

LONDON BOROUGH OF BARNET

INFORMATION AND COMMUNICATIONS TECHNOLOGY STRATEGY EXECUTIVE SUMMARY

“To enable Barnet residents, local businesses, Members, staff and partners to access the information and services they need securely and reliably from anywhere through any device.”

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1. Executive Summary

This Information and Communications Technology (ICT) Strategy provides the Council with a clear and concise vision for the future state of the ICT Service and Infrastructure. It underpins the Council's Corporate Plan 2015-2020; draws on the Council's business strategies and plans; and has been developed through extensive consultation with Commissioning Directors, Delivery Units, Capita, Re and Barnet Group. The Strategy also takes into account central government direction of travel, policy and IT industry innovation and best practice.

The Council faces significant challenges, and how services will be delivered and accessed in the future will change radically. The Council faces unprecedented budgetary pressures. There is a need to deliver more for less and a need for closer collaboration with partners and external agencies to deliver better outcomes. Advances in technology has fuelled an enhanced 24/7 personalised customer experience in other sectors which challenges current models of delivery.

The Council's prevailing direction is towards a commissioning and enabling model of service delivery. This requires a responsive, flexible IT environment; shared IT platforms; better use of information; and a focus on improving services to customers through smarter ways of working.

Implementation of this strategy will not only modernise how the Council functions in the short term, but provide the agility and building blocks to allow the Council to embrace the opportunities that new technologies and new models of service provision bring.

The IT Strategy will drive effective prioritisation and investment decisions. Implementation will deliver:

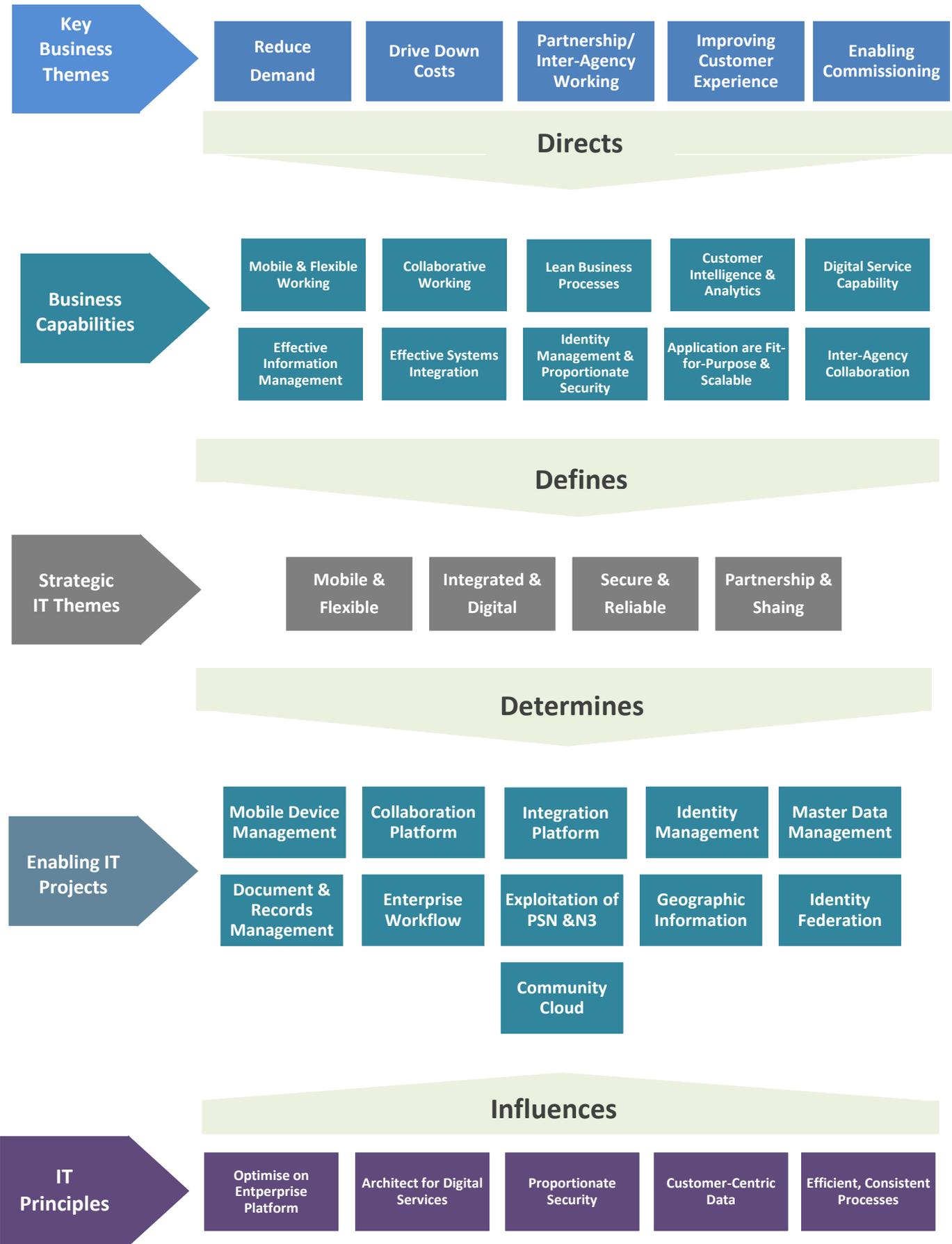
- a. A cost effective IT Service that contributes significant business value
- b. An enhanced, modern customer experience by providing the tools for digital services and a process of continuous improvement
- c. More effective inter-agency working by allowing closer collaboration
- d. Increased productivity and customer satisfaction through an empowered field-based workforce with access to the information they need
- e. Better public service outcomes through intelligence led service planning
- f. Property rationalisation savings by enabling smarter working
- g. Reduced complexity and increased efficiency for employees with a significant reduction in the number of applications utilised by the Council.
- h. A modern, intuitive, functionally rich but simplified IT user experience

Approval of this strategy will initiate:

- Development of an overarching delivery plan, taking into account priorities and dependencies.
- Business cases for each of the components, starting with the high priority delivery needs.

The following diagram illustrates how IT can contribute to business value through 4 Strategic IT Themes. From these, the key enabling projects are identified.

IT Strategy On-A-Page



2. Introduction

Purpose:

This strategy provides a view of the future IT capability, architecture and services required by the Council, aligned to current and future business needs. It is not a detailed specification of IT components, but a business-oriented document that provides the necessary contextual view to enable IT investment decisions to be aligned with the corporate direction.

The strategy is about how IT will help London Borough of Barnet to succeed in delivering its objectives. It is an integral part of the business strategy - it sets out how IT will guide the business strategy, and how IT will deliver on the business strategy.

Technology within the Council is critical to business success. Delivery units rely on technology services to enable successful outcomes. Business areas and ICT could do more to ensure that maximum benefits are being derived from current and future technologies. For this to happen, the business needs to embrace ICT within key decision making processes and the Council's major line of business systems need to be viewed more as Council strategic assets. Achieving this will require cultural and procedural changes but the potential benefits in the form of improved business efficiencies and delivery of faster outcomes should be viewed as essential.

The ICT strategy is supported by a five year implementation roadmap influenced by an assessment of business risks, priorities and the likely availability of funding and business cases.

Source:

- The Strategy underpins the Council's Corporate Plan 2015-2020;
- Delivery Unit plans and objectives
- Consultation with Commissioning Directors, Delivery Units, Capita, Re and Barnet Group
- Priorities and Spending Review 2016-2020
- Takes into account central government direction of travel, policy
- IT industry innovation and best practice.

The strategy considers external factors such as government health reforms and austerity measures which have financial and organisational impacts felt by employees, partners, service providers and the residents of Barnet. ICT services, like all other Council services, need to contribute to the savings.

This document will be updated and reissued annually to reflect the impact of ongoing strategic planning and needs assessment, with changes being fed back into ongoing ICT change programmes.

The Strategy Supports and enables:

- Information Management Strategy
- Smarter Working
- Customer Access Strategy
- ICT management and security policies

3. Business Context

London Borough of Barnet Council faces significant challenges over the next five years. All delivery units are faced with reducing budgets whilst needing to enhance the quality of service delivery. ICT can directly help by delivering a robust and flexible technology platform, and by introducing new, cost effective solutions.

ICT must provide solutions that represent value for money. Over the next five years LBB will become increasingly aligned with Central Government, Health, other third parties and outsourcing partners. This will increase the need to realise the benefits of shared services and alternative delivery models.

The key business themes to which the IT Strategy must align are:

Reduce Demand

Drive Down Costs

Partnership / Inter-Agency Working

Improve Customer Experience

Enable Commissioning

Key Business Theme 1: Reduce Demand

A significant challenge is growth in demand for services; particularly in Health and Social Care where age-related demand is set to increase dramatically. In addition to increasing volumes, there is an increase in scope of service responsibilities and statutory obligations. A prevention strategy is necessary and information systems that can facilitate this are vital.

Key Business Theme 2: Drive Down Cost

The need to reduce operational costs whilst absorbing increasing demand and improving customer service is a key challenge and one where IT can make a significant contribution.

Key Business Theme 3: Partnership / Inter-Agency Working

There is an increasing need to engage with external professional teams. This is driven by increasingly shared public service outcomes e.g. managing care choices more holistically with health. Collaboration and co-design with partners means new ways of working.

Key Business Theme 4: Improve the Customer's Experience

The Council is committed to having a strong customer focus. Customer expectations are becoming more sophisticated. Services need to be increasingly mobile, personalised, intuitive and available 24/7. By 2020, the majority of customer interactions with the Council will be digital, self-service, intuitive, and flexible and will increase customer satisfaction.

Key Business Theme 5: Enable Commissioning

Barnet's Commissioning approach drives the Corporate Strategy. We support a varied mix of providers: in-house, charities, private and joint ventures. This range of delivery models requires a flexible and collaborative approach to the design and delivery of IT services.

4. Strategic IT Themes

A number of business capabilities have been identified as key to the Council meeting its challenges and achieving its vision. These capabilities fall into four Strategic IT Themes:

Strategic IT Theme 1: Mobile and Flexible

Staff are mobile and less dependent on offices while remaining connected with their teams, systems and information.

Staff are able to work remotely and are not dependent on specific Council sites

Staff are able to collaborate with colleagues and agencies while working in the field

Access to systems and information is simple for mobile workers

Mobile devices are appropriate to the way staff work

Strategic IT Theme 1: Mobile & Flexible

The highly mobile, social, and always connected world has had a profound effect on business and increasingly local authorities. This theme will support mobile and collaborative working and interaction with customers. It will enable the deployment of new applications and tools to integrate services and content with increasingly mobile technologies.

The Council workforce will be mobilised and costs reduced with explicit use of mobile technologies, video/audio conferencing and collaboration tools.

The Strategy will harness these technologies to support smarter working; increase the number of people per allocated desk; rationalise the Council's property estate (e.g. enable the move to Colindale in 2017); reduce carbon footprint; and improve productivity.

The architecture provided under this theme will support effective collaboration both internally to reduce the feeling of isolation when working in the field and with partner agencies (see also the Partnership and Sharing theme). All services and partners will be able to share information on projects and initiatives.

Strategic IT Theme 2: Integrated and Digital

Systems are integrated enabling data to be stored, shared and consumed digitally and securely, to drive reliable, consistent and efficient processes.

Applications are fit-for-purpose and scalable

Staff are trained to make better use of applications

Better quality data to improve service delivery efficiency

Portals are intuitive for Residents, partners and staff

Effective systems integration

Lean, consistent businesses processes

Strategic IT Theme 2: Integrated and Digital

The Council is seeking through its Customer Access Strategy and the associated Customer Transformation Programme to enhance the customer experience through effective demand management. To achieve effective demand management, the Council needs to deliver excellent online services that are integrated through to the Council's internal data, systems and processes.

This theme will help the Council enhance its engagement with its customers and provide a personalised, responsive experience. It will enable residents and local businesses to find what they need in a self-service environment. A key element of this will be to reduce instances of the use of paper in Council processes to allow information to be electronically available to customers and staff.

A programme of activity will allow the Council to realise a variety of benefits:

- **Better Customer Experience** – through digital services, user satisfaction will increase.
- **Reduced cost of delivery** – streamlined processes, end-to-end integration, and automation.
- **Culture of Continuous Improvement** – embedded to drive continuous business processes improvement and ensure benefits realisation.
- **Mobile-enabled services delivery** – reduced need to return to offices to find paper-based information and carry out manual processes

Strategic IT Theme 3: Secure and Reliable

A reliable and secure service that leverages existing investment, reduces duplication, and delivers what the business needs.

Single, consistent user identity across systems

Reliable ICT that supports business continuity

Proportionate security

PSN and PCI-DSS compliance

Secure access to information for Residents and Businesses

Strategic IT Theme 3: Secure & Reliable

Changing delivery models are increasing the complexity of the security landscape. Partnerships and mobility are adding to the complexity, requiring new approaches to extend security outside of the firewall, and to provide risk intelligence and rapid response. This theme will propose a solution which is federated and scalable to achieve the necessary interoperability. Security will be applied proportionately so that users are only required to follow complex authentication procedures when they are accessing sensitive information. This theme will be delivered in partnership with the Customer Transformation Programme, which is at the centre of providing new services to residents.

This theme will also deliver rationalisation of the application estate, promoting re-use of existing investments and reducing duplication. This will also enable information to be captured, stored and maintained in fewer places leading to improved data quality and reliability.

Key benefits:

- **Keep data safe** – ensure data is protected and access only provided through appropriate layers of authentication and security
- **Remove risk** – ensure the Council is adhering to security accreditations where appropriate
- **Simplify user experience** – where appropriate through single sign-on authentication
- **Improved data quality** – leading to improved service efficiency and effectiveness

Strategic IT Theme 4: Partnership and Sharing

Platforms are shared and accessible through a variety of channels, enabling collaboration with residents, local businesses, partners and third parties.

High assurance identity management & data security

Customer communication

Inter-agency collaboration

Digital service capability

Integration with Partner agencies supports commissioning

Customer & business Intelligence & advanced analytics

Strategic IT Theme 4: Partnership & Sharing

Secure sharing of information with residents, local businesses and partners is an increasing requirement to deliver service. Partners include major organisations such as the NHS and Police as well as local charities and voluntary sector organisations.

This theme will deliver sharing and collaboration capabilities to deliver on a variety of scenarios ranging from transfer of a single document containing sensitive information through to regular, automated information streams.

Key benefits:

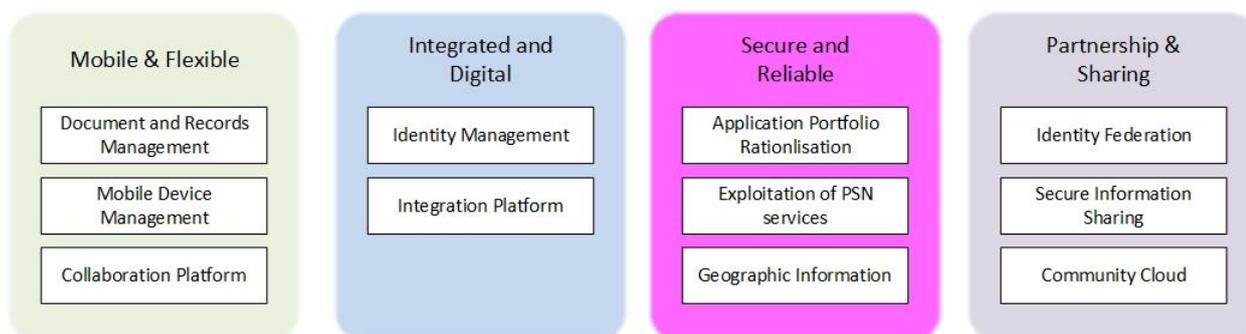
- **Reducing information security risk** – by standardising secure information exchange, confidence in sharing with partners is increased
- **Reducing manual information exchange** – increase efficiency by providing the tools to reduce the amount of manual effort, postage and other means employed to exchange information
- **Compliance with standards**– use integration to exchange information in compliance with established standards e.g. the Interoperability Toolkit (ITK) standard as adopted by NHS and local health and social care communities

5. Technical Components

In order to deliver the drivers and outcomes there are a number of specific core ICT components that need to be established either through adapting and enhancing existing applications within the LBB landscape or introducing new ones.

The intention is to implement these core components and retire other components where functions are duplicated. Economies will be achieved by having a less diverse estate and so reducing costs to maintain.

These core components are as follows:



Theme 1: Mobile and Flexible

Document and Records Management

A key enabler of the IM Strategy, document and records management enables centralisation and digitisation of previously paper-based information and provides secure, efficient access from a variety of locations. It supports paperless office and archive reduction initiatives and access to documentation for mobile workers.

Mobile device management

This component provides a robust and centralised capability to apply and manage policy for corporate and “bring your own” devices which may be required by Council staff to deliver service efficiently. It can apply the policy required to ensure security is maintained to local and Cabinet Office standards, ensure license compliance and procedures when a device is lost or stolen.

Collaboration Platform

This facilitates shared work spaces and communication, both internally and with external partners. It enables remote working with tools for document collaboration and conferencing.

Theme 2: Integrated and Digital

Identity Management

This delivers a common identity management capability with a single source for managing access, revocation, authentication and authorisation of system users. It is able to federate with other identity providers, both external and internal to provide a broader, secure reach supporting sharing information across organisational boundaries.

Integration Platform

An “Enterprise Service Bus” is capable of communicating with a broad range of systems and data sources. The integration platform provides orchestration and data mapping facilities to enable effective and automated data exchanges in both batch and near-real-time mode. This enables the Digital services architectural approach by providing consistent data provider services to a broad range of channels and consumers in a predictable, repeatable way.

Theme 3: Secure and Reliable

Application portfolio rationalisation

Application portfolio rationalisation actively seeks out IT services which are not delivering value, are a poor fit to business needs, do not comply with technology standards or are duplicating other systems’ functions. This process will drive re-use of existing investments and improve value for money from IT as well as reducing complexity for both users and the IT service.

Exploitation of PSN Services

The Public Services Network delivers a range of services which the Council should be taking advantage of. The core service allows secure communication between government bodies including DWP and NHS (via N3) and for shared services such as Brent registrars and Harrow legal. Consideration can also be given to the Digital Marketplace on G-Cloud which supplies services ideal for secure partner information sharing.

Geographic Information

The ability to store and use information with a geospatial dimension is essential to the Council to deliver services and gather Management Information. Accurate geospatial data is critical to keeping customers informed, for example advising residents of planned works in their area, as well as being essential for asset management and effectively planning and managing the Barnet environment.

Theme 4: Partnership and Sharing

Identity Federation

Linked with Identity Management (Theme 1), the ability to federate identity with external organisations is a foundation for information sharing with external parties whether they be NHS or local businesses and charities. Establishing federated trust relationships enables secure access to be provided to information while preventing the need to take on onerous administration of access management for non-Council users.

Secure Information Sharing

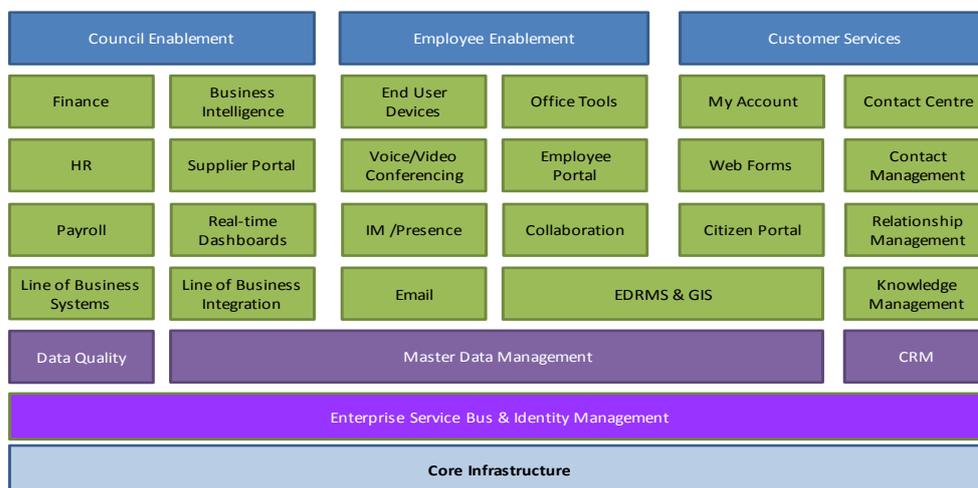
This capability will deliver the ability to share information on a number of levels and through a variety of mechanisms with external organisations and individuals. This will involve: ad-hoc document exchange through to continuous, automated information feeds; in some instances adopting the information exchange standards of other organisations; while in other circumstances setting the standards where none exist or where the Council needs to be taking a lead.

Community Cloud

This capability exploits the provision built into the ICT transformation programme whereby infrastructure is made available to host applications and services on behalf of the Barnet ecosystem and supports the Commissioning model. Where new and existing partners need the use of systems which they cannot themselves provide or are required by commission to use Council-mandated technology, the community cloud can be extended to deliver these services.

6. Proposed Architecture

The proposed future state architecture for the Council reflects how the ICT capabilities are organised to deliver the needs of the key stakeholder groups. The following diagram illustrates this:



A common set of capabilities provide the “glue” around the internal business systems and the externally facing services as consumed by users with a variety of devices. The purpose is to achieve a consistent way of delivering services and information securely to a variety of consumers while maintaining value by achieving improved economies and efficiencies. Economies are achieved by having a less diverse estate and so reducing costs to manage, a smaller skill set to maintain in support and development and reduced user training. This also leads to efficiencies by enabling a greater degree of re-use when change occurs – for instance when systems are replaced.

The capabilities may not necessarily be one single application (although the fewer the better to minimise interoperability issues), but rather a set of services specified to fulfil business requirements.

7. IT Principles

A set of IT principles will guide IT decision making. These principles provide a cultural and standards-driven steer to new and existing solutions design to ensure they deliver the business needs and outcomes required. This supports the Enterprise Architecture objective of alignment of business and IT services.

The high-level IT Principles are:



IT Principle 1: Optimise Enterprise Architecture

- Description** The direction will be towards using enterprise-wide platforms.
- Rationale** Reduce the number of business solutions providing similar functions into a common platform to remove complexity, reduce data duplication and redundancy. A shared platform approach to delivering digital services and managing data accelerates the adoption of new technologies, lowers costs and reduces duplication.
- Implications** Application review to identify opportunities to rationalise. Proactively retire legacy systems based on lifecycle and cost/benefit analysis.

IT Principle 2: Architect for Digital Services

- Description** The direction will be to architect our systems using a Service Orientated Architecture (SOA) approach and choose technology and applications that allow interoperability and integration end-to-end from the front office to the back office.
- Rationale** To deliver digital services which enhance the customer experience and deliver at a lower cost through multiple channels. A SOA approach will allow us to decouple information and data from applications and develop a common set of business functionality components. This will drive more efficient processes, reduce application portfolio and allow us to present information, from mobile applications to websites, and increased automation at the presentation layer. If done right, it will add reach and value to Council services by helping to surface the best information and making it widely available through a variety of useful formats. This also provides vendor agility by reducing lock-in and enabling individual components to be modified or replaced without knock-on effects on the rest of the IT landscape.
- Implications** Integration of Customer Platform into relevant connected systems using open integration approaches. Architectural review of the application estate to rationalise and migrate to common platforms. Replacement over time of non-compliant and monolithic legacy systems which cannot support the SOA agenda.

IT Principle 3: Proportionate Security

Description	Security measures are applied in direct proportion to the sensitivity of the data being accessed. This includes the user experience so that the need to undergo complex identity verification is limited to those processes and information accesses which demand it.
Rationale	Identity verification and user authentication processes can become onerous activities which are justified when accessing sensitive information. However, these processes can become unjustified and frustrating if the user is only accessing public domain or relatively insensitive information.
Implications	Council information classification must be comprehensive and accurate to enable the appropriate security measures to be applied. An identity management platform must be established to enable variable levels of authorisation to be conferred according to the level of sensitivity.

IT Principle 4: Data is Customer-Centric

Description	Data is created, managed, and presented through websites, mobile applications, raw data sets, and other modes of delivery, and allows customers to shape, share and consume information, as required.
Rationale	How we create information, the systems we use, and how we organise and present data, must focus on our customers' needs. Customers must also be able to trust that the council will maintain and use their data securely and in compliance with standards such as those embodied within the Data Protection Act. Putting the customer first means quality information is always accessible, current and accurate.
Implications	Develop improved customer insight to understand the customer's business needs. Make content more broadly available and accessible and present it through multiple channels on any device. Make content more accurate and understandable by maintaining plain language and content freshness standards. Encourage feedback to ensure we continually improve service delivery. Facilitate transactions that rival customer experiences when engaging with the private-sector. Customers are directly able to access and update their Council-held data and provide the appropriate consents on how it is used.

IT Principle 5: Efficient, Consistent Processes

Description	IT is to support efficient business processes and the way we work.
Rationale	IT can better deliver what the business needs by focussing on the business processes which it is required to support and enable.
Implications	The business must document its emerging requirements which are then used as the measure of success for IT transformation and change. The business must provide priorities for IT changes to ensure that there is sufficient time and resources available to deliver what is needed. Effective business relationship management is established and maintained within the IT service.

8. Current Landscape

The following are key achievements realised through the ICT transformation programme and provide a strong foundation for the implementation of the capabilities described in this ICT strategy.

- Data centres and resilience
- Replaced Email platform
- New networks
- Service improvement
- Performance & Supportability
- Replacement web sites & My Account
- Mobile Devices

The following elements evident in the current ICT landscape represent the core focus areas for the strategy to address:

Silo Application Structure

- Applications dictate business process
- Inability to integrate, collaborate

Vast number of Applications

- Duplication of systems and data; discrete information structures preventing joined-up data
- Expensive to maintain, proprietary, expensive to develop
- Need for modern productivity tools

Technical Architecture lacks Flexibility & Agility

- Information held in islands, unstructured held in thousands of documents with multiple versions of related data
- Difficult to marshal accurate and timely information to support decision making and information sharing.
- Reporting and analytics are currently underutilised, with business users often tracking data in separate spreadsheets and databases in order to report and utilise information

9. IT Governance

IT Governance will sustain direction and guidance for the development and implementation of IT for the Council. It will monitor and ensure compliance with corporate policies, standards, vision, strategy and change control procedures. An essential function must be to ensure alignment between business, transformation and IT strategies and roadmaps. It will provide guidelines on key principles and standards to be followed and make reference to industry best-practice. These will include standards across the entire enterprise: business, information & data, security, applications, technology, infrastructure.

10. People

The challenge the Council faces is to improve the effectiveness of its people's contribution to public services at a time when the importance and expectation of IT is increasing. The Government's ICT Capability Strategy, (October 2011) addresses the people aspect of future Government ICT, building on the Skills Framework for Information Age (SFIA). The IT Operations Plan will provide an assessment of how it plans to leverage and develop the skills capability of its workforce.

The implementation of the IT Strategy will provide new applications with new functionality, and enable new ways of working. The transformation will only be a success if adequate training provision of staff is included in the cost models and business cases of each project. Failure to address this adequately will lead to expensive solutions delivering sub-optimal value.

11. IT Roadmap

The roadmap shows the broad timelines for the implementation of strategic platforms and capabilities including the internal steps which will make up their projects including:

- Requirements/Proof of Concept
- Product selection
- Design and Build
- Testing and Training
- Rollout

