

Finance and Resources Committee Meeting 30 July 2009

Information Technology Strategy 2009/2010

Executive summary and recommendations

Introduction

This paper sets out the Information Technology Department's Strategy for the financial year 2009/2010.

Decision

The Committee is asked to note the document. No decision is required.

Background information

This document is intended to support the HPC strategy and sits alongside other departmental strategy documents and work plans.

This document has been approved by the Finance and Resources Committee in March 2009. It is provided for note for the benefit of the new Committee to gain a better understanding of the IT function within HPC.

Resource implications

The resource implications of the attached document are assumptions which are already part of the HPC budget for 2009/2010

Financial implications

The attached paper's assumptions are all accounted for in the current version of the HPC budget for 2009/2010

Appendices

None

Date of paper

4th March 2009

**HPC Information Technology
Strategy 2009/10**

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March 2009

Contents

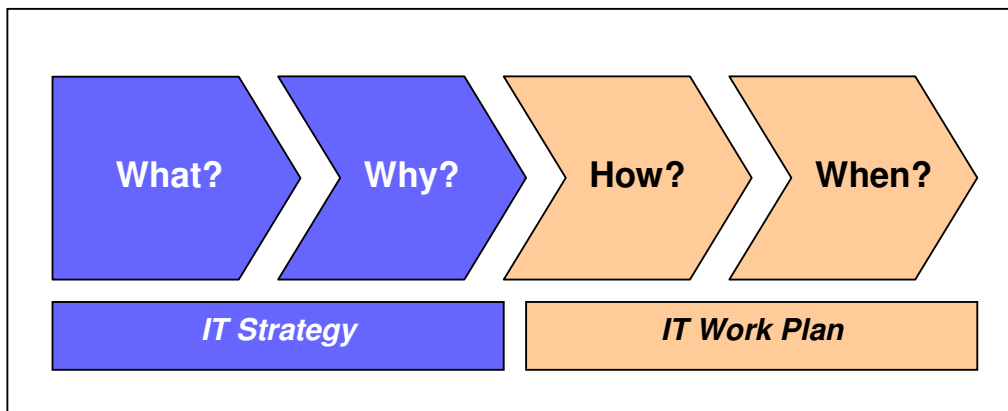
- Introduction3
- Glossary4
- Health Professions Council Strategy4
- IT Strategic Vision.....6
- IT Strategic Objectives7
 - Information Technology Objective 1:7
 - Information Technology Objective 2:8
 - Information Technology Objective 3:9
 - Information Technology Objective 4: 10
- IT Key Services and Principles..... 11
 - Resource 11
 - Business Services 13
 - Technical Services 15
 - Service Management..... 16
 - Application Development..... 16
- IT Action Plan 18

Introduction

The provision of Information Technology (IT) and Information Systems (IS) are central to the success of a modern organisation. Investment in IT should drive the efficiency of the organisation and enable it to become more effective in achieving the corporate objectives.

The Health Profession Council (HPC) IT strategy supports the organisation strategy as detailed in the Strategic Intent document. The IT strategy identifies the overall vision for the medium term and a number of strategic objectives or themes. The objectives seek to group common challenges together which are addressed in the context of each of the areas of the organisation.

The IT strategy identifies the 'what' and the 'why' for the technology direction of HPC; the 'how' and the 'when' are addressed in the annual Work Plan which is attached in the appendix of this document.



The IT function supports a growing organisation with employee numbers continuing to rise. The majority of employees are located at the HPC office which consists of several co-joined buildings on Kennington Park road. There are a small number of permanent employees working remotely as home workers and a larger population of occasional roaming users notably within the Approvals and Monitoring, and Fitness to Practice teams.

The core organisation processes operated by HPC and supported by the IT function are:

1. Standards of Education Training driving the Approvals process;
2. Standards of Proficiency driving the Registrations process;
3. Conduct, Performance and Ethics driving the Fitness to Practice process; and
4. Standards of Continuing Professional Development (CPD) driving the CPD assessment process.

HPC has an income predominantly driven by Registrant numbers and their associated fees.

It is notable that there are circa six additional aspirant groups awaiting regulation and HPC is also seeing growing telephone enquiry call volumes and Fitness to Practice investigations.

Glossary

COTS.....	Commercial Of The Shelf package
CPD.....	Continuing Professional Development
Customer.....	The person who purchases an IT service
FTE.....	Full Time Equivalent
.	
FTP.....	Fitness to Practice
HPC.....	Health Professions Council
ISA.....	Independent Safeguarding Authority
IT.....	Information Technology. The underlying hardware, software and communication infrastructure which is used to create information services.
ITIL.....	Information Technology Infrastructure Library
IS.....	Information Systems. The combination of business software applications, procedures and activities that utilise IT components to deliver an information service.
OGC.....	Office of Government Commerce
PC.....	Personal Computer i.e. desktop or laptop computer
Service Delivery	ITIL category for service management encompassing: service level management, IT continuity management, financial management, capacity management and availability management.
Service Support	ITIL category for service management encompassing: service desk, incident management, problem management, configuration management, change management and release management.
User.....	The person who consumes an IT service

Health Professions Council Strategy

The main objective of the HPC as set out in Article 3 (4) of the Health Professions Order 2001 is:

'To safeguard the health and well-being of the persons using or needing the services of registrants'.

The strategy of HPC is to continually improve the organisation, influence the regulatory agenda and promote best practice.

To achieve this HPC uses six guiding principles:

1. Protect the public;
2. Communicate & respond;
3. Work collaboratively;
4. Be transparent;
5. Provide value for money & audit; and
6. Deliver a high quality service.

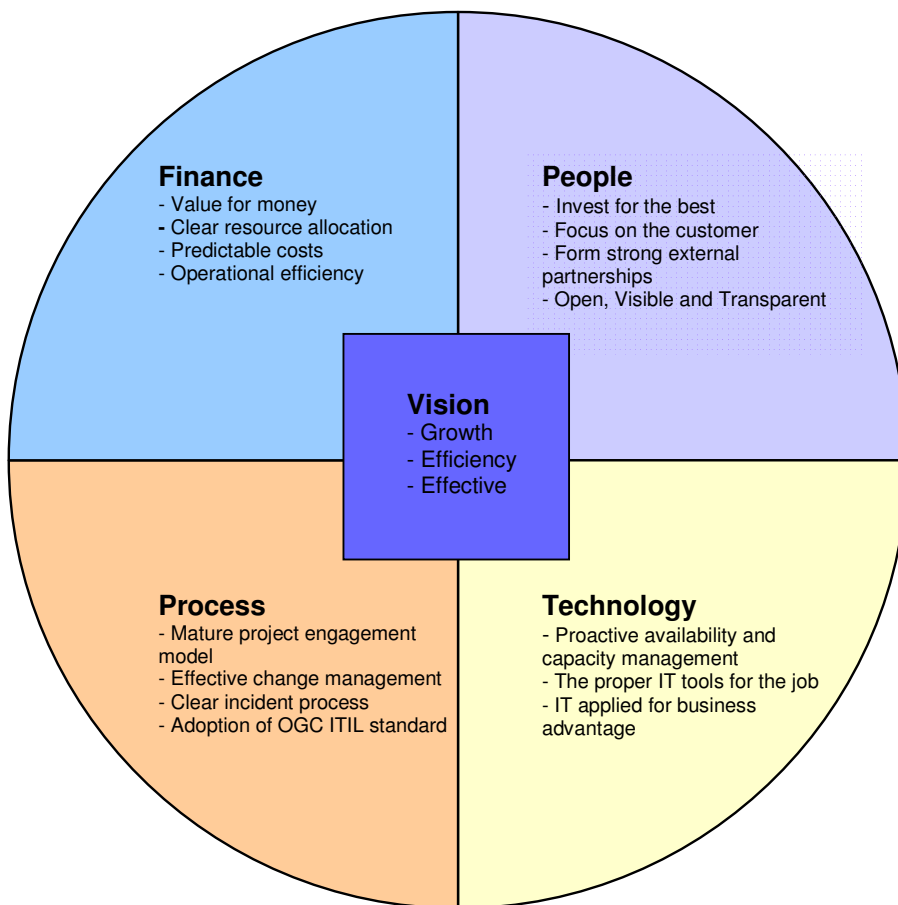
The IT strategy supports all aspects of the organisation strategy but the Strategic Intent document highlights in particular the 'investment in systems and procedures to provide a value for money service for registrants and the public and to build capacity for the growth of the organisation' as a key method to achieve the organisation objective.

IT Strategic Vision

The new strategic vision describes from an Information Technology perspective the desired outcome for HPC. The vision is:

To enable the continued growth of the Health Professions Council by exploiting Information Technology and Information Systems to drive efficiency and effectiveness throughout the organisation.

This could be viewed against the four key areas of: People, Technology, Finance and Process.



IT Strategic Objectives

The IT strategic objectives identify the key themes that link the strategic issues faced by the organisation.

Information Technology Objective 1:

To drive efficiencies within the organisation by the use of Information Technology and Information Systems.

This addresses the following strategic issues:

- HPC cannot continue to increase employment costs as a percentage of turnover to meet the demands from the growth in Registrant numbers;
- The ability to meet the rising expectations from the public and Registrants for HPC to process Applications, Re-admissions and Renewals etc, ever more quickly;
- To reduce risk and improve accessibility for the key Fitness to Practice processes;
- Requirements derived from external authorities such as the initiatives of the Independent Safeguarding Authority (ISA); and
- The increasing usage of divergent technologies increasing the overhead and raising risks of business continuity and support.

This will be achieved by:

- Exploiting the web by providing more interactive services on line and driving a self service culture with Registrants and the public;
- Define technical architecture standards which new systems must adhere to;
- Review the Fitness to Practice processes and investigate the benefits for applying IT to better support and improve the function;
- identify opportunities to consolidate infrastructure hardware and software to reduce support overhead and duplicated data silos
- Review key contracts to identify resource savings and service improvements;
- Adding functionality to existing applications to support ISA initiatives; and
- Improve the IT control model to ensure that business changes are supported by a valid business case.

Information Technology Objective 2:

To apply Information Technology within the organisation where it can create business advantage.

This addresses the following strategic issues:

- The highly skilled Registration advisors spend a disproportionate amount of time responding to low skilled telephone enquiries which does not fully utilise their potential;
- There is an over reliance on manual processes and basic databases to operate key business functions;
- There is a need to accurately import and process data from disparate systems when on boarding new professions for statutory regulation by HPC such as the Practitioner Psychologists and the Hearing Aid Council; and
- The rising expectations of the public to interact with HPC electronically and to perform key processes immediately via the internet at any time.

This will be achieved by:

- Exploiting the web by providing more interactive services on line and driving a self-service culture with Registrants and the public;
- Investigating the IT needs of the Fitness to Practice function and creating a Major project to build a business case and implement any appropriate services;
- Developing systems to enable the registration of additional health care professions; and
- Develop effective partnerships with key suppliers to support our development needs.

Information Technology Objective 3:

To protect the data and services of HPC from malicious damage and unexpected events.

This addresses the following strategic issues:

- The need for the organisation to quickly become operational following a major disaster to the premises or services;
- To protect the information services from malicious damage; and
- To secure the data collected and created by HPC from loss or theft. This risk is highlighted following the loss of personal data by the United Kingdom government in 2007.

This will be achieved by:

- Implementing a remote, service managed facility where the core services of HPC can be replicated and accessed remotely in the event of a disaster. The specific services covered and the time taken to bring them on line is specified in the business continuity plan;
- Regularly test the integrity of our systems with external security specialist organisations;
- Ensuring that we have active scanning of all personal computers, high risk servers, web and email traffic for malicious software;
- Apply build standards for new services that are focused on security and service continuity;
- Encrypting all Laptop data to secure data from loss and theft; and
- Investigating the mechanism for encrypting all sensitive data within HPC including backups and portable devices and creating a Major project to procure and implement the appropriate services if necessary.

Information Technology Objective 4:

To meet internal organisation expectations for the capability of the IT function.

This addresses the following strategic issues:

- The need to improve the method of prioritising resources to achieve business benefit;
- The increasing expectation of HPC for the IT department to meet larger change programmes whilst maintaining business services within agreed service levels;
- To provide an efficient service that the organisation can depend upon to support the organisation need;
- There is an increasing reliance on technology to run business processes effectively; and
- To have transparent internal IT processes and procedures minimising any impact on the business function.

This will be achieved by:

- Developing IT team to improve to separate functions and improve effectiveness;
- Formalising the key processes that drive the IT services;
- Redefine the engagement model for third party support providers to improve the effectiveness of their services and forge closer relationships;
- Adopting the key principles of the Office of Government Commerce (OGC) Information Technology Infrastructure Library (ITIL) framework for Service Management;
- Identify and implement key tools to support the Service Management processes and PC support.

IT Key Services and Principles

Resource

HPC is the most economical of the nine United Kingdom statutory regulators of health professionals. The IT function accounts for approximately 6% of annual expenditure (figure 1) and is supported by a team of six FTEs. The department structure and how the functions are separated are depicted in figure 2 and figure 3.

Description	Value (,000)	% (-depreciation)
Fixed Opex		
Human Resources	341	36
Support costs	476	50
		Subtotal 86
Variable Opex		
Hardware & software	39	4
External support	23	3
Small project costs	66	7
		Subtotal 14
Capex		
Switches, servers and PCs	69.5	100

Fig 1 – high level financial overview

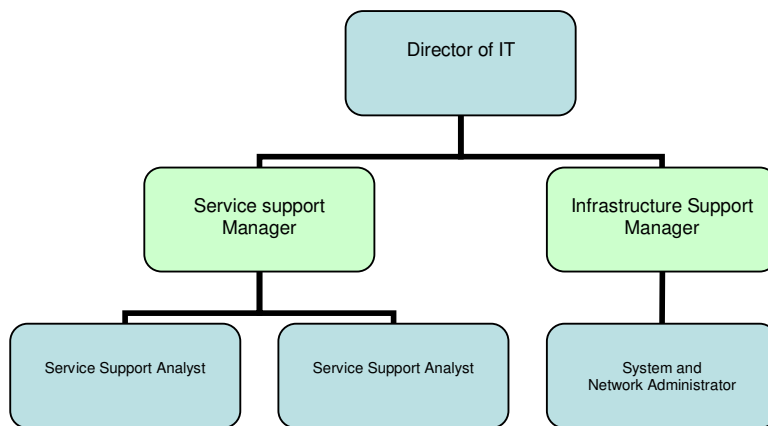


Fig 2 – Department structure

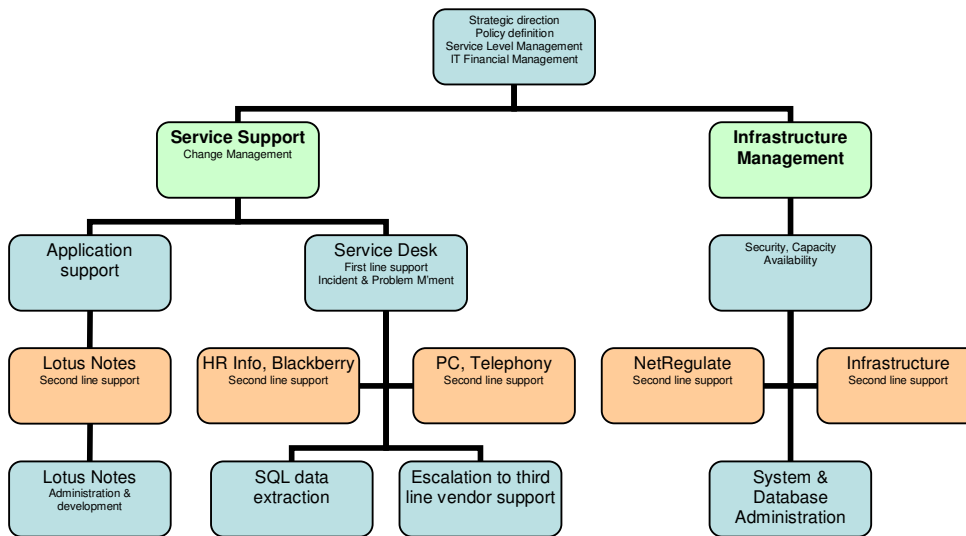


Fig 3 – Department functional separation

The IT function is predominantly delivered internally to maintain high levels of flexibility and control, and to more ably manage costs incurred through change.

The service desk operates from Monday to Friday between 08:00 and 18:00 to match the operating hours of the organisation.

Each member of the IT team is responsible for specific areas of the IT infrastructure and receives appropriate specialist training as identified in the Performance Development Review process. To maximise the effectiveness of the team all members have a broad knowledge of the technologies deployed.

The IT team is structured against four principles:

- To utilise the IT resource effectively we need to have **clear ownership** and separation of responsibilities;
- To have functional specialists that excel at their core specialism - we want to **increase the depth** of the IT team skills and knowledge;
- We need to recognise that as a small team every team member will still need to be able to 'triage' incidents i.e. we need to retain a **breadth of understanding** albeit at a higher level;
- Allocate resource to **proactively manage** the IT infrastructure.

HPC will create long term partnerships with external vendors where there is a need to provide recurrent specialist services that cannot be delivered internally.

Business Services

The IT function supports the following end-to-end business services comprising several technologies and sub-services that are transparent to the Customer or User. The delivery of each service encompasses all of the enabling functions e.g. the delivery of the Registration service also encompasses the availability of the network to connect to the Registration system.

1. Personal computing (including printing and network storage)
Supply, installation and management of personal computers and all associated software and peripheral devices e.g. scanners
2. Registration
Availability, capacity and performance management of the Registration system
3. Application development
Project management, development and implementation of small scale application development
4. Application support
Availability, capacity and performance management of the many separate internally developed applications:
 - i. Freedom of Information system
 - ii. Fitness to Practice system
 - iii. HR Starters and Leavers system
 - iv. Intranet information service
 - v. Employee database system
 - vi. Suppliers database
 - vii. Pass list database
 - viii. World wide regulators website
 - ix. IT training book library
 - x. Private Papers Document Store
 - xi. Partners Database
 - xii. Meeting room/ resource database
 - xiii. Batch processor schedule
 - xiv. Form request (request application pack on internet)
 - xv. Registration - Temporary Registration Database
 - xvi. Secretariat – Document management system
5. Education and Monitoring
Availability, capacity and performance management of the Education and Monitoring database system
6. Email and web browsing
Availability, capacity and performance management of the email function and ability for HPC employees to browse the internet
7. Desktop telephony
Availability, capacity and performance management of the desktop telephony function including call recording and queue management
8. Customer Relationship Management system (CRM)
Availability, capacity and performance management of the Customer Relationship

Management system iExtensions.

9. Financial ledger
Availability, capacity and performance management of the SAGE 200 Financial general ledger system
10. Financial Payroll
Availability, capacity and performance management of the SAGE 50 Payroll 2008 system
11. Human Resources Information
Availability, capacity and performance management of the 'HR Info' system for managing the HR requirements HPC
12. Web site hosting (Internet, intranet, extranet)
Availability, capacity and performance management of the hosting only for the HPC websites both internal and external
13. Reports generation and data extract/upload
Provision of Crystal Reports development service and data extraction from key systems to aid external mailings etc
14. Productivity training
Coordination and provision of external professional training for desktop personal productivity tools e.g. MS-Word
15. Video Conferencing
Availability, capacity and performance management of the video conference function (excluding the video equipment which is supported by Facilities)
16. Mobile personal mailing service
Availability, capacity and performance of the Blackberry function enabling remote and personal diary and mail synchronisation.

Technical Services

Technical services are transparent to but underpin the Business services.

IT Continuity

To maximise service and performance and minimise cost the majority of the IT infrastructure is located at the HPC office premises in dedicated facilities addressing cooling, power and physical security needs. As an exception the Internet service is hosted and managed remotely at a dedicated data centre by a managed service provider.

HPC also employs its data centre as part of its IT Continuity plan and hosts copies of the core data applications, notably:

- Registration system (NetRegulate);
- Finance systems (Sage100, Sage200, Sage payroll);
- Mail service;
- Shared network drives G: and N: ;
- Approvals and Monitoring application; and
- FTP applications.

This allows for rapid availability of the core elements of the HPC IT infrastructure to a reduced user group in the event of a critical outage.

Data is synchronised using several methods over a 24 hr cycle. Additionally backups are taken internally and cycled weekly to provide a more granular method of recovery, with a reference backup of all systems archived off-site each month.

IT Standards and Compliance

Mainstream proven commercial software and hardware are deployed to maximise interoperability between vendors and availability of third party support.

Desktop equipment is supplied by Dell and laptops are supplied by Toshiba. We have further standardised on models which have an extended business life where the vendor guarantees to supply the same model for a prolonged period. This reduces the variety of hardware that needs to be supported, improving the effectiveness of the support.

As a de facto standard Microsoft software is predominantly used on the PCs; it is also used on the server environment except where higher performance and availability is required.

Where HPC does not have the required depth of expertise in an area of the infrastructure that is critical to the delivery of one of the business services it will seek to obtain appropriate third party support for example in security penetration testing.

PC delivered software will continue to be audited by an external organisation to verify license compliance.

IT Security

A multilayered approach is taken to address concerns of IT security.

Authentication and Authorisation:

- Users require complex passwords for authentication to PC and Network services;
- Users are only granted access to services to which they have specific authorisation;
- Passwords for PC and Network services are changed every four weeks; and
- Additional passwords are required to access each core application service e.g. Registration system.

Perimeter security:

- The IT systems are tested quarterly for vulnerabilities from external attack using a specialist security company;
- All incoming and outgoing email and web traffic is scanned for viruses and malicious software;
- All personal computers and servers running Microsoft technologies have virus protection software deployed;
- The latest security patches are deployed automatically to the personal computers on the network;
- Laptops are encrypted to protect any sensitive data; and
- Physical access is restricted to the HPC offices and is further restricted to the server infrastructure.

Service Management

Simple service management is delivered focused primarily on the Service desk, Incident management process and IT continuity. Service levels for the availability of key services are published monthly.

HPC is applying elements of the Information Technology Infrastructure Library (ITIL) guidelines as published by the Office of Government Commerce (OGC) to its Service Management processes. This is a key method for driving efficiency and effectiveness through the use of IT and is a key development within the IT strategy addressing areas of Service Support and Service Delivery.

The implementation of more formal service management is aimed to increase transparency to the user and customer and to drive efficiency and effectiveness within the IT function without excessive bureaucracy.

Application Development

The development of business critical applications that support the core business processes of the organisation is supported either:

- through bespoke development outsourced to a specialist company where there does not exist a commercial product that can be efficiently applied against our substantive requirement; or
- by purchasing a Commercial Off The Shelf (COTS) package.

It is more desirable and advantageous to purchase a COTS solution and be able to leverage the increased investment in the software development and typically higher levels of support availability.

In house development will continue where:

- a viable commercial software solution does not exist;
- to prevent the proliferation of small technically diverse software with specialist support requirements; and
- there is a need to deploy a low risk solution quickly and economically.

IT Action Plan

The Action Plan is a series of candidates for action to achieve the Information Technology objectives. These candidates for action can and will change to reflect current organisation need. Each year the IT Work Plan will detail the candidates for action that have been selected for implementation during that financial year. The priority is set each year following discussions between each directorate as part of the financial planning cycle.

Objective 1 Candidates for Action (page 7):

To drive efficiencies within the organisation by the use of Information Technology and Information Systems.

- Develop a new web channel enabling Registrants and Applicants to electronically submit for key business process;
- Consolidate infrastructure hardware and software to reduce support overhead and duplicated data silos;
- Develop and deploy a standard hardware laptop and desktop;
- Develop and deploy a standard personal computer image;
- Implement the IT external hosting transfer of Services to a new provider Major project which will reduce the HPC support overhead and reduce costs for our outsourced hosting and ISP services following the go-live of the Online Renewals project;
- Implement the Independent Safeguarding Authority phase 1 Major project;
- Implement the NetRegulate Improvements Major project to affect a number of discrete changes within the Registration system to improve function;
- Review the IT Network and Server infrastructure to consolidate where possible to reduce support overhead; and
- Review key contracts to ensure value for money services.

Objective 2 Candidates for Action (page 8):

To apply Information Technology within the organisation where it can create business advantage.

- Reduce the number of data and functional silos, consolidating application requirements to support generic business functions across teams and directorates;
- Investigate the business case for supporting the Fitness to Practice directorate with specialist targeted case management software;
- Investigate the business case for implementing document and records management on the unstructured data of the organisation.
- Support the FTP Case Management system phase 1 Major project to enhance service and reduce organisational risk within key FTP processes;
- Implement the IT aspects of the Stannery St building project phase 2;
- Implement the Registration of Practitioner Psychologists to the HPC register;
- Implement the Registration of the Hearing Aid dispensers to the HPC register;
- Support the Fees 2011 Major project for changes to the HPC renewal fees;
- Support the Renewal Cycle Review Major project to identify the business case and possible implementation for altering the Renewals cycle for professions; and
- Investigate the need for an enterprise reporting solution to allow cross function analysis to improve our corporate and operational planning.

Objective 3 Candidates for Action (page 9):

To protect the data and services of HPC from malicious and unexpected events.

- Instigation of rigorous patch management policy ensuring appropriate patching of servers and applications to address risk;
- Consolidation of software protecting HPC against virus and malware attacks;
- Audit the physical configuration of the servers and network infrastructure and apply best practice;
- Review of the policy for using external media to connect directly to HPC personal computers
- Development of the mechanism for keeping the HPC primary and disaster recovery sites data in synchronisation;
- Implement the IT external hosting transfer to new provider Major project which will reduce the HPC support overhead and reduce costs for our outsourced hosting and ISP services following the go-live of the Online Renewals project;
- Implement a Laptop technology refresh addressing obsolete hardware, improving usability, strengthening security and maintainability;
- Review the options for encrypting the backup for the NetRegulate application and if appropriate implement a relevant strategy;
- Review the options for encrypting the HPC network drive and removable media and if appropriate implement a relevant strategy;
- Implement a service improvement to the HPC network by segmenting the network to reduce contention, improve performance, security and maintainability;
- Conduct quarterly independent penetration tests of our environment to assure adequate security controls; and
- Conduct a quarterly audit of our license compliance by a third party organisation.

Objective 4 Candidates for Action (page 10):

To meet internal organisation expectations for the capability of the IT function.

- Formalising the process for determining both Major and Small IT project inception;
- Develop an effective change management process to protect the production environment from outages;
- Develop effective incident and problem management processes to efficiently process support requests;
- Create a comprehensive resource management plan to adequately support both the IT operational and project commitments;
- Develop a configuration management database to support effective execution of the problem and change management processes. Specifically document key architecture designs;
- Develop the engagement model of third party vendors to better leverage their expertise for change projects and on going support;
- Develop robust service management policies;
- Realign the published service levels to better reflect the organisation need against the service catalogue;
- Document service catalogue and agreed software list; place under change control;
- Consolidate infrastructure hardware and software to reduce the support requirement of diverse technology;

- Create a comprehensive support library for technicians by documenting key processes and procedures;
- Improve the capability of the intranet helpdesk system to allow the user to track service requests and perform basic fault diagnosis;
- Develop effective capacity management processes supporting the IT infrastructure;
- Develop effective availability management processes supporting the IT infrastructure;
- Consolidate third party support provider list and build deeper partnerships;
- Develop a configuration management database to support effective execution of the problem and change management processes; and
- Realign the published service levels to better reflect the organisation need against the service catalogue;