Council, 08 December 2016

Information Technology Strategy

Executive summary and recommendations

Introduction
This paper sets out the revised Information Technology strategy. This is a refresh of the existing strategy and reflects changes in the external drivers for the HCPC, with additional detail for specific services included in appendices.

Decision
The Council is asked to discuss and agree the strategy.

Background information
This is the fourth iteration of the IT Strategy since 2008. It sets out the direction of travel for information technology within the HCPC through four strategic objectives. The implementation of the strategy is through the annual work plans.

Resource implications
Included in the annual work plan

Financial implications
Included in the annual work plan

Appendices
Appendix 1- Information Technology Strategy

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Information Technology Strategy

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Contents

1. Introduction to the HCPC IT strategy

1.1.   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.

1.2.   The IT strategy supports the organisation strategy as detailed in the HCPC Strategic Intent Document[1].

1.3.   The IT strategy forms part of the HCPC planning documentation that includes:

- Annual report and accounts;
- Departmental work plans;
- Risk register;
- Project plans;
- Five year plan;
- Departmental strategies; and
- Strategic intent.

See appendix A for a diagram showing the interrelation and relative detail of the substantive planning documentation of the HCPC.

1.4.   The IT strategy identifies the overall IT vision for the medium term as well as a number of strategic objectives or themes.

1.5.   The strategic objectives seek to group common challenges together which are addressed in the context of each of the different areas of the organisation.

1.6.   The IT strategy includes a number of appendices that focuses on specific areas of the IT infrastructure in more detail. These independent targeted strategies look at the current, medium and longer term horizon.

1.7.   The IT strategy identifies the 'what' and the 'why' for the technology direction of HCPC; the 'how' and the 'when' are addressed in the annual departmental work plan.

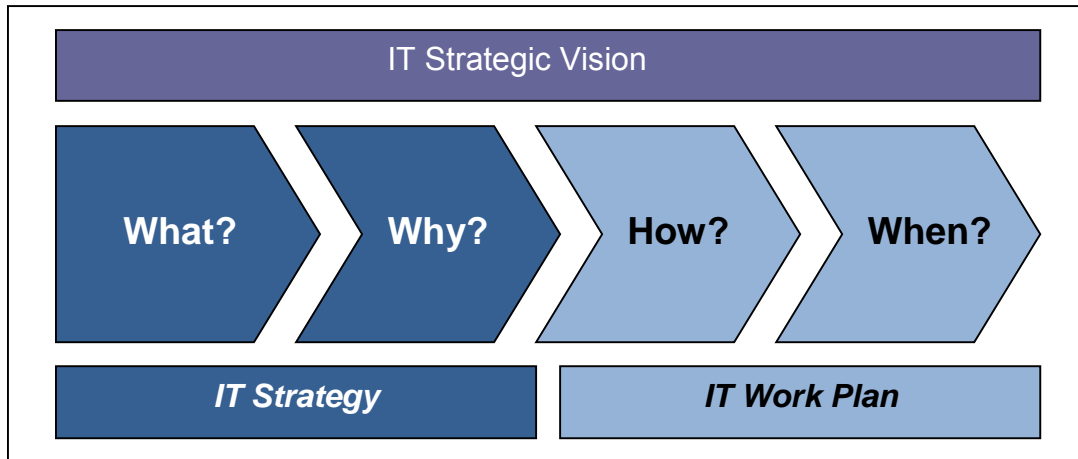[1] Strategic Intent Document 2016 – 2020 first published Jan 2016

Figure 1 - IT planning and delivery

1.8.   The IT function supports a campus site in London. The majority of employees are office based with a significant population of occasional roaming and remote users, notably within the Education and Fitness to Practice departments.

1.9.   As the HCPC continues to develop it maintains a cycle of continuous quality improvement.

1.10.   The IT strategy represents the medium term view; it will be revised when there is a significant change to the internal or external environment.

1.11.   This is the fourth iteration of the IT strategy since 2008.

2. HCPC organisation strategy

2.1.   The main purpose of the HCPC as set out in Article 3 (4) of the Health and Social Work Professions Order 2001 is:

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

2.2.   To protect the public the HCPC:

- Set standards for entry to the Register and for continued registration;
- Approve education and training programmes that successfully deliver those standards;
- Maintain a register of individuals who successfully complete those programmes; and
- Take action if the standards may not have been met.

2.3.   The HCPC does this by achieving the following six strategic objectives:

1.   To maintain, review and develop good corporate governance;
2.   To maintain, review and develop efficient business process throughout the organisation;
3.   To increase understanding and awareness of regulation amongst all stakeholders;
4.   To ensure that the organisation's work is evidence informed;
5.   To be proactive in influencing the wider regulatory policy agenda; and
6.   To ensure that our approach to regulation takes account of differences between the four countries.

2.4.   The IT strategy supports all aspects of the organisation strategy but has particular relevance to driving efficiency through changes to, and supporting, the organisation's business processes.

2.5.   The IT strategy further supports the organisation values which not only reflect the social context in which the organisation operates but also its aim to deliver effective and efficient regulation.

2.6.   The values are:
•   Transparency
•   Collaboration
•   Responsiveness
•   Value for money
•   High quality service

3.   Drivers for change

3.1.   One understanding of a strategy is that it should include:

"A rich and holistic understanding of causes, trends and possible futures"[2]

3.2.   The starting point is to understand the external drivers that require HCPC to adapt. The list of drivers can change frequently but they will contain a core that is relevant for the medium term.

3.3.   This IT strategy is based upon a number of drivers listed below; each has an indicator to the expected trend:

•   Political will for regulation:
Possible significant changes in the professions and the numbers of professionals regulated.

In the 2016-17 session of Parliament the government's intention is to

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[2] Geoff Mulgan, Head of the Prime Minister's Strategy Unit 2002.

legislate to establish a new regulator for Social Workers in England.

In autumn 2016 the Department of Health published a consultation document on reform of healthcare regulation. The consultation may lead to legislation in the 2017-18 session of Parliament with further changes in the scope and volume of HCPC's work taking effect over the following two or three years.

- Customer service expectation:
  Higher service expectation from stakeholders, which are free to use through their preferred device.

- Economic:
  The need to achieve value for money and manage HCPC's finances on a sustainable basis, while keeping registration fees low.

- Devolution:
  An increasingly fragmented UK political environment.

- European Union (EU):
  Changing UK legislation following the decision to exit the European Union.

- Models for Regulation:
  o Continuing alternative models including voluntary registers by other regulatory authorities.
  o Increasing expectation to create an internal separation between the adjudication functions and those for the prosecution of cases.

- Nature of FTP concerns:
  Ambiguity about the number and complexity of concerns raised against registrants.

- Flexible working:
  Increasing need to support flexible working both within the office space and remotely using corporate and personal devices.

- Data security standards:
  Increasing requirement to increase the strength of protection for data managed by the HCPC and to achieve recognised data security standards.

3.4. The drivers can be used to determine a number of possible futures for HCPC. The IT strategy addresses the following possible future with increasingly turbulent political expectations, with higher expectations from registrants and stakeholders:

- Changing numbers of UK regulators of healthcare professions;

- An uncertainty in the number of new registrants and a step change reduction in overall registrant numbers results in uncertain revenue and resources;

- An external cost focus;

- A single corporate campus site based in London;

- Increasing influence in the global regulatory environment;

- It is expected that HCPC will receive progressively more complex concerns raised against registrants that increase the length of cases;

- An increasing requirement to attain security standards within the IT infrastructure;

- Greater technical separation of function between adjudication and case management functions; and

- A move towards flexible work environments and increasing home working.

4.   IT Strategic Vision

4.1.   The strategic vision describes from an information technology perspective the desired outcome for HCPC. The vision is:

To enable the continued improvement of the Health and Care Professions Council by exploiting information technology and information systems appropriately and proportionately to drive efficiency and effectiveness throughout the organisation.

5.   IT Strategic Objectives

5.1.   The achievement of the vision is through four strategic objectives which identify the key themes that link the strategic issues faced by the organisation. Each strategic issue is addressed by using a number of tactics which together support the strategic objective.

5.2.   The four strategic objectives are:

- To drive efficiencies within the organisation by the use of information technology and information systems;

- To apply information technology within the organisation where it can improve effectiveness;

- To protect the data and services of HCPC from malicious damage and unexpected events; and

- To meet internal organisation expectations for the capability of the information technology function.

5.3.   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:

5.3.1.   To maintain the employment costs at the current percentage of total operating expenditure;

5.3.2.   The ability to meet the rising expectations from the public and registrants for HCPC to process Applications, Re-admissions and Renewals etc., ever more quickly;

5.3.3.   External pressures to reduce and maintain the time taken from an initial allegation to final disposal within the FTP function.

5.3.4.   To reduce data entry risk and improve accessibility for the core business processes;

5.3.5.   To ensure that the organisation does not become dependent upon IT systems that are unsupported and not able to be maintained;

5.3.6.   Requirements derived from external authorities such as the initiatives of the Payment Card Industry Data Security Standard (PCI DSS) and European legislation such as the professional qualifications directive

(Directive 2005/36/EC); and

5.3.7. The usage of divergent technologies increasing the support overhead and raising risks of business continuity and support.

This will be achieved by:

5.3.8. Exploiting the web by providing more interactive services online and driving a self-service culture with stakeholders;

5.3.9. Maintaining flexibility of supplier by exploiting the channel partner model applied by large vendors of IT services and products where applicable;

5.3.10. Appling technical architecture standards that new systems must adhere to;

5.3.11. Through the major project process review the core business processes and apply IT appropriately to better support and improve the function;

5.3.12. Identifying opportunities to consolidate systems to reduce the number of data silos; reduce the risks of integration and reduce the dependencies between systems;

5.3.13. Adoption of virtualisation technology to enable improved service levels, enable a more resilient and flexible environment and to avoid the proliferation of hardware;

5.3.14. Adoption of public and private cloud services to leverage the benefits of professionally managed data centres and contractual guarantees of performance for both infrastructure and application services;

5.3.15. Maintaining a continuous cycle of updates and refreshes to technology to ensure external support;

5.3.16. Reviewing key contracts to identify resource savings and service improvements; and

5.3.17. Applying an IT control model to ensure that business changes are supported by a valid change process.

5.4. Information technology objective 2:

To apply information technology within the organisation where it can improve effectiveness.

This addresses the following strategic issues:

5.4.1. The lost opportunity of using highly skilled employees with expertise specific to the HCPC to perform lower skilled bureaucratic and administrative tasks;

5.4.2. A trend towards more flexible working arrangements with a variety of alternative models to the traditional office based employee;

5.4.3. An over reliance on manual processes and basic databases to operate key business functions;

5.4.4. The expectation to quickly and effectively regulate new or transferred professions and non-professional groups without affecting services to existing regulated professions;

5.4.5. There is a reasonable expectation that business services will continue to improve and develop over time and with the advancement of technology;

5.4.6. A need for increasing office space that is specialised for functional use e.g. tribunal rooms;

5.4.7. In any organisation there is a need to ensure that the corporate knowledge gained in one area of the organisation maintains its integrity and is made available to other areas of the organisation where appropriate; and

5.4.8. The rising expectations of the public to interact with HCPC electronically and to perform key processes immediately and securely via the internet at any time, increasingly through mobile devices.

This will be achieved by:

5.4.9. Exploiting the internet by providing more interactive services on-line and driving a self-service culture with stakeholders;

5.4.10. Through the major project process review the core business processes and apply IT appropriately to better support and improve the function;

5.4.11. Implementing commercial off the shelf solutions (COTS) to leverage the significant investment into the product development roadmap

providing rich functionality from a wide user base;

5.4.12. Focusing on a small number of core technology vendors such as Microsoft where we can leverage their significant development investment in relevant product suites.

5.4.13. Identify opportunities to consolidate software and infrastructure building service capabilities that form a foundation that is exploited by many business systems;

5.4.14. Continually review innovations in the IT sector to assess potential benefit for the HCPC and support the development of business cases;

5.4.15. Adoption of public cloud services to leverage the benefits of secure external access to corporate business systems professionally managed and maintained with contractual guarantees of performance;

5.4.16. Delivering flexible systems to enable the continued improvement of business services; and

5.4.17. Develop effective partnerships with key suppliers to support our development needs. Whilst maintaining flexibility of supplier by exploiting the channel partner model applied by large vendors of IT services and products where applicable.

5.5.   Information technology objective 3:

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

This addresses the following strategic issues:

5.5.1.   The need for the organisation to quickly become operational following a major disaster to the premises or data services;

5.5.2.   The need for the organisation to remain operational following an IT continuity event;

5.5.3.   External organisations increasingly require adherence to recognised security standards to access their services;

5.5.4.   The number and complexity of IT systems is appropriate and proportionate to the size and type of organisation as the HCPC, without introducing risks concerning the failure to maintain key systems;

5.5.5.   To protect the information services from malicious damage originating either internally or externally; and

5.5.6.   To secure the data collected, created and managed by HCPC from loss or theft.

This will be achieved by:

5.5.7.   Exploiting a remote, service managed hosting facility where the core services of HCPC can be replicated and accessed remotely in the event of a disaster;

5.5.8.   Implementing commercial off the shelf solutions (COTS) where appropriate to exploit built in security and resilience;

5.5.9.   Maintaining a rolling programme of upgrades and system replacements to ensure software is supported and providing effective protection;

5.5.10. Allocating resources based on risk, ensuring that services are secure and available;

5.5.11. Architecting and delivering solutions that are both appropriate and proportionate to the type and size of the organisation;

5.5.12. Making systems secure by design;

5.5.13. Ensuring the network design is architected for resilience and security;

5.5.14. Regularly testing the integrity of our systems with external security specialist organisations;

5.5.15. Ensuring that we have active scanning of all personal computers, high risk servers, web and email traffic for malicious software;

5.5.16. Applying build standards for new services that are focused on security and service continuity;

5.5.17. Instigating a rigorous patch management policy ensuring appropriate patching of servers and applications to address risk;

5.5.18. Adopting recognised industry standards for the delivery of IT services:

- Adoption of the ITIL framework for Service Management;

- Adoption of the ISO27001 standard for security; and

- Application of Microsoft standards for secure server design.

5.5.19. Encrypting all laptop data to secure data from loss and theft and applying specific controls to the use of removable media;

5.5.20. Applying appropriate access controls to restrict user access to only those areas necessary to perform the role; and

5.5.21. Applying technology where appropriate and proportionate to support the control of sensitive data when used with removable media, including backups and portable devices.

5.6.   Information technology objective 4:

To meet internal organisation expectations for the capability of the information technology function.

This addresses the following strategic issues:

5.6.1. The need to continually review the method of prioritising resources to achieve business benefit;

5.6.2. The need to have highly specialised IT engineers to support a diverse set of technologies effectively;

5.6.3. The use of divergent technologies increasing the overhead and raising risks of business continuity and support.

5.6.4. The increasing expectation of HCPC for the IT department to meet larger change programmes whilst maintaining business services within agreed service levels;

5.6.5. The need to manage change events without impacting unduly the operation of production services;

5.6.6. The need to operate an affordable IT service that delivers and maintains services to an acceptable standard;

5.6.7. To provide an efficient service that the organisation can depend upon to support the organisation need;

5.6.8. There is an increasing reliance on technology to run business processes effectively; and

5.6.9. To have transparent internal IT processes and procedures minimising any impact on the business function.

This will be achieved by:

5.6.10. Structuring the IT team to provide a separation of functions, improving specialisation and effectiveness;

5.6.11. Effective targeted professional training of the IT team for key technologies and for service skills;

5.6.12. Ensuring appropriate supporting systems that enable the effective monitoring and reporting of the IT services;

5.6.13. Ensuring effective technology is applied to support the raising of incident notifications and the ITIL processes;

5.6.14. Formalising the key processes that drive the IT services;

5.6.15. Driving the IT infrastructure towards a homogeneous environment to allow greater interoperability;

5.6.16. Reduce the number of technologies deployed to increase the depth of the support for those that are used;

5.6.17. Leverage the commercial benefits of the public sector framework agreements to standardise on Microsoft software unless there are specific technical or commercial reasons to use an alternative;

5.6.18. Deploy proven commercial software and hardware to maximise interoperability between vendors and availability of third party support.

5.6.19. Managing the engagement model with third party support providers to improve the effectiveness of their services and forge closer relationships;

5.6.20. Adopting the key principles of the Office of Government Commerce (OGC) Information Technology Infrastructure Library (ITIL) framework for Service Management;

5.6.21. Prioritising resources based primarily on risk;

5.6.22. Delivering services based on being appropriate and proportionate to the size and type of the organisation;

5.6.23. Outsourcing or ensuring professional support arrangements with external support providers for key technologies and services that underpin core business services; and

5.6.24. Identifying and implement key tools to support the Service Management processes and PC support.

6. Consequences of the IT Strategy

6.1. The strategic objectives are used to validate that resources are being allocated appropriately. When consideration is made to assigning resource to a new task or initiative then it must fall within one of the existing strategic objectives. If it does not then either the initiative is not part of the core objectives of the HCPC or a new IT strategic objective needs to be considered.

6.2. The application of the IT strategic objectives creates a direction of travel that defines the IT landscape of the HCPC. This direction is determined to achieve a particular outcome for the organisation that supports the 'possible future' as identified in the organisational drivers.

6.3. When the organisational drivers change, so should the strategic objectives in order to change the direction of travel to a new future.

6.4. The current drivers and strategic objectives will inexorably lead HCPC to a future that will have the following implications for the IT stakeholders.

6.5. Stakeholder experience

This section highlights the more significant touch points between the key stakeholder groups and the IT services with which they interact. It is meant as an illustration only and will inevitably be reshaped and altered by the existing change processes where resources are allocated through the annual budget setting process, major project prioritisation process and through strategic decisions by Council.

HCPC Employee experience

6.5.1. Access to IT services will be available through a more flexible range of devices driven by convenience i.e. locally using a corporate PC; remotely using a corporate or private laptop or through mobile devices such as tablets and smart phones. The access will be simple and secure.

6.5.2. The PC will continue to be developed to support a fully flexible working environment working environment with the ability to hot desk transparently.

6.5.3. The availability of corporate IT services will be extended outside of the normal working day supporting more flexible working.

6.5.4. The finance suite of technologies will be reviewed for their effectiveness and for the potential benefit of consolidating into a

unified platform.

6.5.5. Changes to the business applications will increasingly drive efficiencies in the administration of the core operational processes allowing the skilled employees to increasingly focus on adding value.

6.5.6. The review of the registration operational processes and supporting systems will deliver technology changes that will be delivered through a number of phased implementation projects.

6.5.7. Telephony services will be more tightly integrated into the registration system allowing improved management of call flows.

6.5.8. The review of the FTP operational processes and supporting systems will deliver technology changes that will be delivered through a number of phased implementation projects.

6.5.9. Lotus Notes applications e.g. Starters and Leavers database, will be moved into line of business applications as they are replaced or enhanced.

6.5.10. Business applications will be increasingly delivered using cloud services, accessed through a common web browser and accessed simply outside of the HCPC office.

6.5.11. Corporate business intelligence will technically be delivered centrally using the Microsoft business information stack of technologies. This will allow immediate access to operational data through a series of dashboards, reports and tables across the breadth of the HCPC.

HCPC Service Users (general public, registrants, committee and council members, programme providers etc.)

6.5.12. A self-service culture will continue to be extended with the addition of new online services targeting key registration, education and fitness to practice processes;

6.5.13. The web strategy will extend beyond the corporate website into providing a true internet experience where information and services will be customised to stakeholder communities as well as being made available across a much wider breadth of technologies and devices.

6.5.14. Stakeholders engaging with the HCPC across different models of regulation will receive a differentiated experience at the point of contact ensuring that there is no misrepresentation of the specific services being offered.

This is only relevant if the concept of alternative models of regulation

including negative registers is progressed.

6.5.15. There will be more technically managed sharing of information across borders and with UK bodies to support the objectives of public regulation;

6.5.16. Mobile applications such as the iPhone HCPC app will continue to form an important part of the HCPC mobile strategy but a fully responsive web site will support greater flexibility across more diverse mobile platforms.

6.5.17. Dedicated multi-media suits and interactive presentation boards will be delivered as part of the refurbishment of the 186 Kennington park road building.

6.6. Provisional schedule

6.6.1. This is an illustrative schedule that shows the likely order and length of the projects that would deliver the changes described within the IT Strategy. The schedule will inevitably be reshaped and altered by the existing change processes where resources are allocated through the annual budget setting process, major project prioritisation process and through strategic decisions by Council.

Initiative	Year 1				Year 2				Year 3				Year 4				Year 5			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
186 Kennington Park Road renovation	█	█	█																	
Registration Transformation project phase1	█	█	█																	
Registration Transformation project phase2				█	█	█	█	█												
Registration Transformation project phase3									█	█	█	█								
HR and Partner system implementation	█	█	█																	
Website design	█	█																		
Website build			█	█	█	█														
Finance system consolidation review		█	█	█																
Implementation of Finance review					█	█	█	█												
FTP case management and adjudication review				█	█	█	█													
FTP case management implementation project phase1								█	█	█	█									
FTP case management implementation project phase2												█	█	█	█					
FTP case management implementation project phase3																█	█	█	█	
Education system upgrade					█	█	█	█												

Note: this list only recognises the major technology change projects and not maintenance projects.

7. IT service approach

7.1. Resource

7.1.1. The IT function is delivered through a small dynamic and flexible team that provides on-site support and manages the outsourced services from a number of key technology providers. They fulfil a role that lies between the business and the external technical service provider; interpreting business needs to technology suppliers ensuring expert technical oversight.
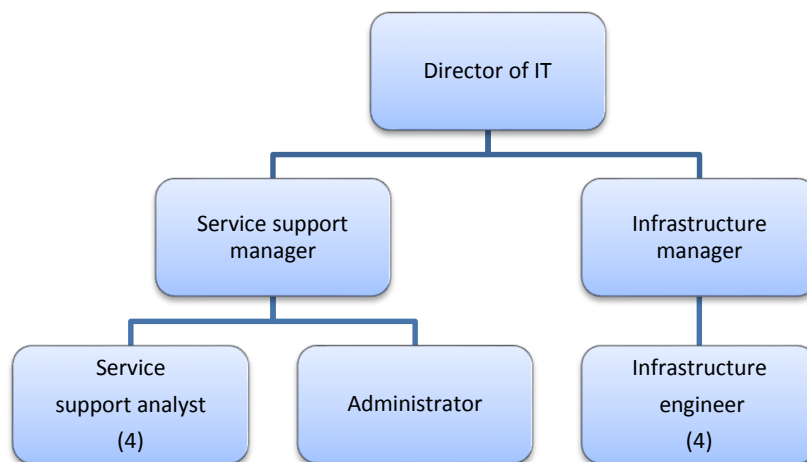
Figure 2 – IT organisation structure

7.1.2. The IT function uses a mixed model of outsourced services combined with internal business and technical expertise; this allows the team to maintain high levels of flexibility and control, and to more ably predict costs incurred through change.

7.1.3. Each member of the IT team is responsible for specific areas of the IT infrastructure and receives appropriate specialist training. To maximise the effectiveness of the team all members have a broad knowledge of the technologies deployed.

7.1.4. The IT team is structured against three principles:

- Ownership: to utilise the IT resource effectively there is clear ownership and separation of responsibilities;
- Expertise: to maximise the depth of the IT team skills members of a team will focus on core specialise areas; and
- Coverage: to retain a breadth of understanding albeit at a higher level the teams cross train to ensure services can always be supported.

7.1.5. HCPC creates long term partnerships with external vendors where there is a need to provide recurrent specialist services that cannot be delivered internally such as application development.

7.1.6. The IT function accounts for approximately 6% of total annual expenditure by the HCPC excluding depreciation and capital expenditure by major project.

7.2. IT continuity

7.2.1. To maximise service and performance and minimise cost the majority of the IT infrastructure is located at the HCPC office premises in dedicated facilities addressing cooling, power and physical security needs. As an exception the web services and disaster recovery provision are hosted and managed remotely in public and private cloud services.

7.3. Application Development

7.3.1. 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.

7.3.2. Configuration and customisation of any COTS solution will primarily be performed using expert external development organisations. This recognises the reality of attracting and retaining development resources in a small organisation. However, we will continue to evaluate the opportunity of creating a development competency within HCPC as we increase the use of key technologies throughout core business processes.

7.3.3. It is more desirable and advantageous to purchase a COTS solution and leverage the increased investment in the development of the software and to receive a higher level of technical support.

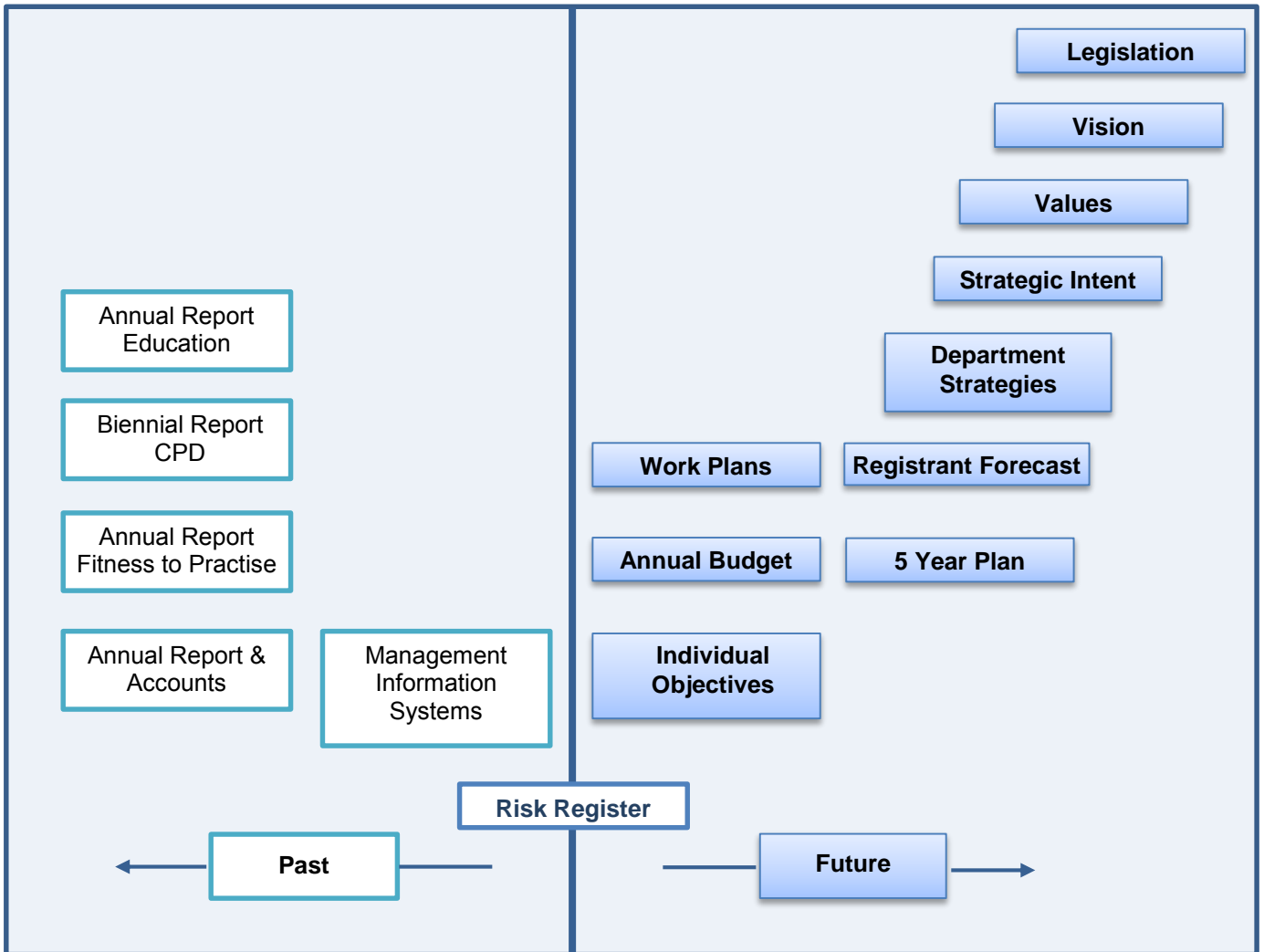In house development will continue only where:

- 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.

8.   Glossary

COTS…………..	Commercial Off The Shelf package.
CPD…………….	Continuing Professional Development.
Customer……….	The person who purchases an IT service.
Drivers………….	External influences that require an adaptation by the organisation.
FTE……………..	Full Time Equivalent.
FTP……………..	Fitness to Practice.
HCPC………….	Health and Care Professions Council.
ISA………………	Independent Safeguarding Authority.
IS………………..	Information Systems. The combination of business software applications, procedures and activities that utilise IT components to deliver an information service.
IT………............	Information Technology. The underlying hardware, software and communication infrastructure which is used to create information services.
ITIL……………..	Information Technology Infrastructure Library.
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.
Virtual desktop…	A method of accessing the services and functions traditionally offered by a PC from a centrally delivered server infrastructure.
Zero client………	A device that performs minimal processing but is used to access and present IT services run centrally on server infrastructure.

9. Appendix A – Planning Documentation of HCPC

HCPC's Governance Framework

Past		Future
Annual Report Education		Legislation
Biennial Report CPD		Vision
Annual Report Fitness to Practise		Values
Annual Report & Accounts	Management Information Systems	Strategic Intent
		Department Strategies
		Work Plans / Registrant Forecast
		Annual Budget / 5 Year Plan
		Individual Objectives

Risk Register

Past ← → Future

10.   Appendix B – Information technology hosting strategy

Information technology hosting strategy
Guy Gaskins, Director of Information Technology

Document Control
Reference: IT HOSTING STRATEGY
Issue No: 1.0

Issue Date: 04/02/2016

Purpose and Scope
The purpose of this document is to set out the high level strategy for the hosting provision of IT services. It applies to all information processing facilities within the HCPC.

Related Documentation
Annual IT work plan
IT strategy

Responsibilities
The IT department is responsible for the implementation of the strategy. The Council is responsible for the agreement of the HCPC annual budget.

Aim
To remove the overhead of managing a physical server and storage environment with its associated issues of:
- maintaining continuity of power;
- maintaining continuity of cooling;
- security;
- use of prime office space;
- performance management;
- patch and upgrade management;
- incident management;
- availability management; and
- service level management.

To refocus resource on higher value architectural skills to improve:
- performance;
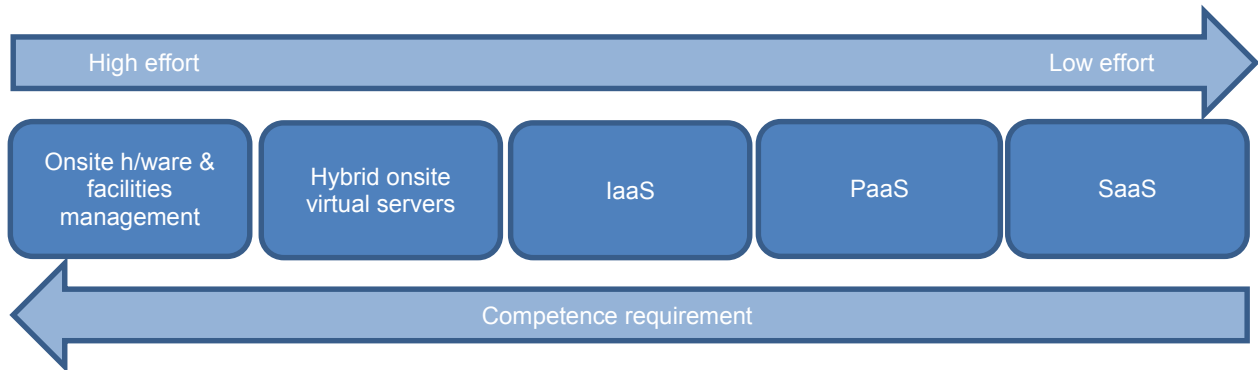- capacity;
- security; and
- application management.

Subsidiary benefits include:
- increased flexibility to increase and decrease resources on demand;
- improved security, leveraging certified professional hosting service providers;
- equivalent or reducing infrastructure costs;
- 24 hour incident management;
- improved disaster recovery position; and
- easier access to core services remotely.

Objective
To move up the 'value' chain for infrastructure hosting, exploiting the investment and support capabilities of commercial organisations to deliver 'low value' commoditised compute, memory and storage solutions.

High effort				Low effort
Onsite h/ware & facilities management	Hybrid onsite virtual servers	IaaS	PaaS	SaaS

Competence requirement

Approach
The HCPC will move through a number of discrete steps from the traditional physical, local environment with the associated issues, to delivering all relevant services using remotely delivered professional hosting services, exploiting software as a service (SaaS) where available. The change will be evolutionary rather than revolutionary as individual services are moved along the trajectory at times of business opportunity i.e. when significant changes are precipitated by business process or platform and software changes.
The details and schedule of changes will be detailed in annual work plans.

HCPC infrastructure (traditional implementation)
Primary services are delivered locally using traditional infrastructure and hybrid virtualised servers.
Disaster recovery provision is delivered remotely using a warm standby approach utilising a commercial Infrastructure as a service (IaaS) provider.
Internet facing services (web sites) are delivered remotely utilising a commercial Infrastructure as a service (IaaS) provider.

Medium term objective
Move through opportunity, primary services to Cloud SaaS or Platform as a service (PaaS) infrastructure.
Replace warm standby disaster recovery provision on IaaS with cloud recovery services on demand.
Replace traditional onsite backup and shipping procedures to a cloud backup service.

Longer term objective
Move all primary services to Cloud services SaaS or PaaS.

Remove the DR provision for services run in the Cloud and exploit money backed guaranteed SLA.

Change History Record

Issue	Description of Change	Approval	Date of Issue
1	Initial issue	GGaskins	04/02/2016

11. Appendix C – Line of business application strategy

Information technology line of business application strategy
Guy Gaskins, Director of Information Technology

Document Control
Reference: IT LINE OF BUSINESS APPLICATION STRATEGY
Issue No: 1.0

Issue Date: 01/03/2016

Purpose and Scope
The purpose of this document is to set out the high level strategy for the provision of line of business applications ("Applications") at the HCPC. It does not address non-core applications such as desktop personal productivity applications. It applies to all information processing facilities within the HCPC.

Related Documentation
Annual IT work plan
IT strategy

Responsibilities
The IT department is responsible for the implementation of the strategy. The Council is responsible for the agreement of the HCPC annual budget.

Aim
To improve data sharing between business teams and interrelated business processes while maintaining data integrity by breaking up data silos.

To increase the internal technical support team application knowledge, and leverage higher external support services by reducing the diversity of technology that supports the core business.

To improve the availability of applications, and to be able to rapidly react to changes in business need to increase the scale of applications at short notice.

To improve data confidentiality while providing secure remote access by using cloud based software as a service.

To reduce costs by selecting software and service providers that have a long term strategic commitment to their products and services, while having a preferential commercial pricing agreement for public sector organisations.

Objective
To deliver Applications using 'commercial off the shelf' (COTS) software primarily through a cloud implementation. Reducing lifetime costs by following best practise development techniques to meet the business requirement, through configuration rather than customisation; bespoke custom development is considered only when there is not a commercial product that can effectively meet our substantive requirement.

The use of cloud technology improves the ability to scale applications while removing the overhead associated with the administration of a physical or virtual infrastructure. This enables resource to specialise in the core Application support service.

This approach exploits the long term, high commercial investment in the development of the software and platform services. Application development is outsourced to organisations that specialise in development for the Application.

Where technically possible cross functional departmental requirements will be delivered in consolidated applications i.e. there is a move to multi-departmental shared applications. This leverages the re-use of function and the sharing of data across silos without costly formal interfaces.

Higher functional fit				Lower
Bespoke local applications	Customised local COTS applications	Configured local COTS applications	Configured cloud SaaS application	Consolidated cloud SaaS applications
Higher cost of ownership			Lower cost of ownership	
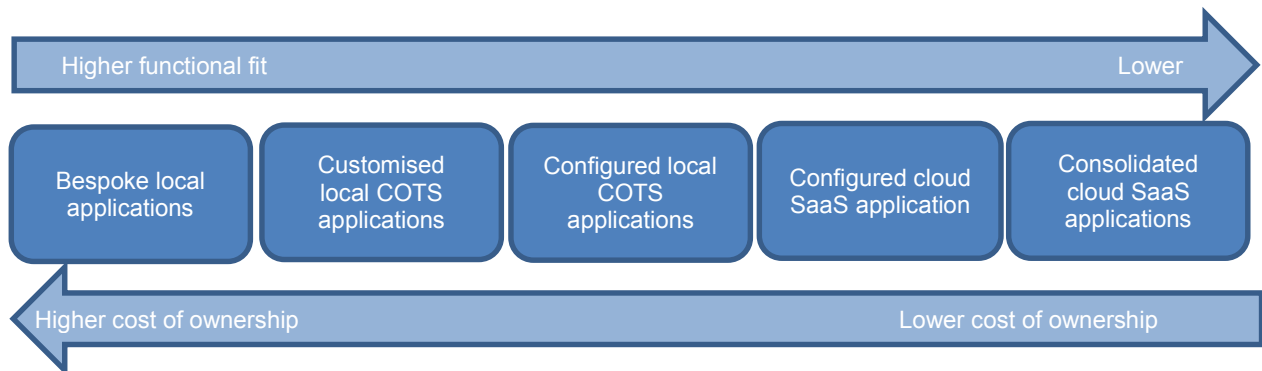
Approach

The HCPC will move through a number of discrete steps from the traditional local bespoke custom built applications, to a consolidated application implemented in the cloud as software as a service (SaaS).

The change will be evolutionary rather than revolutionary as individual services are moved along the trajectory at times of business opportunity i.e. when significant changes are precipitated by business process or platform and software changes.

The details and schedule of changes will be detailed in annual work plans.

Current position

A hybrid of traditional customised bespoke applications and commercial of the shelf software applications with significant customisations, delivered locally.

Medium term objective

Move to a hybrid model of configured commercial off-the-shelf software applications delivered locally and through the cloud. Create interfaces between line of business applications to facilitate data sharing in the support of business processes.

Select Microsoft as a strategic application supplier based on their position as a market leader for both business applications (enterprise and desktop) and cloud platform delivery, and their inclusion in government framework agreements for procurement.

Longer term objective
Deliver all line of business applications through cloud software as a service.
Consolidate separate line of business applications into single applications, enabling
data sharing and reducing license and support costs.

Enhance data confidentiality and integrity by leveraging the cloud service providers
investment in achieving international compliance for security standards e.g.
ISO27001, G-Cloud (OFFICIAL), FIPS etc.

Remove the disaster recovery provision for services run in the cloud and exploit
money backed guaranteed service level agreements.

Change History Record

Issue	Description of Change	Approval	Date of Issue
0.1	Initial draft	GGaskins	23/02/2016
1	Feedback update	GGaskins	01/03/2016

12. Appendix D – Information technology desktop strategy

Information technology desktop strategy
Guy Gaskins, Director of Information Technology

Document Control
Reference: IT DESKTOP STRATEGY
Issue No: 1.0

Issue Date: 01/03/2016

Purpose and Scope

The purpose of this document is to set out the high level strategy for the provision of desktop services i.e. the delivery of applications and services through personal computers (PC) both laptops and desktops. It applies to all information processing facilities within the HCPC, as well as remote access to the HCPC Information Services.

Related Documentation

Annual IT work plan

IT strategy

Responsibilities

The IT department is responsible for the implementation of the strategy. The Council is responsible for the agreement of the HCPC annual budget.

Aim

To minimise the financial and opportunity cost of the desktop infrastructure, by reducing the administrative overhead of managing a traditional PC infrastructure with its associated issues of:

- Information security management;
- Employee dependency issues, when a PC is allocated to named individuals;
- Malware detection and control;
- Heterogeneous environment making every PC unique;
- Conflicts between software packages ; and
- Patch management for performance, issue resolution and security.

To create a flexible office working environment:
- To allow employees to freely hot desk to any workstation and receive a similar experience; and
- To creat an innate business continuity plan by allowing dynamic and flexible use of office space in any of the HCPC office buildings.

To create flexible working opportunities outside of the HCPC office environment:
- To meet the growing expectation for flexible working patterns;
- To create an enhanced IT continuity plan, supporting key employees to function effectively outside of the office environment; and
- To extend the opportunity for employees to work outside of the HCPC office environment using their own equipment for ad hoc, unplanned or reduced functionality home working.

Objective
To create a homogenous desktop environment where the user applications and experience is abstracted from the physical PC infrastructure. Changing the emphasis from managing a PC infrastructure to deliver access to applications and services, to managing the effective delivery of applications and services independent of platform.

Approach
The HCPC will move through a number of discrete steps from the traditional physical environment, to delivering services using a hybrid approach and ultimately to a model delivering applications and services predominantly through cloud services.

The change will be evolutionary rather than revolutionary, as individual services are moved along the trajectory at times of business opportunity i.e. when significant changes are precipitated by business process or platform and software changes. The schedule of change is also determined by the commercial and technical viability of cloud delivered desktop technologies.

The details and schedule of changes will be detailed in annual work plans.

No flexibility, low security		High security	High flexibility
User experience bound to the physical PC			User experience independent of device
Locally installed software	Central package management	Virtualisation of applications delivered locally	Cloud delivered applications (DaaS)
User rights to install software	Admin rights to install software	Apps and data access managed centrally	
Unique PC builds (Heterogeneous)	Limited set of standard builds	Separation of PC, apps, user experience (Homogeneous)	Applications delivered on-demand
Data stored locally	Data stored on network centrally	Hybrid data (centrally & Cloud)	Data stored in the Cloud
Security based on the device		Authorisation controlled centrally	Authentication enables secure 'anywhere' access
Traditional		Medium	Longer term

Traditional desktop infrastructure
The simplest desktop infrastructure starts with few controls, every PC is unique and applications are installed locally with little or no automation. Data is stored locally and synchronised where needed with other managed storage. The emphasis of security is based upon agreed acceptable use of the equipment by employees.

Updates and patches rely significant upon manual intervention to maintain service availability. With local rights to install software, there is a significant risk of malware and software licence infringement.

Short term objective (HCPC PC infrastructure)
The HCPC have moved to a controlled environment where there is some separation of data, operating system and applications.

Significant homogeneity is established through centrally managed PC software packages and images. Standardised builds defined around departmental specialisms extending the common organisation requirements. Updates and patches are controlled and managed centrally.

Data is secured centrally and software installation is controlled centrally. Some applications are delivered locally through application virtualisation.

Medium term objective
Clear separation between the data, applications, operating system, user experience and physical device.

Exploit the breadth and depth of the Microsoft desktop optimisation tools to manage a physical Microsoft PC environment effectively through central management, displacing other technologies:

- Utilise Microsoft security controls to manage data and applications;
- Deliver appropriate applications through virtualisation including browser based applications;
- Separate the user experience from the physical PC environment.

Longer term objective
Move from a device centric strategy to one where the focus is on delivering the application or service to the business users. This will exploit cloud delivered services significantly.

The clear separation of the component layers of the desktop environment will be critical in delivering a virtualised desktop to any device using Desktop as a Service (DaaS) or similar variants.

Replace the corporate physical PC technology with 'zero' clients; reducing maintenance requirements, power consumption, noise and extending device

lifetimes. Enable the use of personal devices to utilise the corporate cloud desktop service.

Remote access will be achieved through any number of devices, corporate or user owned. The user experience will be determined by the type and how 'trusted' the chosen device is.

Data will be stored centrally offsite in Cloud services; increasing availability, reducing maintenance requirements and increasing business agility.

Change History Record

Issue	Description of Change	Approval	Date of Issue
0.1	Initial issue	GGaskins	16/02/2016
1.0	Feedback update	GGaskins	01/03/2016

13.   Appendix E – Information technology mobile working strategy

Information technology mobile working strategy
Guy Gaskins, Director of Information Technology

Document Control
Reference: IT MOBILE WORKING STRATEGY
Issue No: 1.0

Issue Date: 11/03/2016

Purpose and Scope
The purpose of this document is to set out the high level strategy for mobile working at the HCPC.

Related Documentation
Annual IT work plan
IT strategy
Desktop strategy
Hosting strategy
Line of business application strategy

Responsibilities
The IT department is responsible for the implementation of the strategy. The Council is responsible for the agreement of the HCPC annual budget.

Aim
To provide technical services that enable employees to work effectively and securely outside of the HCPC office campus using both corporate owned devices as well as untrusted devices. This will increase the resilience of the IT and business continuity plans, as well as creating the opportunity to have an agile workforce that is capable of productive work irrespective of physical location.

Objective
To provide a range of secure methods to remotely connect to the corporate services which address different working practice scenarios, from access to email, calendar and contacts on the go, to full access to line of business applications.

To break the dependence upon using a corporate device by abstracting the application services from the physical device that is used to consume the service.

To provide methods to secure untrusted devices and control permissions to reflect the security status of the device i.e. reduce functionality to protect data dependent upon the trust of the device.
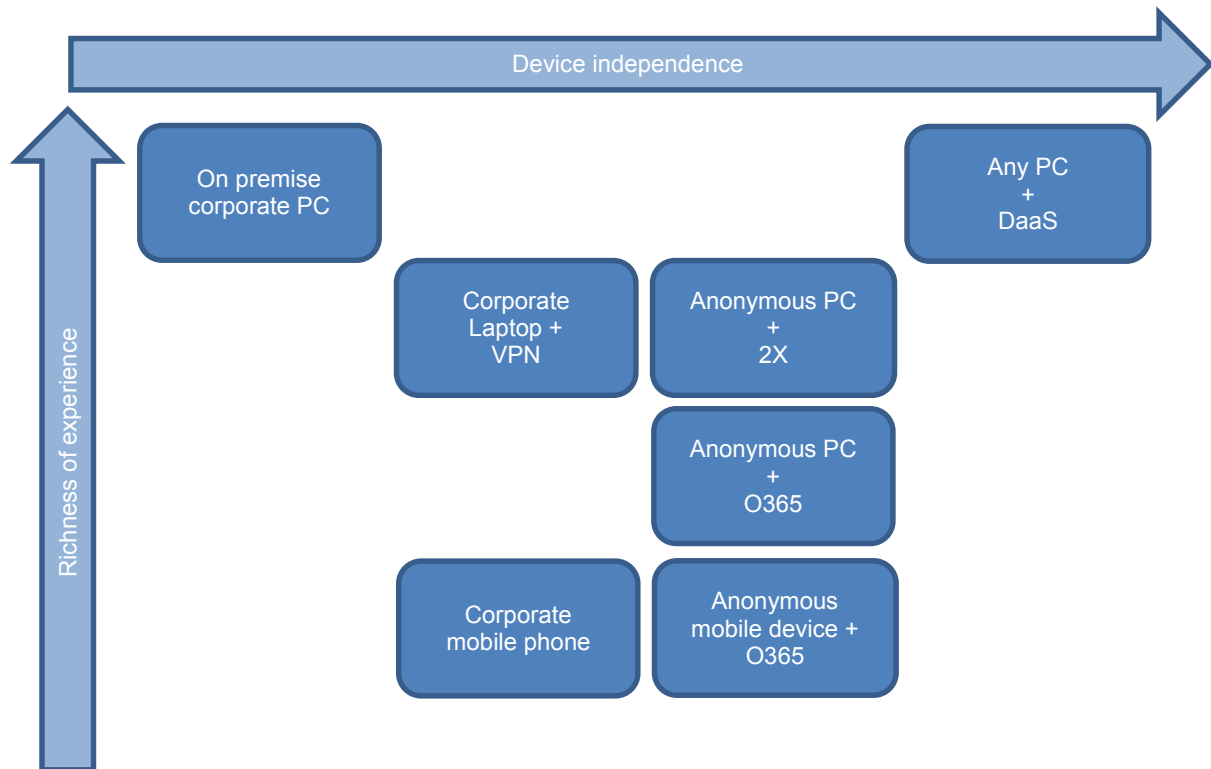
Approach

The HCPC will move through a number of discrete steps from a traditional mobile strategy based upon a corporate laptop with a virtual private network (VPN), to delivering a hybrid approach and ultimately to a rich fully functioning remote desktop environment delivered as 'desktop as a service' (DaaS) and used both from the HCPC offices and while working remotely.

The approach will cater for different scenarios of usage:

- Regular, desk based with full access to line of business applications;
- Regular, desk based with full access to personal productivity tools;
- Regular, mobile device access to emails, calendar and contacts;
- Irregular, mobile device access to personal productivity tools; and
- Irregular, mobile device access to emails, calendar and contacts.

The change will be evolutionary rather than revolutionary as technology is introduced at times of business opportunity when changes are precipitated by significant platform and software changes. The schedule of change is also determined by the commercial and technical viability of remote access technology.
The details and schedule of changes will be detailed in annual work plans.

HCPC infrastructure (traditional implementation)

Remote access is delivered through a traditional corporate laptop and VPN for full access experience; by the use of a corporate Blackberry for regular access to

emails, calendar and contacts; and using session virtualisation (2X) for full access using untrusted devices.

Medium term objective
Provide untrusted devices access to email, calendar and contact data using Microsoft Office 365 cloud services. The intranet and file storage will be migrated to Office 365 allowing secure access to both corporate data and personal productivity tools such as Word, Excel and PowerPoint. The intranet will be used as a way of providing portal access to local back office web applications such as the financial purchase order processing and HR portals.

Access will be gained through both corporate (trusted) and untrusted devices. The richness of the user experience will be determined by the trust level of the device.

Longer term objective
Move from a device centric strategy to one where the focus is on delivering the application or service to the business users. This will exploit cloud delivered services significantly.

The clear separation of the component layers of the desktop environment will be critical in delivering a virtualised desktop to any device using Desktop as a Service (DaaS) or similar variants.

Remote access will be achieved through any number of devices, corporate or user owned. The user experience will be determined by the type and how 'trusted' the chosen device is.

Data will be stored centrally offsite in Cloud services; increasing availability, reducing maintenance requirements and increasing business agility.

Remove the DR provision for services run in the Cloud and exploit money backed guaranteed SLA.

Change History Record

Issue	Description of Change	Approval	Date of Issue
0.1	Initial issue	GGaskins	03/03/2016
1.0	Feedback	JRoth	11/03/2016

14. Appendix F – Information technology telephony strategy

Information technology telephony strategy
Guy Gaskins, Director of Information Technology

Document Control
Reference: IT TELEPHONY STRATEGY
Issue No: 1.0

Issue Date: 24/02/2016

Purpose and Scope

The purpose of this document is to set out the high level strategy for the telephony provision at HCPC incorporating mobile and desk telephony. It applies to all information processing facilities within the HCPC and all employees.

Related Documentation

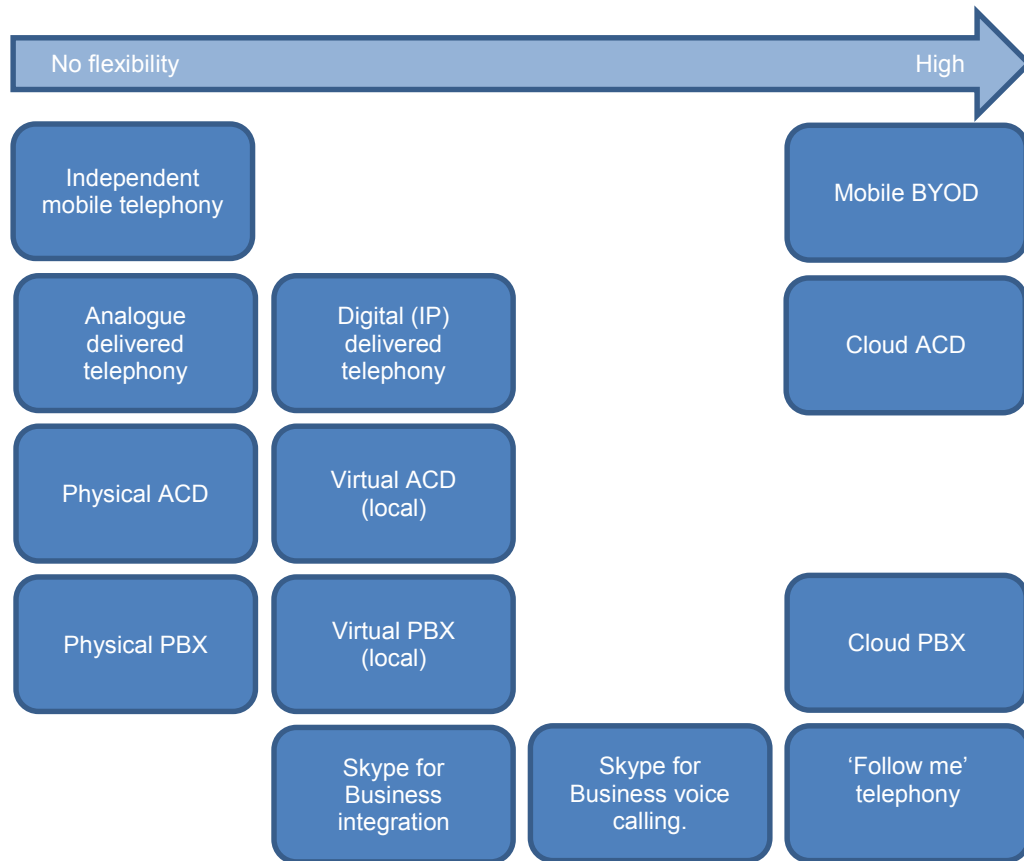Annual IT work plan
IT strategy

Responsibilities

The IT department is responsible for the implementation of the strategy. The Council is responsible for the agreement of the HCPC annual budget.

Aim

To provide a communication infrastructure that supports a mobile workforce with flexible working patterns and that uses both corporate and personal devices. To reduce the reliance on physical infrastructure and benefit from the anticipated reduction in effort required for maintenance and support. To reduce the risks associated with the loss of the office facilities following a disaster such as fire or flood.

Objective

To consolidate telecommunication to a single platform by converging mobile and fixed line telephony services and to deliver telephony from cloud service providers.

No flexibility			High
Independent mobile telephony			Mobile BYOD
Analogue delivered telephony	Digital (IP) delivered telephony		Cloud ACD
Physical ACD	Virtual ACD (local)		
Physical PBX	Virtual PBX (local)		Cloud PBX
	Skype for Business integration	Skype for Business voice calling.	'Follow me' telephony

Approach

The HCPC will move through a number of discrete steps from the traditional physical, local environment for fixed line telephony delivered through physical ISDN, to flexible Voice over IP (VoIP) delivered telephony.

Mobile telephony will become an extension of the desk based telephony securely delivered to any authorised handset.

Secure telephone traffic will be maintained for sensitive credit card payment collection services.

The private branch exchange (PBX) and automatic call distribution (ACD) will be relocated to a cloud service provider along with call recording functionality.

The change will be evolutionary not revolutionary as commercial services become available and reliable.

The details and schedule of changes will be detailed in annual work plans.

HCPC telephony (traditional implementation)
Desktop telephony delivered through an analogue public switched telephone network (PSTN).

Public facing non-geographic numbers (NGN) providing limited mitigations for the physical loss of the office in the event of a disaster.

Separation between the desktop telephone service and the mobile network service.

Private Branch Exchange and Automatic Call Distribution is delivered locally using virtual servers, as is call recording and other add-on services.

Medium term objective
Introduce Skype for Business as a messaging hub for voice (soft phones), video conference and IM, restricted to within HCPC.

Integrate Skype for Business into the local PBX and allow integration from the desktop to make telephone calls through 'click to call'.

Virtualise the local infrastructure to provide a more resilient service and to create a practical disaster recovery position.

Move from analogue delivered telephony through the PSTN to digitally delivered telephony using VoIP.

Exploit existing PBX technology to enable 'follow me' telephony abstracting the location and available telephone devices.

Longer term objective
Converge messaging through voice, video, instant message (IM) and email by using Mobile Device Management software (MDM) to secure untrusted devices, and deliver the Skype for Business client with PSTN calling enabled.

Move the PBX and ACD to a cloud delivered model.

Converge mobile and fixed line telephony to a single personal number with 'true' follow-me telephony applied.

Converge messaging to Line of Business (LOB) applications, integrating seamlessly the application and telephony services.

Exploit money backed guaranteed SLA for cloud services to reduce the risk of a disaster recovery event.

Change History Record

Issue	Description of Change	Approval	Date of Issue
0.1	Initial draft	GGaskins	04/02/2016
1.0	Review and comments	JMcMahon	24/02/2016