support within our published internal service standards; more rapid support response requires fewer projects to be undertaken.
  - Constantly need to refocus resources for most appropriate use

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HPC IT Strategy

- **Scalability of systems**
  - Ensure LISA registration system can accommodate numbers of predicted registrants and professions without major development
  - Annual upgrade of software running LISA to maintain good functionality
  - Move to online and SMS text messaging services for applicants and registrants wherever possible
  - Outsource where not cost effective to maintain skills in small IT department

- **Security of Systems**
  - Use of internal and external security appliances, practices and procedures to protect data
  - Periodic penetration testing to search for potential vulnerabilities
  - Encryption of laptops and PC's used externally to prevent data access if machines lost or stolen
  - Desktop and server based anti-virus, anti-spam, web filtering

- **Maintain or improve response to Helpdesk requests as resources allow, using best practice**
  - Priority based on business impact
  - Predictable decision making on tickets
  - Independent of employee status
  - Published multi level SLA to the business; Critical, High, Medium, Low, Procurement,
  - Train IT employees in ITIL Service Management best practice
  - Helpdesk "Customer Service" surveys to monitor appropriateness of services offered

- **Customer Service Focus**
  - Maintain our reputation for good customer service internally and externally

- **Operating Systems and Office Applications**
  - Use penultimate versions of software to protect against issues associated with newly released applications – too many potential bugs
  - Best of breed where possible, not just Microsoft or IBM / Lotus Notes

- **Innovation and Creativity**
  - Open-minded policy by IT management leading to opportunities to improve our capability
  - Maintain ability to develop systems in house and externally
  - Share data and information between systems where possible, track all contacts with stakeholders
  - Interact with all levels of the organisation to determine opinions / opportunities for improvement on processes

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Projects supporting the Registration function

- Registration fee change. Realignment of registration fee charges. (LISA project – testing and rollout)
- Relocate merged departments to Stannary Street – networking, and hardware move October 07 (£25,000)
- Equality and diversity - Revision of equality and diversity policies to ensure the HPC is positively promoting an equal and diverse society. (LISA project). Requirement of Trust, Assurance and Safety white paper = demographic capture not yet budgeted but in white paper
- Professional qualifications directive - Project to implement European directive 2005/35/EC. Oct 07 (LISA project) (£40,000)
- CPD - Implementation of processes to audit and track registrants' evidence of CPD. (LISA project) 07-08 financial year (£80,000)
- On-line LISA authentication - LISA development to allow registrants to update personal details online. (LISA project – roll out)
- Enabling more cost effective New Profession Acquisition through LISA developments late 07-8
- Automated Call recording and Call routing; Screen popping based on incoming call number of applicants and registrants (£20,000 recording)
- Automatically link documents to registration and application records (LISA project - roll out)
- Monitoring capability of Voice automation technologies for future scalability

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Non Registrations Projects

- Application Server Upgrade Summer 07 (nominally £30,000 within the LISA Support Fee); ongoing upgrades each year
- LISA access rights – restricting some "Finance" type functions to Finance dept Jul 07 – Jan 08 (£35,000) Internal Audit requirement
- Finance System upgrade – specification to be determined; Sage version upgrade possible Apr 07 – Nov 07 (£19,000)
- Google appliance to enable better searching of directory structure for particular documents Nov 07 (£2,000)
- Upgrade Back up tape unit for LISA and other servers – storage capacity issues to be resolved May 07 (£11,000)
- Maintain and develop HPC's Disaster Recovery capability - ongoing
- Modify the HPC IT Helpdesk to a ITIL based Service desk – ongoing as time with other projects allows
- Maintain and develop Fitness to Practise systems
- Maintain and develop Education Approvals and Annual monitoring system
- Maintain and develop Human Resources systems including online services for employees
- Investigate a comprehensive Document Management solution for HPC within the next 2 years
- Upgrade and extend the telephone systems to allow automation where ever possible
- Work with the Communications and Registrations functions to enhance the HPC websites offering additional information and services

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Legislation impacting the IT strategy

- **Current**

    All legislation to be complied with, however, most significant to the IT Department are;
    — Data Protection Act 1998 – protecting personal information
    — Freedom of Information Act 2000 – enabling access to information
    — Regulation of Investigatory Powers Act 2000 – potential access to personal information by company or other authorities
    — Waste Electrical and Electronic Equipment Act 2006 derived from EU Directive on Waste Electrical and Electronic Equipment 2002
    — Gowers Review of Copyright laws 2007 -IT software licensing
    — Trust, Assurance and Safety – The Regulation of Health Professionals in the 21st Century 2007 White paper

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IT Department

- **Current staffing levels**
    - IT Director > *IT Strategy, projects, contract management, IT governance, DR plan*
    - Back Office Systems Administrator > *Lotus Notes support and development + IT projects*
    - Network & Desktop Security > *LISA projects, network support*
    - Systems Support Analyst > *Helpdesk tickets and smaller projects*
    - Information Services Manager > *Information Archive auditing, destruction/disposal, Freedom of Information requests*

    Planning to train all IT employees on ITIL processes and then roll out to ensure best practice within the IT department

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IT Workplan 2007 - 2008

Executive Summary and Recommendations

Introduction

The attached document is the IT departments' proposed workplan for 2007 – 2008. It details the key objectives, the main areas of work and what we intend to develop within the IT over the next financial year.

Decision

The Committee is asked to discuss the proposed workplan and agree it's contents.

Background information

This document is intended to supplement the Council's strategic intent document and sits alongside other departmental level strategy and workplan documents such as Communications, Registrations, Education, Projects, Policy & Standards, Human Resources and Fitness to Practise.

It is a working document and is therefore always under review.

Resource implications

See attached workplan.

Financial implications

See attached workplan.

Appendices

IT Workplan 2007 - 2008

Date of paper

21 March 2007

HPC Information Technology Work plan 2007-8

Contents

Introduction

The IT department maintains and develops the technology and information used by HPC and its stakeholders to assist HPC departments to carry out their functions.

This document

This document has been drafted to set out work priorities for the financial year April 2007 – March 2008, and to provide a basis against which the work of the Information Technology department can be planned and measured. This document is underpinned by the Council's strategic intent, and details how the IT department will continue to develop, to build the Council's ability to cope with scalability and in the wider arena, business resilience in preparing for the changes ahead in the regulation of healthcare professionals.

The nature of the work that Information Technology deal with are such that it will comprise both planned projects, and also work which arises as a result of changes to the external environment, such as changes in legislation, changes to the professions, and other developments that are often unpredictable. Further, there is an element of effort involved in "keeping the lights on". Hence, in allocating resources, maintaining the ability to respond to changes in the internal and external environment are important factors.

The White Paper published in February 2007, "Trust, Assurance and Safety-The Regulation of Health Professionals in the 21st century" places additional requirements on HPC's systems to regulate more professions, more registrants, and gather additional information on those persons. This is mainly addressed as "scalability" within this document.

Resources

The IT department currently consists of 5 employees;

Roy Dunn	Director of Information Technology,
Rick Welsby	Back Office Systems Administrator,
Tyrone Goulbourne	Network and Desktop Support,
Craig Kjelvei	Systems Support Analyst,
Tom Berrie	Information Services Manager,

The Director of Information Technology is responsible for the overall management of the IT team and the hardware, software and data resources used by HPC in its day to day operation. IT strategy is documented, and developed with departmental colleagues in response to known and predicted business needs, legislation and IT governance requirements. A significant amount of project related work is carried out over the year. Some helpdesk and reporting requirements are satisfied as time allows.

The Back Office Systems Administrator is responsible for maintaining and developing the Lotus Notes environment, covering e-mail, Fitness to Practise systems, Freedom of Information and other HPC wide databases. A significant amount of project work will be undertaken as HPC requirements are finalised. This will include some LISA registrations related work such as CPD.

The Network and Desktop Support is responsible for maintaining the desktop base that each user requires for their day to day work, the servers and backups configuration, and the day to day LISA support tickets. Some bespoke reports are created on demand. LISA related project work is undertaken as required. Some bespoke database work is undertaken on demand.

The Systems Support Analyst is responsible for servicing many of the Helpdesk tickets, building new machines and installing software. Some smaller IT project work will be scheduled. Helpdesk workload in IT is influenced by HPC wide IT skills.

The Information Services Manager is responsible for the collation of monthly management reports, maintaining, documenting and developing the hardcopy archive; assisting in the creation of a document, records and content management strategy. Freedom of Information and Subject Access requests are also serviced when allocated via the appropriate tracking databases.

The percentage of time allocated to each of the key functions of the IT department and allocated to employees are as follows;

		Roy	Tyrone	Rick	Craig
QTR1	Support	10%	20%	20%	70%
Apr-Jun	IT Projects	50%	30%	30%	20%
	HPC Projects	40%	50%	50%	10%
QTR2	Support	10%	20%	20%	70%
Jul-Sep	IT Projects	40%	30%	30%	20%
	HPC Projects	50%	50%	50%	10%
QTR3	Support	10%	50%	50%	60%
Oct-Dec	IT Projects	30%	40%	40%	30%
	HPC Projects	60%	10%	10%	20%
QTR4	Support	10%	50%	50%	60%
Jan-Mar	IT Projects	30%	40%	40%	30%
	HPC Projects	60%	10%	10%	20%

Tom Berrie's tasks are not broken down in the same way as this does not accurately describe the nature of his work.

Business Aims of the IT function – what we do

- support HPC's business processes including the 4 core regulator functions of maintain and publish a register, approve and monitor education provision, provide a Fitness to Practise process, and communicate with stakeholders;

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- share common information throughout the organisation where ever possible , recording all contacts to the person or organisations database
- base its activities around the "Center for Information Systems Research" IT management model as promoted by the Massachusetts Institute of Technology (MIT) in the US and IT Service Management Forums / Information Technology Infrastructure Library (ITIL);
- maintain scalability in internal and external provision of services;
- provide value for money;
- allow HPC to be as open and transparent as possible; and
- maintain appropriate security measures and IT governance throughout the organisation.

If Council amends the Strategic Intent there may be changes to the IT Strategy in the short, medium or long term, plus changes to underlying architecture, and infrastructure to support these aims.

Scalability of HPC functions – key strategic imperative for IT

As a modern regulator and a modern business HPC uses technology to provide control of workflow, resilience, and increasingly scalability.

To help the long term development of the business functions of HPC we must increasingly use on-line internet based, or possible mobile telephony based systems to allow direct input of applicant and registrant data into the core back end systems, with appropriate validation in place.

Technology solutions are more cost effective and scaleable within HPC's financial resources.

Wherever paper forms are currently used, or would be used in future, an on-line version should be provided also, allowing the "customers" direct input to be captured to the production or intermediate systems. This will save data input resource within HPC, and allow faster turn around times at times of heavy workload.

Thus HPC will encourage the take up of on-line applications, on-line renewals and the use of the HPC Authentication model as these systems are developed and rolled out. This will impact registrations and communications functions.

Where HPC uses xml to populate systems, and where suppliers or stakeholders find it difficult to supply data in the required format, the IT department will determine if it is cost effective to offer a data translation service from MS Excel spreadsheets or other easy to use data sources.

Achieving the Information Technology Objectives in 2007-2008

Information Technology Objective 1:
Business as usual objectives include:
- operate within the IT budget
- develop a workplan (this document) outlining key activities within the year
- update the Disaster Recovery plan format (August 2007)

Information Technology Objective 2:
New Professions acquisition;
- develop the requirements and technology to allow HPC's IT department to import new profession contact details to the LISA registrations system without incurring additional costs from Digital Steps, unless the new profession has additional characteristics not currently used. This should be developed in time for any new professions resulting from the White Paper published in February 2007, "Trust, Assurance and Safety-The Regulation of Health Professionals in the 21st century"

Information Technology Objective 3:
Continuing Professional Development technology built within allocated budget (£80,000).
- deliver a collection of systems or functionalities to allow registration departments to track registrants through the CPD process. Delivery of basic systems is by 31st March 2008, although additional automation may be required in the following year.

Information Technology Objective 4:
Professional Qualifications Directive 2005/36
- deliver the appropriate technology solution based on recently published guidelines by October 2007, at a cost of up to £40,000

HPC Key Projects

HPC IT are providing two types of business application, those where the process is closely defined by legislation (Health Professions Order 2001); and those where the outcomes are predictable, but the day to day operation are less well defined.

Where the exact business requirements are less well defined, HPC will develop in house process specific applications on a robust platform such as Lotus Notes / Domino, where requirements can be refined over time, and modifications made relatively cheaply. An internal Notes resource will be required in house to maintain and develop these systems. Some specific Notes applications may be required to be built by contractors to our specification where time pressure does not allow them to be built in house. External support for Notes developments will be arranged.

Major developments will be carried out by external contracting organisations, under the close guidance of the user departments and the IT function.

Major projects 2006-7-8

2006-7 projects ending
- LISA Fee Rise project implemented and testing
- LISA Authentication & Online contact management testing
- LISA Renewals refresh collecting additional information testing
- LISA Intermediate lapsing testing
- LISA (Trust) Bulk register look up testing

2007-8 project continuing or commencing
- CPD under development when specified (whole of 2007-8) (Major Projects) (£80,000)
- application Server upgrade (summer 2007) (Solaris Stream) (nominally £30,000)
- professional Qualifications Directive (live Oct 07) (Major Projects) (£40,000)
- acquisition of new professions generic systems (Major Projects)
- LISA Access rights for financial functions (Jul 07 – Jan 08) (Major Projects) (£35,000)
- finance System upgrade (Apr 07 – Nov 07) (Major Projects) (£19,000)
- Equality and Diversity – some work may be undertaken to allow capture of additional demographic detail for registrants and applicants as required in the White Paper

"Major Project" requirements analysis will be initiated by the Project Management function at HPC.

All functionality that can be provided to registrants, applicants, education providers and employers online will be developed over the medium to long term to ensure data input at HPC is kept to a minimum. This will usually be via the provision of on-line services. Address change, registration renewal, modification or up date of payment details, application data entry and submission of graduate pass-lists from HPC approved courses will be supported with appropriate levels of authentication and validation.

Registrations and Applications

The existing LISA registrations system has been in place since July 2003, and provides the workflow and publication of data pertaining to the register of those HPC professions able to work in the UK. Additional functionality has been added on an almost continuous basis as processes have been rolled out.

The LISA registrations system will maintained with appropriate upgrades of hardware, or software to maintain suitably rapid functionality. This will be monitored on an ongoing basis. The upgrade of the application server is part of this improvement process.

In late summer 2007 the LISA application environment will be migrated to a new application server and operating system version by Digital Steps. This will be carried out within the new LISA Support agreement. Extensive testing will be required by the IT and user departments.

This will become an annual upgrade offering some additional functionality, over and above the HPC defined new functionality.

Although the existing LISA system file server (Krusty) is currently operating efficiently and shows now signs of failure, it is now 4 years old. It would be prudent to plan to replace the hardware within a maximum of 2 years, and ideally early in the 2008-9 budget year. Costs for hardware are generally falling but £30,000 capex should be planned for.

LISA training, testing and Lotus Notes migration (Solaris Work Stream)

A Sun Solaris low range server will be purchased early in the financial year to assist in three projects, and ultimately be retained in the final role.

Over the period April 2007 to June 2007 the server will host a version of the latest production LISA Application. This will facilitate the testing of upgraded ICR renewals process software, and enable registrations officer training with the latest complete version of LISA.

The migration of LISA from using Borland Application Server to the equivalent Sun Application Server will take place over the summer with a requirement for rigorous testing. This task will ultimately enable the upgrade of the base software of LISA. This will be the first major operating system level upgrade since LISA was built in 2003. The end point for the Application Server migration must be timed to fit in with a small quiet period in late summer early autumn prior to the Occupational Therapist renewal window.

Following roll out of the Application server to the live environment, a Lotus Notes test environment will be built for a migration from version 6.5.4 to version 7.0.1 or later. In future Lotus Notes will be permanently hosted on this new server speeding up LISA and Lotus Notes in the process.

Services Provided to HPC by Information Technology

IT Infrastructure

IT Infrastructure covers the range of software, PC and Servers; network cabling and wireless based systems and telephones including Automated Call Distributor (ACD). HPC does not align itself with a particular brand or provider for services or hardware / software, but follows a best of breed approach. We use that which is most appropriate to our requirements.

Where software versions migrate beyond the currently used version at HPC, we will evaluate the risks of not migrating to the latest version, or migrating to the current

penultimate version. If sufficient benefit is gained by migration we will upgrade to the latest version after an appropriate period of usage in industry. Where vendor support for a product is not guaranteed, we will evaluate in light of current stability vs. risks of new versions and any intrinsic issues we may face with that new version.

The latest offerings from Microsoft, namely Vista operating system and Office 2007 will be evaluated within IT prior to rollout to users.

Software audit will be carried out periodically by an external contractor to ensure HPC maintains an adequate number of software licences, thus fulfilling our legal obligations for software licensing. This will take place on a quarterly basis, in January, April, July and October.

A Configuration Management Database, a collection of all, hardware, software, IT skills and services will be developed gradually as time allows. This is one of the first stages to implementing IT Service Management, (ITIL), an internationally recognised IT management standard.

Web and internet security - outsourced

A managed service provides the greatest security for small to medium sized organisations unable to finance highly trained IT security specialists.

This provides a managed firewall, a web content filtering service, an anti-virus service for inbound and outbound e-mail, and integrated VPN security for those employees working offsite. Star Internet and Message Labs provide this service.

This will continue to be the preferred solution for HPC.

Penetration testing and PCI testing - outsourced

The HPC network is indirectly linked to the internet, behind a series of robust security appliances and policies. As our internet site provides the only route to examine the HPC register, it must be intrinsically secure at all times.

To prove that the on-line register does not form a route to misappropriate information an annual penetration test will be carried out by an external contractor, of known ability and trustworthiness. National Computer Centre (NCC) provides this service.

This will be supplemented by further quarterly specific tests to prove that Payment Card Industry (PCI) credit card standards are adhered to even if our organisation is currently just below the threshold where these tests become mandatory. Cost with the penetration testing is in the order of £20,000 per year.

Provision of e-mail services, web chat technologies

E-mail traffic is routed via our Internet Service Provider Star Internet. E-mail provision is via Lotus Notes v 6.5.4. A migration to v7.1 is planned with the "Application Server" testing server providing the new location for this software, once the testing and

training is complete. Application Server migration is projected for completion in late Summer 2007. Therefore migration occurs after this point.

All web chat sessions are recorded to back up and this service is currently only provided to those departments where managers have opted in to usage.

At some time in the future we will evaluate the benefit of securely archiving all e-mail and messaging traffic to a *"write once, read many* "storage device. There is currently no legislative requirement to do this, but it is becoming accepted practice in commercial organisations.

Disaster Recovery and Data Back up

Data from the LISA registrations system is specifically replicated overnight to servers off site in a secured server farm maintained by our ISP, Star Internet. The timing of the LISA backup must be managed to allow backup to be completed before any batch processes are run, creating an easier fall back position, than if the processes were either part complete or fully complete.

Lotus Notes data, and therefore the systems therein are replicated every 15 minutes to the same server farm throughout the day and night.

HPC internally backup all data overnight to server directories that are then backed up to corporate scale tape solutions. The current tape system is reaching the end of its life, and the data volume requires three tapes per back up session. Upgrade to the latest tape technology will allow these data to be backed up to just a single tape. It is envisaged that this upgrade will take place early in the new financial year.

Month end tapes will continue to be stored off site by Recall in an underground bunker. Daily tapes sets are taken off site by IT staff. However, it should be noted that in the past secure backup repositories have themselves been destroyed by fire.

These two data solutions provide two different functions.
Tape Back up provides a medium to long term copy of HPC data at a specific point in time. Restoration of data is possible from either the months daily tapes or the month end back up sets. The daily tapes are overwritten on an ongoing basis the following month. Only the Month End tapes are retained as a permanent record.

The data replicated to our ISP is designed to be rapidly accessible should we invoke our Disaster Recovery / Business Continuity plans. This should negate the requirement for reference to back up tapes.

All of these data can be accessed by VPN solutions from either HPC laptops with 3G cards, or more usually a PC environment set up in our back up office location at the supplier NDR's site in Uxbridge.

Annual tests of the DR/BC solution will take place.

This will include loading of the latest information from the LISA production application and registration system

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If part or all of the Disaster Recovery plan is invoked for any reason throughout the financial year, this will be included as part of the annual testing of the plan.

Assisting the management of electronically archived files

A Google search appliance will be purchased and installed to the HPC network environment to aid user searching across the network. This will enhance the use of existing or old electronic documents and files, where the creators of the content have left the organisation. The appliance costs approximately £2000. Purchase will be delayed slightly to ensure we obtain the maximum specification for the money.

A Sharepoint application test will be carried out to determine if a non Lotus Notes solution is capable of fulfilling some of HPC's document management issues.

Software testing for future systems

HPC currently uses a combination of Microsoft Office 2003 or 2000; Microsoft XP or 2000 desktop operating system. However these technologies are being replaced by Microsoft over 2007, and some may reach end of life within a few years. HPC IT must therefore investigate how these new technologies will behave with HPC's particular applications such as the FTP system (APU), Education Approvals & Annual monitoring systems (SELMA), plus Digital Steps LISA registration system.

To this end the IT department will provision a test environment separate from the main HPC network, using any spare PC's and a file server.

Information Services

Freedom of Information & Data Protection Act Subject access Requests

A bespoke development in Lotus Notes already provides the workflow and calendaring for Freedom of Information requests. This system will be duplicated and modified to manage Subject Access Requests under the Data Protection Act 1998.

The HPC and CPSM paper archive held offsite will continue to be evaluated and scanned to disk if of significance, or destroyed if out of retention.

Bespoke reports will be created as required, and a programme of demographic information developed over the coming year in conjunction with a LISA development to capture such data.

IT Training across HPC

The IT customer service survey will be used to evaluate the required training outside the Performance Review System over February March. This will result in a set of courses required to assist HPC's IT users carryout their tasks most efficiently with the resources provided.

IT will source bulk training contracts as in 2006-7 via the supplier QA-IQ

Summary of IT strategy

IT Direction
- Increasingly online with authentication
- Decreasing hardcopy
- IT Process flows mapped to ISO9001:2000 standard published on HPC intranet
- Evaluate implementation options for ITIL standard service support.
- Security aiming for ISO27001; annual penetration testing and remedial work.
- Avoid blind technology alleys

Innovation
- Working remotely via VPN from encrypted laptops or desktop machines.
- Dual channel secure document delivery system – [opportunistic development]
- Increase on-line usage for HPC processes and communication.
- Build test environment for Windows VISTA O/S and Office 2007 for evaluation

Company
- 120 users, with full Microsoft Office, and Power users up to 20% of total.
- PC estate approximately half of workforce; laptops for management team and mobile or remote workers.
- Long term home workers to be provided with PC's that are encrypted.

Software
- MS Office 2003
- MS XP O/S where possible
- Crystal Reports 10
- MS Project
- Lotus Notes 6.5.4 > 7.1 migration

LISA live (Production) system
- Solaris v8.5 >10
- Apache v1.1.37
- 10Mb & 2Mb assured separation leased line connection
- Java v1.3.1_04
- Java Webstart v1.0.1_02
- Oracle 9i
- BES v5.2 > Sun Application server v (latest stable version)

Hardware
- Sun V880 Server with twin Ultrasparc III processors 2Gb RAM, multi Tb storage
- Wintel Pentium desktop computers
- Toshiba laptops
- Mitel IP telephony in house (Voice over IP)
  Archive voice if business requires

Information

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- Publish to the web unless confidential
- Document control enhanced
- Controlled directory structures for doc mgmt in short term
- Invest in Google appliance for HPC wide searching of repository

Data
- Replicated off site to DR server farm, nightly with function specific servers for remote operation
- Tape back ups nightly, monthly stored off site with vendor. Improved tape capacity to be rolled out.

IT governance
- MIT / CISR IT Governance model
- Programme Management
- Prioritisation of Helpdesk tickets by business priority
- ITIL Service Management – Foundation level qualified minimum
- IT Software asset management via external contractors
- Penetration testing via external contractors

Risk management

The IT department manage risks within the IT department, and throughout the company.

Key areas are IT security, covering access to HPC data, on mobile workers laptop computers, appropriate ring fencing of IT systems so that only the required employees / contractors have access to data, using best of breed technologies to monitor and constrain the types of data query allowed against the HPC online register.

HPC's disaster recovery plan covers a range of scenarios. However, advice from experienced experts in the field including Chief Fire Officers, Chief Police Officers and military specialists indicate in reality the plan is often used piecemeal during a real crisis. Not every scenario can be planned for, nor should be planned for.

See the appendix below for details.

Appendix: risks managed by the Information Technology department

Risk		Risk Owner	Significance Feb 2007	Probability Feb 2007
2.1	Inability to occupy premises or use interior equipment	Facilities Mgr & Director of IT	Low	Low
Mitigations Invoke DR Plan				
2.2	Rapid increase in registrant numbers	Chief Exec, Director of Operations, Director of IT	Low	Low
Mitigations Scaleable IT systems/registration				
2.5	Public Transport disruption	Facilities Mgr & Director of IT	Low	Low
Mitigations Invoke DR Plan				
5.1	Software Virus damage	Director of IT	Low	Low
Mitigations Firewalls and anti-virus SW checks, appropriate policies and procedures, penetration testing				
5.1	Software Virus damage	Director of IT	Low	Low
Mitigations Firewalls and anti-virus SW checks, appropriate policies and procedures, penetration testing				
5.2	Technology obsolescence (HW or SW)	Director of IT	Medium	Low
Mitigations Open system IT strategy, future proofing and LISA upgrade / development plan				

5.3	IT Fraud or error	Director of IT	Medium	Low

Mitigations
Adequate access control procedures maintained. System audit trails; automated password enforcement, penetration testing and backs on and off site

10.2	LISA Registration system failure	Director of Operations / Director of IT	Low	Low

Mitigations
IT Strategy, support and development / refresh programme

15.12	Unauthorized removal of assets (custody issue). Unauthorised access to HPC data via stolen hardware.	Director of IT / Facilities Mgr	Low	Low

Mitigations
IT asset labelling and logging, issuance to employees. Encryption of all HPC IT assets with personal data stored (laptops/PC's)