

EXECUTIVE MANAGEMENT TEAM: 15 DECEMBER 2016

CORPORATE OVERVIEW & SCRUTINY PANEL: 19 JANUARY 2017

CABINET: 1 FEBRUARY 2017

ICT STRATEGY 2017/18

1. INTRODUCTION

- 1.1 The purpose of this report is to set out and seek agreement to the proposed new ICT Strategy for the next twelve to eighteen months.

2. ICT STRATEGY

- 2.1 It is proposed to keep this ICT strategy's time window to twelve to eighteen months to ensure a level of agility with regard to the future that has been lacking in NFDC's approach to ICT in the past.

There are two compelling reasons for taking this approach:

- Uncertainties with regard to the future requirements for ICT at NFDC. For example, the evolving Digital strategy and degree of 'channel shift' we may wish to enable through technology.
- As we are all aware from our own experience of computing (e.g. smart phones, tablets, online commerce, and social media) the world of information technology is moving so fast that any strategy that fixes any aspect of ICT is likely to be proved redundant very fast. This has never been more so with the rapid developments of, for example, mobile devices, cloud computing, hyper-convergence, internet of things (IOT), automation and software as a service.

With this in mind it is proposed that this strategy is reviewed and incrementally redefined on a twelve to eighteen month basis. This means that NFDC can adjust ICT, within a framework of clear service objectives, to respond to new opportunities, take advantage of new technology, or reorganise the team at relatively short notice in comparison to the historical pace of change.

- 2.2 The ICT Strategy consists of four components: ICT Projects Portfolio, ICT Organisation, ICT Technology Roadmap and ICT Operating Model. In addition, special consideration has been given to Members' ICT requirements. The strategy is attached as Appendix 1.

3. RECOMMENDATION

- 3.1 It is recommended that EMT support and endorse the ICT Strategy.

For further information please contact:

Rob Beere
Service Manager – ICT Services
Tel: 023 80285588
E-Mail: rob.beere@nfdc.gov.uk

Background Papers

APPENDIX 1 – ICT STRATEGY REPORT

Contents

Section	Contents
1	Introduction & Context
2	ICT Projects Portfolio
3	ICT Organisation
4	ICT Technology Roadmap
5	ICT Operating Model
6	Members' ICT

1. Introduction & Context

The strategy aims to address the key domains of Stakeholder, People, Technology and Processes. This is in order to reach a clear understanding of the key reasons for ICT doing what it does. Specifically, why we are doing one thing and not something else, who does it, what we do, and how we do it efficiently and effectively. The strategy is laid out to follow this structure and each section covers one of these domains, with a final section to address Members' ICT requirements. This is illustrated in Figure 1 below.

	Stakeholders “why?”	People “who?”	Technology “what?”	Processes “how?”
Scan	Meetings, ICT Survey – accumulated issues, requirements & demands	Current team SWOT, roles & responsibilities, organisation	Apps Architecture mapping, Infrastructure issues, legacy estate versus digital	Governance, workflows, practices - team & suppliers
Analysis	Potential projects, business cases and how to proceed	Positives & negatives	Tactical and strategic options and drivers against demand	Positives & negatives
Vision	EMT, Service Managers, Members, decide on and buy in to investments and benefits & sequencing	Draft new organisation to meet ICT Strategy	Integration of new technology with existing investments	New practices, behaviours and governance for ICT
Outcome	ICT Projects Portfolio	ICT Organisation	ICT Technology Roadmap	ICT Operating Model

Figure 1: ICT Strategy components (from 100 Day Plan)

Goals and Objectives of ICT

The goals of the ICT Service are as follows:

- To deliver an IT Service that applies the right digital technology to enable the council to meet the Corporate Plan & Service Plans
- To collaborate with Members, EMT, Service Managers, Officers, and Suppliers, to deliver increasingly efficient services and financial improvements through ICT

- To sustain a professional, productive, and enthusiastic ICT team who focus on ‘the customer’ and work towards continual improvement

To meet these goals ICT will have six objectives:

Supporting our Corporate Plan with NFDC wide Applications
Helping deliver our Service Plans through individual applications
Maximising Digital Public Engagement
Standardising/Reinforcing/Protecting our technology platforms
Enabling a flexible/mobile workforce without compromising security
Being devolution ready – being open to shared services, common platforms and integrated applications where practical

Key Issues Today

ICT has clear and present issues to face today:

1. A pent up demand for ICT across council services, ranging from the need for application upgrades to wholesale renewal of systems.
2. An aged and somewhat unstable ‘on premise’ infrastructure, opaque asset management, unclear license compliance, constraining network architecture, and limited technology to assist mobile working.
3. A deficit in modern technology know-how or skills within the NFDC ICT team.
4. A weak partner/supplier network with a largely legacy mind-set and limited capability to help us change or improve.
5. Unclear direction as yet for Digital at NFDC making it hard to invest in ICT without risking later technology redundancy.

The ICT Strategy aims to address and plot a course to resolve these issues.

2. Projects Portfolio

Introduction

The objective of this element of the strategy is to document the ICT requirements of NFDC’s Members, EMT and Service Managers. The output is a list of potential ICT projects that can be put through the formal process of business case development. This will enable the creation and, most critically, the evolution of the ICT Asset Maintenance/Replacement Programme over time to reflect the changing needs of NFDC.

Actions Taken

Through a formal ICT survey in July 2016, each Service Manager was asked to describe where they felt that ICT could be improved, and what ICT development projects they would like to see progressed, subject to business case development and approval. This resulted in a long list of potential projects covering every area of the council’s services. This was then

discussed with EMT and the process of engaging with Members, via CO&SP and the Finance and Efficiency Portfolio Holder, was instigated.

(This includes work on what 'Digital by Default' means at NFDC and how we go about achieving as much as possible digitally while recognising the unique character of the New Forest and the specific needs of the population of our district).

This eventually resulted in the development of a Projects Portfolio covering all service areas with circa 40 items. This was used as initial input to the creation in October / November of the ICT Asset Maintenance/ Replacement Programme for 2017/18 and 2018/19. The 40 items were then whittled down with EMT into 4 key priority items that break out into a series of projects in one of three categories: foundation, improvements or optimisations. This is illustrated in the diagram below.

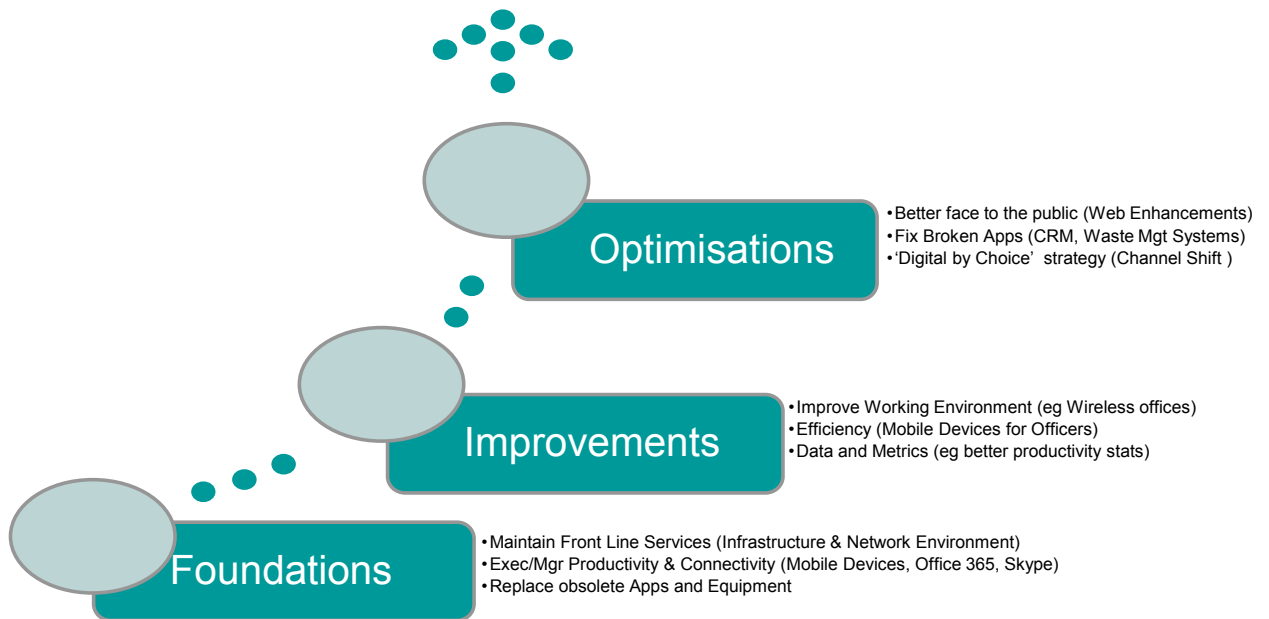


Figure: Asset Maintenance / Replacement Programme

The items within these categories that are proposed will each need business cases and detailed budget approval and they are as follows.

a. ICT to Protect and Maintain Front Line Services

This consists of a series of projects to design, specify, procure and implement infrastructure and applications to protect and improve council services and reduce the risk of serious outages, security threats, or degradations in systems performance. These projects will address the age, capacity, and performance issues of our hardware, software and network connections across the council by updating central servers and storage equipment, and replacing applications like EDRMS and Office/Outlook with more up to date services including Cloud and Software as a Service.

The specific projects will include:

1. Refresh Hardware, Software & Connectivity in Server Rooms (e.g SAN, Uniclass, SQL, Agresso servers). A range of our equipment is at a point where it is either at the end of support or at risk of failure; we need a thorough review and plan to replace it. This may be replacement of individual servers or devices like tape drives or else the wholesale replacement and move to cloud-based or hyper-converged technology.

2. Backup solution (On premise or Cloud) for IT systems. Investigation, selection, procurement, development and implementation of back up infrastructure based on cloud technology to replace the existing aged and capacity limited hardware on premise.
3. Investigation, selection, procurement, development and implementation of Office 365 alternative to on premise Outlook and Office toolsets with cloud based subscription model.
4. Review and expansion of connectivity to the internet to enable better provision of Cloud computing. We currently have a single point of failure in the form of our internet connection via Hampshire County Council using HPSN2.
5. Infrastructure Management environment. We currently have no means of understanding or addressing failures or degradations in our IT infrastructure. Hardware, software and network monitoring is becoming more and more vital as council services move to more mobile ways of working and cloud based infrastructure that relies on good integration and inter-connectivity.
6. Meridio must be replaced as it will not be supported by the vendor after Feb 2017. We will run with limited support and start the replacement project mid 2017/18. The project will cover the selection, procurement, development and implementation of replacement of the remaining Meridio data stores not replaced by IDOX. The project will also include migration, integration and optimisation activities.
7. Improve the ICT in committee rooms in ATC and MLD so they are fit for purpose and easy to use.
8. Replacement of personal computing equipment with up to date devices for better productivity and work-force flexibility based on new specifications, including potential mobile working options like laptops/tablets where appropriate.

b. Wireless Connectivity in Major Sites

This project is concerned with the investigation, selection, procurement, development and implementation of improved WIFI capability for key offices, depots and the Health and Leisure centres in the district. The aim is to improve working efficiency and flexibility, for example by aiding hot desking, committee room working, and visitor connectivity.

c. Improve Customer Interactions

This project will improve customer interactions through three distinct projects.

1. Replacement of existing Excel and Status CRM based systems with more efficient systems for all aspects of environmental collection services. This will remove the keying and rekeying effort associated with the current processes and enable the council to offer a better public facing service for residents and local businesses.
2. CRM replacement project to replace the aged and functionally limited system. The requirements are being worked up by a Customer Services project team between now and March 2017 and this will determine the best options for a solution.
3. Website enhancements to improve the current GOSS website. GOSS have a more up to date website offering that needs to be investigated. This is linked with the CRM and Waste projects above and these will need careful coordination to ensure money is spent on the right enhancements in the right sequence.

d. Integration of NFDC and New Forest National Park Authority (NFNPA) IT functions

This project will conduct an investigation into the scope for closer integration between NFDC and NFNPA IT functions for mutual benefits. Currently NFDC provide an agreed level of

support for NFNPA covering mapping (GIS), planning (Acolaid), finance/procurement/HR (Agresso) and the National Land and Property Gazetteer (NLPG). If developed further, NFDC and NFNPA could collaborate on additional IT services encompassing areas such as server management, shared networks, shared working, joint procurement and strategic IT planning. These would be added to the Service Level Agreement already in place. To achieve this would require the creation of capability to deliver the joint ICT services, the costs of which would be agreed between NFDC and NFNPA.

Actions Remaining

There remains the question of how the series of potential projects flagged by Service Managers should be addressed. These range from a total review/replacement of the HR/Payroll environment, to small enhancements to specific applications such as Orchard, Acolaid, Gladstone and Agresso. It is clear that completing the Foundation / Improvement / Optimisation projects will be a major investment of ICT time and effort and leave limited capacity to conduct more large-scale IT projects. However, it is intended that some enhancements to our key applications like Agresso, Acolaid, Gladstone and Orchard can be made via the 'business as usual' ICT teams who provide support and small enhancements. The way this could be managed via an Agile Demand Management process is covered in the Operating Model section further on in this report.

Next Steps

The next steps are EMT and Cabinet approval of the ICT Asset Maintenance/Replacement Programme. This will then be developed, via the Technology Roadmap, into a detailed Project Portfolio work plan for 2017-2018. This will be overseen by the ICT Service Manager and performed primarily by the Technology Officer and ICT Project Manager, two new roles within the new ICT Organisation, below.

3. ICT Organisation

Introduction

Perhaps the most critical task in developing a new ICT Strategy is the review and re-development of the organisation and structure of the ICT team to make it fit for future purposes. For this reason, a primary focus since September 2016 has been the design and implementation of a new ICT organisational model. This has taken a significant amount of management time but is now yielding results as the new team forms.

Actions Taken

There were a number of historical issues which the new ICT organisation structure addresses:

- Inefficient team groupings and insufficient clustering of knowledge and capabilities to ensure service resilience;
- Unclear ICT management team roles and responsibilities;
- Lack of clear competency grade levels or career development paths for ICT staff;

- An aging workforce and virtually no junior staff to feed into the base of the grade pyramid to provide the next generation of ICT staff.

Proposed Structure

Team 1 – ICT Service Level Management – This section will bring together Service Desk, SLA Management, Asset Management and Licensing under one manager. The manager will be supported by 1 Senior Analyst, 2 Analysts and 1 Graduate.

Team 2 – ICT Applications Management – This section will now bring together 3 existing teams: Property, Non-property and GIS. This proposal will reduce the number of management posts from 3 to 1. The manager will be supported by 7 Senior Analysts, 2 Analysts, 1 Graduate, 1 Support and 1 Apprentice.

Team 3 – ICT Infrastructure Management – This section will bring together 2 existing teams, Infrastructure (including technical team) and Security. This proposal will reduce the number of senior posts from 2 to 1. The manager will be supported by 4 Senior Analysts, 2 Analysts, 1 Graduate and 1 Apprentice.

The ICT Service Manager is accountable for the transformation of the ICT team in accordance with the ICT Strategy. He will achieve this through the three teams listed above and by means of a **Transformation Office**, which will contain 3 specialists each reporting directly to the ICT Service Manager. The purpose of this Transformation Office will be to drive the necessary changes within ICT covering process improvement, technology innovation, and business case driven projects. There will be a specialist responsible for each of these topics. They will report directly to the ICT Service Manager because of the cross-functional nature of each role, and because of the authority needed for each role to enforce change and drive transformation. Each specialist will sit on the ICT management team.

The specialist roles are as follows:

Specialist 1 – ICT Transformation Officer – This is a post to drive performance improvement across ICT and create a culture of continual improvement through processes, people and technology.

Specialist 2 – ICT Technology Officer – There will be ongoing requirement to ensure that the ICT Service and its clients are up to date with new technology, that opportunities to augment existing technology are realised, and that the integrity of the overall ICT architecture and standards are assured, maintained and improved. .

Specialist 3 – ICT Project Manager – There is likely to be an ongoing requirement for ICT project management resource within NFDC. This role provides the core project management capacity of one person to cover foundation ICT projects and whatever business/service driven projects can reasonably be assigned. . The project management capacity may be expanded with additional project managers if justified by approved business cases.

The new ICT organisation structure can be diagrammatically represented as follows.

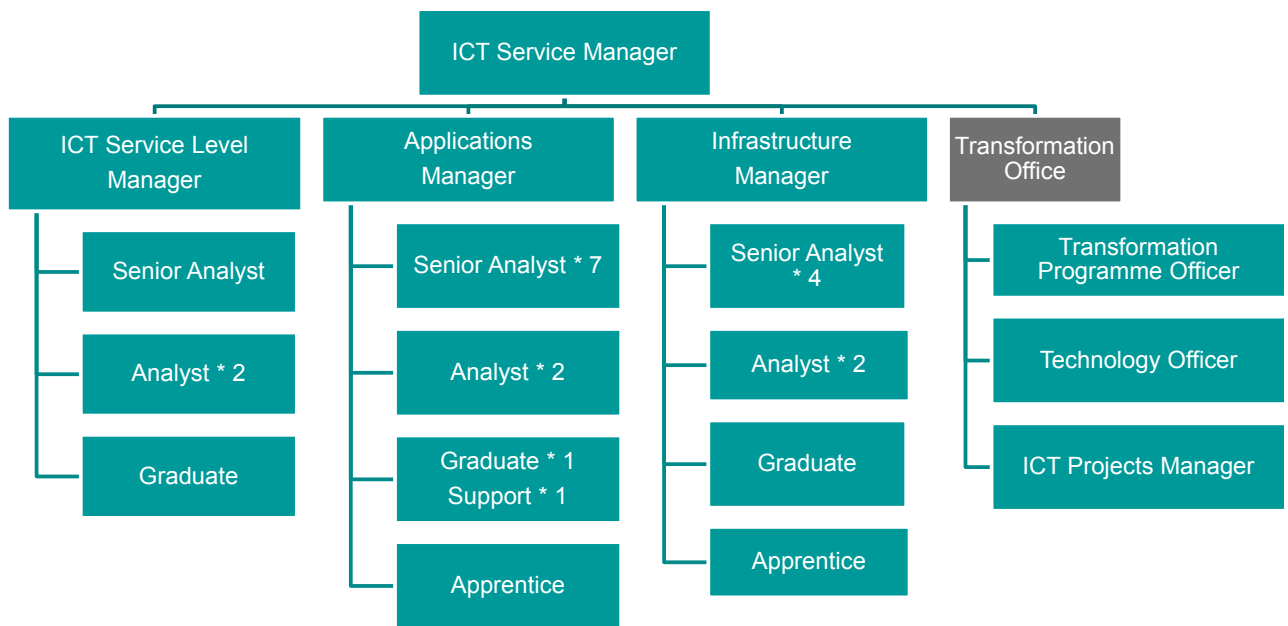


Figure: Proposed ICT Organisation Structure (showing Heads not FTE)

The new organisation proposes a career structure for ICT staff and this will be as follows, subject to Job Evaluation:

- Level 1 Apprentice
- Level 2 Graduate / Support
- Level 3 Analyst
- Level 4 Senior Analyst
- Level 5 Manager

It is proposed that the 3 teams will have a number of staff at Levels 1 to 4; the numbers proposed are detailed above. This will ensure that tasks are done at the right level, that there is a career path for staff in a fluid IT job market, and ensure that we are bringing in up to date skills at an appropriate level.

We will take a proactive approach to Knowledge Management by using a matrix to define which Analyst has primary, secondary or tertiary responsibility for each application and each component of our infrastructure. This is a tried and tested means of spreading knowledge and creating a resilient organisation where several people hold knowledge about every IT component and can provide cover during holidays or sickness thus avoiding the 'single points of failure' which has dogged NFDC ICT.

Next Steps

The internal re-organisation towards the new structure was completed in early January 2017. We now have a number of vacancies which are currently being advertised internally and externally. We anticipate all appointments, bar the apprenticeships, to be in place by April 2017. The apprenticeships will follow in May 2017.

It is worth stating that this reorganisation is the beginning of a continual evolution of the ICT team at NFDC. The skills and technical know-how needed in IT are changing at such a rate that, just as we need to review and renew the ICT Strategy every 12 to 18 months, we need to review and renew the ICT organisation in the same time window.

4. Technology Roadmap

Introduction

The purpose of the Technology Roadmap is to define the best way to meet the requirements defined in the Projects Portfolio/ Asset Renewal Programme. This is achieved by synthesising the following inputs:

- existing NFDC technology (such as our Server Rooms, Infrastructure, Network and Applications);
- new technology on the market (such as Cloud, Software as a Service, and infrastructure hyper convergence);
- best practices seen at other councils in relation to achieving both 'Digital by Default' and cost savings / efficiency gains (such as CRM-Lite, Office 365, Skype, Wireless, Hybrid/Tablets).

From these inputs we can determine how best to meet the requirements of the Project Portfolio / Asset Renewal Programme in a way that is cost effective, scalable, future proof and in line with best practice. The overall aim is to determine what assets in ICT we can:

- refresh, renovate or repurpose;
- and what we must renew, replace or remove.

Actions Taken

Since July, the ICT Service Manager has been scanning the IT market and the landscape of local government in order to understand the breadth of choices and the best practices across the UK in terms of Digital engagement and technical innovation. This is a potentially limitless task and so the work to date has only sampled a small fraction of the whole UK picture, but it is a start.

Scan of the IT Market

ICT have met with upward of fifteen suppliers (e.g. Microsoft, Phoenix, OSCL, Blue Chip, Embedded IT, Eduserv, Status, Jadu, Goss, Netcall) on topics as diverse as Digital by Default/Choice, CRM, infrastructure renewal, cloud services and service management. This has started to widen our insight into the art of the possible with technology today and tomorrow. It is an ongoing task which will require more focus before definitive positions can be taken on the right way forward for NFDC.

Scan of other councils

The ICT management team has met with various councils in Hampshire (Eastleigh, Basingstoke & Deane, Test Valley, Winchester City, Hampshire CC) and has also attended events which have provided an insight into some of the best of breed local government IT practice, such as the PSEICT conference. Some examples of the areas investigated are given below:

Who	Area of Interest
Maidenhead & Windsor	Digital by Choice (Channel Shift and CRM Lite)
Mid Sussex	Digital strategy in a similar district to New Forest
Wokingham	Use of Microsoft stack to create an end to end IT solution
Eastleigh	Transformation using Salesforce.com
Basingstoke & Deane	Cloud, Member technology, Office 365, Strategy
Test Valley & Winchester	Foundation infrastructure and IT Strategy
Derby	Cloud computing infrastructure
Wigan	Digital strategy

This activity has provided insights and ideas on how we can proceed at NFDC. Further discussions and investigations will inform not just the ICT strategy but also our customer engagement strategy. To this end, the ICT Service Manager is working closely with the Customer and Business Improvement Service Manager to ensure a common vision is developed for both service processes and technology used.

Next Steps

The next steps from the above scans are to commence formal projects for each of the defined areas to move from idea to a viable plan. There are some key inputs to this, some of which have been defined and some of which are outstanding. As discussed in the Project Portfolio section, the wider Service Manager requirements and the ICT foundation issues are now understood.

However, the direction of travel for NFDC in relation to Digital Strategy will take some time to resolve. The ICT Manager is part of the Customer Services Review project team which will be considering Digital engagement. This is due to report in approximately March 2017 and this will shape the technology direction of travel for our Digital engagement, both in terms of the general public but also for workforce efficiency and flexibility.

In addition, the ICT Organisation re-structure means that key ICT experts are now just being appointed or are still to be recruited. These staff, such as the Technology Officer and Project Manager, will be at the heart of the design of the architecture and running of the development projects to make the Technology Roadmap real and sustainable.

Given items on the critical path (e.g. Customer Services Review, ICT Restructure bedding down) it is realistic to expect a first draft Technology Roadmap to be created by end April 2017 with a more detailed version by end June 2017 and further iterations/refinements throughout 2017/18. The overall process can be seen as an input-process-output flow and this is summarised in the diagram below:

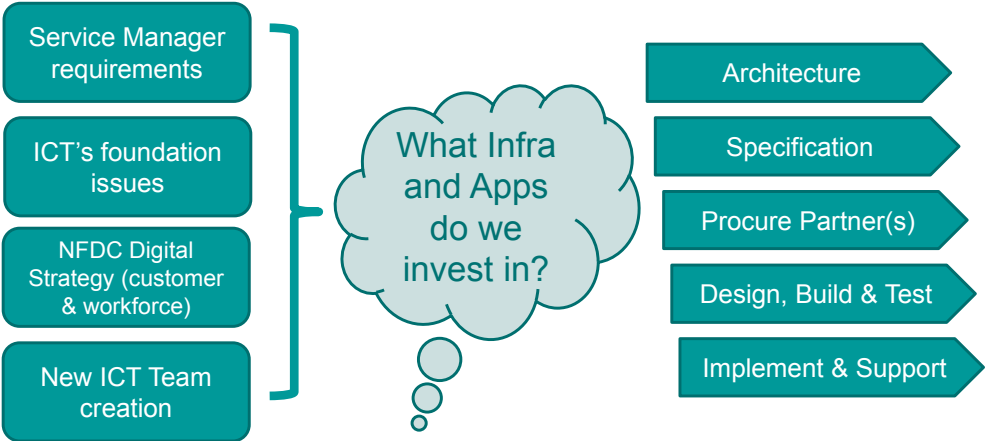


Figure 3 – Input-Process-Output for Technology Roadmap

5. Operating Model

Introduction

The operating model provides the definition of how ICT go about their business of providing excellent support services to the rest of the council. The overall flow of functions across ICT can be seen as follows:

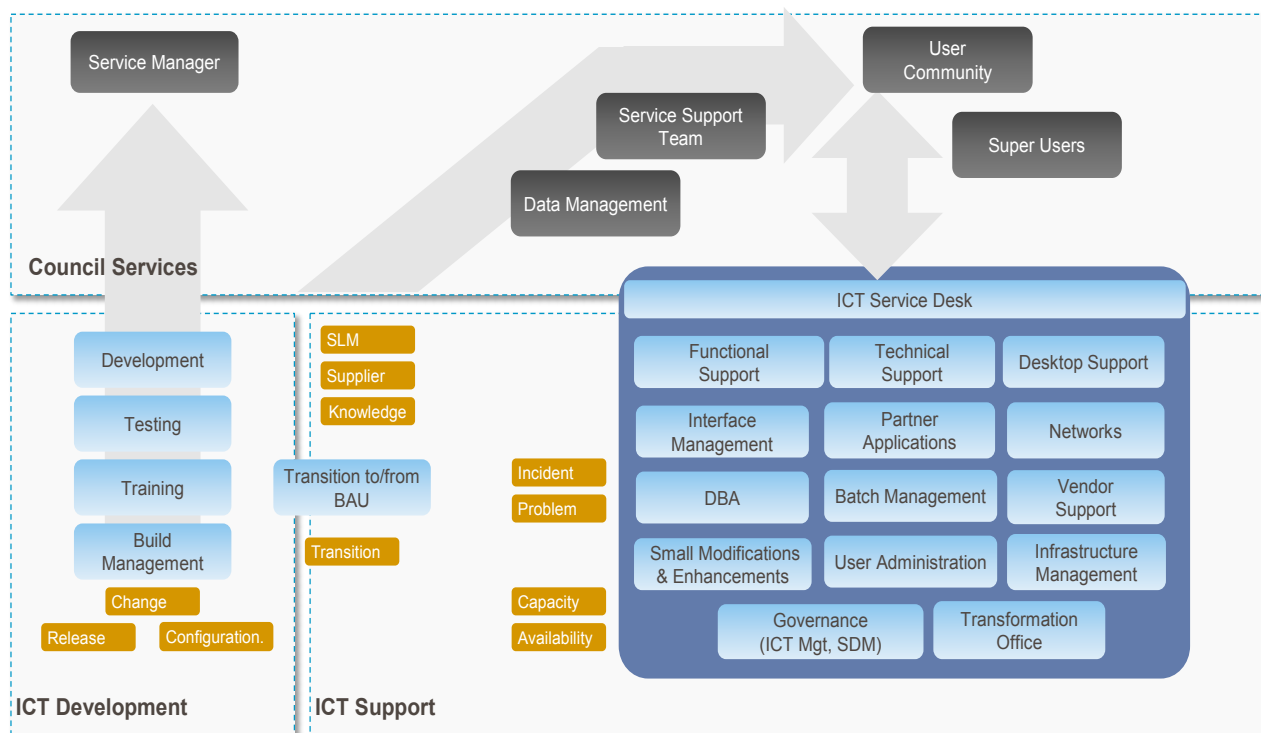


Figure – ICT Functional Model

It is important that every member of the ICT team knows where they fit into this functional model and understands the key work/data flows to and from their areas of responsibility. It has become apparent that currently there is:

- Limited understanding of this overall functional model within ICT across the team
- Little measurement or metrics around service delivery, for example mean effort to fix different types of incidents
- No process to improve or analyse ICT performance against such a functional model

These deficits in capability have led to the inclusion within the new organisation of a Transformation Officer to lead the development and implementation of the operating model, metrics and processes for standardisation, innovation and continual improvement within ICT. The Transformation Officer will report to the ICT Service Manager. Success for the post-holder will be measured by the clarity of the:

- operating Model;
- data points around ICT performance;
- functional responsibilities across the team;
- delivery of Continual Improvement.

This will be enhanced by the definition of a new ITIL compliant Operating Model for managing workload within ICT. This will be specific to NFDC and measure outcomes including fix and enhancement times and staff productivity. A draft Operating Model is shown below to illustrate the various activities and levels of support used to structure ICT workloads.

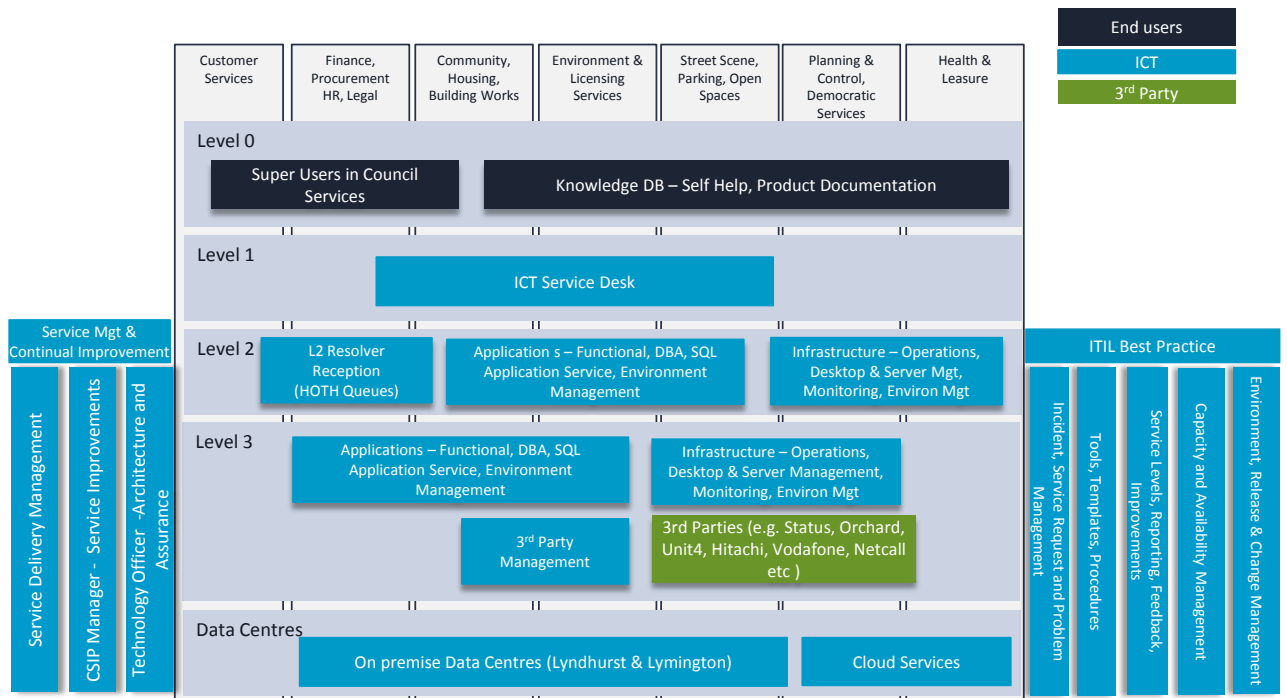


Figure: Draft ICT Operating Model with Support Levels 0,1,2,3

So, the Transformation Officer is key to the production of the new operating model. To achieve this they will produce a Continual Service Improvement Plan (CSIP) which will develop and enhance the operating model and will consist of a range of initiatives to:

- change the ICT team's working methods to conform to the operating model, and
- improve the ICT team's performance.

This will be achieved by methods such as:

- LEAN thinking for improved productivity and removal of redundant work products
- Agile for faster IT systems development
- Shift Left for earlier IT incident resolution
- Failure Mode Analysis to understand the root cause of IT problems

Each CSIP initiative can then be benchmarked for impact against six key areas ranging from IT Process Improvement through Productivity and Ticket Volumes to Business Process Improvement. From this analysis the initiatives with the greatest positive impact will be selected. The template for this analysis is given below, with example initiatives shown:

No	Initiative	IT Process Improvement	Knowledge & Skills	Productivity & Ticket Volumes	SLA & Business Outcomes	Technology & Landscape	Business Process Improvement
1	SHIFT LEFT Strategy						
2	Failure Mode Analysis (FMA)						
3	Quarterly Innovation Forum						
4	Application Renovation Study						
5	Cloud Readiness Study						
6	LEAN Implementation						
7	Client Satisfaction Programme						
8	Apps Service Enablers						
9	Business Outcomes						
10	Infra Improvements						

Figure: Continual Service Improvement Programme – Initiatives and Impacts

This model will enable us to decide which CSIP initiative will have the biggest benefit. For example if an initiative positively impacts IT Processes, Knowledge and Skills, and SLA and Business Outcomes this is a strong indication that it is worth pursuing.

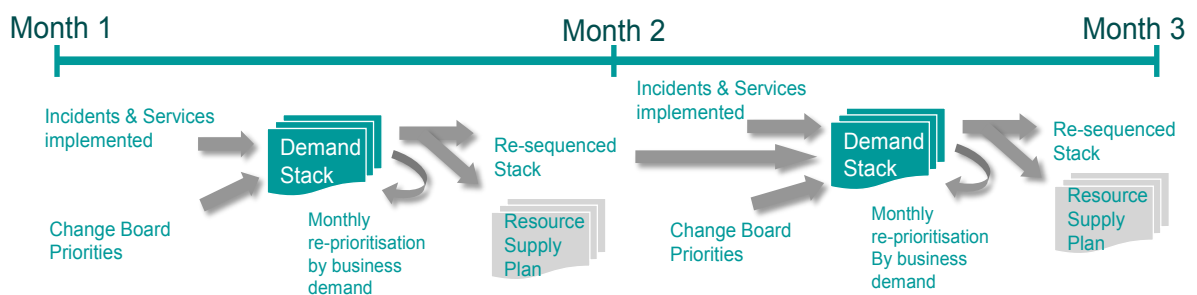
An example of a specific initiative in practice is provided below. This shows the way the Transformation Officer could work with the ICT Management Team on Agile Based Demand Side Planning.

Example CSIP Initiative - Agile Demand Side Planning

In this situation, the ICT team will work with the relevant Council Service Manager to develop and maintain a rolling view of all work items and related resource requirements over a 1, 3, and 6 month planning horizon. This Demand Stack will cover all Changes and Incidents. This will be jointly reviewed on a monthly basis – items cleared will be removed, and then the full Demand Stack will be placed in business priority sequence.

Once completed, the resulting prioritised Demand Stack will become the actual work-plan for next month. This will enable Supply Side Planning. The 1 to 3 month forecast will take a firm view of the resources needed (volume, skill-set), with certainty steadily decreasing for the three subsequent months and will create a Resource Supply Plan.

Metrics will be collected to review delivery, quality and productivity.



Actions Taken

The Transformation Officer role is part of the new ICT organisation and we have now appointed an officer to the post. In the coming weeks the handover of their current work will complete and they will commence

Next Steps

The operating model and CSIP will need to be fully developed, agreed and implemented by the Transformation Officer who will need to work in collaboration with the whole ICT Management Team and all ICT Staff.

6. Members' ICT

Introduction

Providing great support to members is a small but vital element of ICT's overall responsibilities. ICT will aim to be responsive, knowledgeable and helpful in enabling Members to perform their duties using their IT equipment. This involves ensuring access to relevant NFDC services and data, being available to assist members in the event of problems, and providing technical support for the Chamber and Committee Rooms to enable the smooth and trouble-free execution of members' duties.

Actions Taken

ICT Working Group.

This group was used in years past to discuss and advise officers on issues relating to members' use of ICT, both generally and more specifically on matters such as the members' ICT security policy and access to the Council's systems. It has ceased to meet for the past year but will now be re-instigated and members have been asked for 6-10 nominations to participate. The Group will be a forum for officers to get feedback from members and to discuss possible innovations and/or improved ways of working which can be taken through formal decision-making processes as necessary. This group will ideally consist of members with a range of ICT knowledge and skills, from the competent to those who perhaps need greater levels of support and guidance. The group will meet for the first time in January 2017.

Drop-In Sessions

ICT will restart Drop-In sessions to advise and assist members with specific issues. The first Drop-In session was on 21 November in ATC and received circa 8 member visits and resulted in 2 subsequent home visits to resolve deeper ICT issues.

Actions Remaining

There are two other areas where ICT can potentially be of service to members.

Standard PC/Laptop Specification

ICT will create standard specifications for each type of device (PCs, laptops or tablet etc.) for officers and this will be shared with members in an appropriate format to enable them to make informed decisions when updating their own equipment.

Members' ICT Survey

If agreed by the Members' ICT Working Group, in 2017 ICT will create a member's ICT Survey to establish what else we can do to improve services. The contents of this will be agreed with the working group but the aim will be ensure we are assisting appropriately and providing great, supportive IT services for all members.