Islington Digital Services Business Plan

The plan to transform our Digital Services into an effective sovereign capability

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Contents

Summary and recommendations

This is the Business Plan for Islington Digital Services for 2019/21 which is written to support delivery of the Council's Corporate Objectives.

This plan further describes the intended transformation of the ICT Service to support these priorities and provides further detail around the Strategy presented to CMB and staff in November 2018.

Approval is sought from RMB and CMB for the following recommendations. It is recommended that:

1. *it is noted that following the separation from Shared Digital, Islington Digital Services (IDS) is now in a 3-month* **Re-forming & Planning** *phase as a prelude to the* **Transformation** *phase;*

2. *the foundations for the new* <u>operating model</u> *and the* <u>functional building blocks</u> *are noted and agreed;*

3. *a* <u>Digital Education</u> *group be established and funded as an adjunct to the IDS Service Desk function and funded at a base level through an additional baseline appropriation;*

4. *the positions as identified as being web content and analytics related, be transferred to the Communications and Change group;*

5. *the* <u>Sourcing Strategy</u> *be endorsed;*

6. *the Organisational Structure, as proposed separately, be approved for staff and union consultation;*

7. *all IDS managers appointed into the new IDS structure, are required to support* <u>Skills Uplift & Staff Development</u> *by having a development conversation with all staff and recommending to the CDIO an agreed training plan for approval;*

8. *the CDIO be designated as the* <u>governance authority for all ITIL</u> *processes;*

9. *the CDIO authorities be endorsed and delegated by CMB to the office of the Chief Digital and Information Officer (CDIO);*

10. *the* <u>Financial Model</u> *be approved by CMB based on the endorsement of the S151 Officer*;

11. *the reasoning and roadmap for* <u>Technology Renewal</u> *is noted;*

12. *the ongoing importance and commitment to* <u>Cybersecurity</u> *by IDS be acknowledged*

13. *the* <u>Risks and Resilience</u> *associated with this plan and the wider technology environment be acknowledged;*

14. *this plan,* <u>in its entirety,</u> *is approved by CMB for execution through the appropriate organisational and change processes.*

Context and Purpose of this Plan

This Business Plan covers a two-year period and will be revised and updated for the 2021/22 financial year. On 31 December 2018, the Shared Digital arrangement between the London boroughs of Camden, Haringey and Islington was formally ended. However, the process to create a fully functioning sovereign Digital Service organisation is more complex than a single point in time and can be thought of in three phases.

Firstly, the **Separation** phase which commenced when the respective Directors' agreed to separation in late September. The focus was to unwind the people arrangements, contractual arrangements and projects whilst ensuring service continuity. Some activities, such as contract novation and financial reconciliation will continue, but operationally the separation was successfully completed by 31st December 2018.

Phase 2 is the **Re-forming & Planning** phase. A significant early activity is the creation of a new organisational structure that is appropriate for our transformation and future operating model. It is of great significance to our staff as the structure is their touch point with the organisation and provides a sense of future security. They have been 'living out of suitcases' for some time and will welcome a more permanent home.

At this point in time, Islington Digital Services (IDS) is not well positioned to support the council's priorities as delivered through the operational directorates. The planning for 'root and branch' renewal for IT is significant and complex.

This renewal will be delivered through the third phase - **Transformation**. This will nominally commence in April 2019 and the implementation of a new organisational structure for Islington Digital Services (IDS) will be the starting point. Its scope will include the transformation of all dimensions of our operation to achieve the vision outlined in the Strategy presented to CMB and staff in November 2018.

This is a massive change programme by any standard and must be planned to be ambitious yet achievable within our financial and resourcing constraints. It must also recognise that governance in a council environment requires due process and prioritisation within a broader picture.

This business plan is the vehicle to present to the Resources Management Team and ultimately the Corporate Management Board, the 'big picture'. As CDIO[1], I seek endorsement of this plan and the organisation's commitment to the stamina and resources necessary for long term transformational change.

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[1] Chief Digital & Information Officer

The Strategy for Islington Digital Services

The Strategy was presented to CMB in November 2018 and can be seen here. It highlighted the five steps to rebuilding sovereign services as follows:

1. Core IT Services
2. Application Renewal & Consolidation
3. Business Transformation
4. Digital Experience for Residents
5. Technology in the Community

This business plan is largely focussed on the first step of building our core IT services – alongside the initiation of a set of critical business programmes such as ERP *(see below)*. From that capability platform we will be able to tackle the future-building steps that follow. This plan will be evolved and renewed over time as we build maturity and move further up the customer value chain. The end result will be the target Operating Model for Islington Digital Services, clearly setting out:

*   How we engage with our customers;
*   what we provide for our customers;
*   how we provide it;
*   the cost of that provision;
*   how we will maintain the integrity of our technology architecture; and
*   what the direction of travel is for technology across the council (invest, exploit and sustain).

What is an ERP?

The acronym ERP stands for "enterprise resource planning". It refers to the systems and software packages used to manage day-to-day business activities, including accounting, procurement, stock control, HR, payroll, project management and manufacturing. Not all of the functions are implemented in every instance, but the core functions for an effective ERP in local government include Finance, HR and Payroll. Other additions such as planning, procurement and project management expand the value such systems can add – provided their adoption is accompanied by the change in processes and operational culture necessary to reap the benefits of process re-engineering.

The strength of the ERP is that it ties together a wide range of core functions through a 'single source of truth' database ensuring tight process integration and automation, and data-enabled insights into the organisations daily operations.

Today, ERP systems are considered critical to manage small, medium and enterprise businesses across all industries.

The Customer Perspective

Objective performance data for IT as a function is lacking. The financial reporting entities for Islington were far too 'macro' to make comparisons against industry benchmarks. Similarly, delivery statistics are not usefully available to support enumeration of the technology value proposition. As a result, IT performance perceptions are anecdotal and generally mutually disparaging. Customers talk of poor or no outcome. IT leaders have responded with 'they don't understand what we do but here are the things we have done'.   The failure is one of misaligned expectations.

This plan seeks to draw a line under this standoff. It is incumbent on IDS to understand our customers' perceptions and expectations and ensure they are realistic and achievable. We must look beyond the perceived IT needs and help our customers be successful in achieving their business objectives through the smart use of technology.

The anecdotal customer perceptions are real. Our plan must deliver an outcome that will change them. The customer themes include:

These negative themes can be turned on their head to provide a positive set of aspirations that our rebuilding must achieve viz:

- We will provide a modernised technology environment to support effective and reliable Smart Working.

- Our strategic delivery plans will be open and transparent and ultimately prioritised by CMB. Within this we will seek to address the day-to-day needs of our customers with enthusiasm and innovation. We will work within our governance bodies to balance the needs of direct customer delivery with the need to maintain the health of our infrastructure.

- We will demonstrate the power that an agile and customer-focussed IT organisation can provide by bringing deep technical and business knowledge.

- We will develop a transparent funding model that is clear about who pays for what, what costs IT bears on behalf of the organisation as well as providing a benchmark for individual services to demonstrate their value and efficiency.

- We will develop the capacity to deliver at a pace and only be limited by the financial resources available and the organisation's ability to implement change.

- IT must be trusted as the fastest and most effective way to get the job done.

- We must urgently address the issue of critically out-of-date technology and attain a state where technology maintenance and renewal is an organisational habit.

- IT governance must be integrated into the corporate governance chain, reflect the priorities of our customers and keep them engaged through open dialogue and transparency. Our strategic outcomes will be totally aligned to the organisational priorities.

The Operating Model

Our target Operating Model is a framework through which we will deliver on the commitments set out above. It will provide the much needed sustainability the digital service aspires to and will build bridges between users and IDS:

Service Catalogue

The service catalogue is simply a menu of all the standardised services IDS will provide, easily accessed, in plain English and clearly defined in terms of what is provided, how it is provided, and at what cost.

Put simply, staff want their technology to work well and intuitively, support them in delivering high quality services, keep our data safe and be reliable. The core service offer will set out exactly what that means in terms of:

- End user computing – what each staff member will receive and how to use it;

- Data management, storage and security – what we can and cannot do and what is expected of every staff member;

- Connectivity and communications – how we communicate with each other, our customers and our delivery partners

- Our line of business systems – what they are and the purpose they serve

Ground rules

Integrity and sustainability of our IT is central to the Council's ability to function. We have to protect it and we have to support our staff and be clear about our expectations of them. The ground rules cover:

- User responsibilities for access and device management

- Data management internally and externally

- Acquisition and management of IT

- Electronic communications internally and externally (including web and social media)

See [The CDIO Authorities] below which is an essential artefact in the execution of these ground rules.

Financial

In fulfilling our responsibility to ensure IT and Digital is operated at best value, we will benchmark with similar councils to ensure we are providing good value.

Whilst few measures exist today, IDS will put in place a series of measures to demonstrate value and effectiveness and these will be taken from nationally recognised best practice to enable benchmarking. These will be reported on a quarterly basis as they are established. Measures will include (with typical examples):

- Project Performance
  Milestone/budget performance, resource constraints, outstanding demand, value delivered

- Operational Performance
  Incidents, service requests, availability, infrastructure performance, growth metrics, DR tests

- Financial performance
  Budget position, cost per desktop, customer recoveries, costs on behalf of consumers

- Suppliers and Contracts
  Supplier strength, market position, local impact, position/age of contracts, renewal profile, value of contracts, performance against terms
  Position/age of contracts, renewal profile, value of contracts

- Service Desk performance
  First call full-problem resolution (First Time Fix), queue times, provisioning statistics, failure demand (repeat/re-opened faults)

- Technology Debt Ratio
  From a basket of key applications and infrastructure, the percentage of those not at current or near current versions, and the estimated remediation cost. Can be refined to distinguish those with a plan/in-train.

- Risks & Issues
  Top line risks and issues including risks for major programmes

- Customer satisfaction
  Survey based results for the level of satisfaction with IDS services, both transactional Service Desk as well as executive sentiment.

Roadmap

The reforming and planning phases of this plan will put IDS back in control of our IT and ensure the services we deliver are fit for purpose and sustainable. To support that we need a roadmap to articulate how we will take advantage of the rapidly changing world of digital whilst keeping our feet firmly on the ground in terms of cost, meeting business need, capability and capacity. The roadmap will be our view into the future - anchored from where we are today.

Functional Building blocks

In designing an organisational structure in conjunction with a sourcing model, it is a useful step to identify the functional building blocks that make up the IT organisation.

The foremost Internationally recognised set of functional standards for service delivery is ITIL[2] which sits alongside the UK designed and world-renowned IT Service Management Framework (ITSMF), an invaluable methodology for IT service design. See [Appendix A - Industry Standards] for more detail.

In adopting these standards, we will under-pin the new digital service with good industry practice. We must also balance internal and external capacity/capability and strive to attract, develop and retain best talent. These initiatives will be supportive in helping our customers to understand and feel confident within our ICT environment, whilst keeping our practice and profession current through time.

However, there is a necessary degree of nuance around the functions driven by local business needs and priorities, the in/outsource balance, cloud transition maturity and historical culture and experience.   Taking these factors into consideration, the following functions are proposed as the foundation for the organisation.

Enterprise Planning

Enterprise Architecture	The 'big picture' design authority for the technology pieces function together effectively
Solution Architecture	Designs the technology solutions for products
Lifecycle Management	Tracks the lifecycle of applications so that we remain up to date by planning upgrades and replacements that deliver best value.
Strategic Partner Management	Sourcing strategy and Identification of key third party providers

Security, Resilience and Cyber Risk Management

Cyber Security Strategy	Defines the most cost-effective defence strategy for the council
IT Security Assessment	Assess our applications and projects through the lens of cyber security and the potential for data loss
Business Continuity & Disaster Recovery Planning	Holder of the plan to ensure we can maintain business continuity in the event of a cyber-attack or other technology failure
PEN[3] and related testing	**Pen**etration testing of our environment to ensure it is robust
IT Forensics	Forensics investigation into email and other systems/logs to support investigations

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[2] ITIL, formerly an acronym for Information Technology Infrastructure Library, is a set of detailed practices for IT service management (ITSM) that focuses on aligning IT services with the needs of business.

[3] A **penetration test**, colloquially known as a **pen test**, is an authorized simulated cyber attack on a computer system, performed to evaluate the security of the system [Wikipedia]

PMO	Programme Management Office which provides a consolidated view of all work as well as providing the policies, methodology guidance and the toolkits to enable PMs to work collaboratively and effectively. Acts as a point of reference in terms of resource planning and project cost.
Programme/Project Management	Controlled and transparent delivery of projects to quality, time and budget
Project Pipeline and Initiation Management	Oversight of the often challenging gap between the desire to achieve an outcome and the reality of a project driving under its own momentum. Working via the Business Relationship Management (BRM) group to ensure delivery of value against Council priorities & MTFP savings plan.
Project Support	Undertakes the necessary day-to-day project activities in support of project managers

Application Services

Analysis and Process Design	Business Analysis activities coupled with process design using intimate business knowledge to be effective
Website platform services	All activities (above the infrastructure) to maintain the website content management system
Intranet development & support	All activities (above the infrastructure) to maintain and develop Izzi including integration with O365
Application and SaaS Integration	Integration of third party applications – from core on premise application packages to Software as a Service. Includes API[4] development, legacy web applications and associated data management.
Application Support Services	Day-to-day support and administration of applications (generally excludes Service Desk-based user provisioning).

Operational Services

Asset Management	Oversight of physical and software assets including usage commitments for subscriptions

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[4] API = Application Programming Interface – a software mechanism to allow separate applications to communicate with each other.

Database Administration	Administration and backup of standalone databases
Network and Infrastructure design	Design of the operational configurations under the guidance of the enterprise and solution architects
Cloud and Data Centre Operations	Day-to-day server provisioning and operations including patching, backups, scheduling etc. Growing emphasis on the role of cloud and the change that drives to our way of doing things.
LAN, WAN, Firewall and Telco services	Production management and moves/adds/changes (MACs)
Service Desk	Traditional Service Desk function moving to phone-based operation with emphasis on first call resolution. Includes Incidents, Service requests and larger fulfilment projects, field support and user training.
ITIL process management & reporting	Oversight and implementation of our ITIL implementation (Incident, Problem, Capacity, CMDB, etc) including leadership on key processes such as Change Management oversight.

Data Platform Services

Note that this function is not currently funded in the IDS baseline.

Data ecosystem design & implementation	Design and implementation of the platform on which data is stored, curated and analysed.
Data harvesting & curation (ETL/ELT[5])	Extraction of data from our core systems and the transformation of it
Operational design	The design of operational processes for the Operational Services team to execute
Analytics Toolsets and environments	The provision of Microsoft BI and other toolsets for Analytics practitioners to use.

Commercial & Performance Services

Procurement	Effective and compliant procurement of IT services
Contract Management	Effective management of IT contracts to ensure value maximisation and timely re-procurement
Performance Reporting and Forecasting	All dimensions of operational activity including financial.
Business Compliance & Assurance	Oversight of necessary compliance activity across all IT groups

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[5] ETL = Extract Transform Load (for Data Warehouse), ELT = Extract Load Transform (for Data Lake)

Risk Management	Maintenance of the group risk register and active management of mitigations. Includes just the higher impact aspects of individual project risk registers.
ITIL Management Activities	Capability planning, skills development, resource forecasting and optimisation, FOI & audit responses, development of internal capability business cases.

Business Relationship Management

Strategic Relationship Management	The conduit and relationship management channel for the services. Includes escalation of operational issues to early engagement of IT in technology-based projects. Maintains a communications plan – particularly around the lifecycle of relevant applications.

Digital Education for LBI staff

The technical deployment of Office 365 has highlighted the gap between the technology capability offered to staff and their ability to utilise it effectively. Whilst there is a planned survey (for later in the year) of user competence, the current feedback is more anecdotal than scientific but there is a sense that:

1. Staff have well practiced 'work by rote' approach to their computer-related work, rather than an understanding of 'how it works'. This means that if there is any change they are less able to 'figure it out'.

2. As a result of the above, staff are reluctant to 'give it a go' as they might with (say) their own personal smartphone as they are not confident they could get out of trouble if their journey of discovery went wrong.

3. Everyone is very busy and they would rather stick to the tried and true as it is more efficient (in the short term) than learning new ways of working.

4. The big shift for users is from computing as a solo activity (I create a document) to being a collaborative activity (my team and I create and contribute to a document together). This shift is accentuated by the move to smart working where staff need to collaborate more with their team – but their team may no longer be sitting in the same workspace as them.

Nevertheless, there is a genuine desire by staff to be upskilled and more training would be seen as a positive commitment to the workforce and lift the digital confidence of staff. As an example, where there have been pockets of O365 training, it has been very well received.

Without a much stronger focus on connecting our staff with new technology, the investment will be wasted and there will be a constant resistance to new initiatives. At worst, we spend the money on technology and get none of the promised benefits.

Again anecdotally, there is a general acceptance of the above premise. The question remains as to what part of the organisation should host the digital training capability.

This plan proposes that IDS should host that activity as an extension to the Service Desk capability.

The IT Service Desk is often seen as a group that just reacts to user issues. However, they also have a proactive element as they provision equipment for our staff and look ahead to preventing issues before they happen. As a group they are well connected with Islington staff and there are some

strong reasons to consider growing the digital education capability as a new arm to this group. The group:

- is well regarded by its customers

- understands the realities of the digital skills deficit as users ring in for help

- has an operational and service culture

- stands to gain from a more educated community and will therefore be committed to it

- has easy access to the technology deployment plan and can not only react to it but also contribute to the priority and user-needs conversation

- will provide invaluable intelligence from the 'classroom' back into IDS.

It should be noted that the Application Support groups provide specialist training which is an integral part of the scope of those groups and not included in this proposed group.

The proposed functional/sourcing structure is as follows:

Digital Training

Training needs analysis, course planning and scheduling	Understanding the needs for training mixing the need to lift skills generally, account for new technology deployment, and induction for new starters. Also understand the mix of training delivery from online modules to classroom sessions. *In-house*
Training packaging	Procurement and update of online modules to creating collateral for the classroom. *In-house function topped up with products and related services procured externally*
Trainers	Delivering the training. *In-house with specialist and project-related support from external partner*

This training group will also identify and encourage 'super users' across the organisation – people with an aptitude for the technology and the personality to be a local encourager, supporter and link back into the training group.

The funding for this activity is not currently included in the IDS baseline. If this plan is adopted the core functions would be funded from a baseline increment with additional resources as required funded from projects and other initiatives.

It is recommended that a Digital Education group be established and funded as an adjunct to the IDS Service Desk function and funded at a base level through an additional baseline appropriation.

The Sourcing Strategy

Sourcing capability outside of any organisation can be contentious and sensitive. It is obvious that no organisation can provide every aspect of the delivery chain and equally obvious that no organisation can outsource everything.

The overpromised mega-IT-outsourcing deals of the big integrator companies have brought considerable disrepute to the whole concept of outsourcing. The current climate for councils in the

UK is to step back from outsourcing. Some councils remain captured by arrangements where the vendor is systematically monetising the contract.

We therefore recognise the importance of being able to demonstrate that any external sourcing will provide secure long-term benefit to the council with effective levers and controls for operational flexibility and relationship management.

The other side of the same coin is to ensure that we do not over-insource and create problems that are equal but opposite to outsourcing.

The IT strategy document noted that:

We must avoid 'loners'......single points of vulnerability...people stretched to incompetence.

The approach to sourcing is therefore to look at each of the functional areas above to determine the most appropriate sourcing arrangement.

The key considerations are as follow:

Consideration	Commentary
Cost- effectiveness	Is there a reasonable expectation that 'some form of external sourcing' (SFoES) could provide greater cost effectiveness – due to scale or our inability to recruit and therefore use expensive interims?
Sustainable, critical mass & strategic skills set?	Do we see this as a skill set that, strategically we need to retain in-house and that there is sufficient demand that we can create a suitable team? E.g. Commercial Management – clearly only internal people can manage our contracts with external providers, and we need several people to do that effectively. (*No 'loners'......single points of vulnerability...people stretched to incompetence*)
Control by contract? Can it be defined by outcome/spec?	If we adopted SFoES, can we construct a contract that will define the outcomes and create an effective performance framework against which they can be judged? Sometimes 'time and materials is necessary but it does not define productivity well.
Political & regulatory sensitivities?	Are there sensitivities around a function? This could include perceived conflicts of interest or clear political direction.
Out of hours support arrangements required?	Does the function require non-standard arrangements and would SFoES help (e.g. by giving much needed scale) or hinder (e.g. by incurring unjustifiable costs)?
Specialist skills required?	Does the function require skills that are specialist (and probably scarce) that we probably don't need all the time – or that in a fast-moving area could not provide the environment for an employee to thrive?

Consideration	Commentary
Customer intimacy / delivery chain importance?	Is this a high trust function where our customers really want to see people 'who are one of us' and who know the council business intimately? Whilst this may be a perception over fact scenario, it is important to respond to it as we rebuild trust with customers.
Could there be a toxic third party (rigid) dependency?	If we entered into SFoES relationship, is there a danger that we could get stuck in a dependency trap where we were exploited because of our inability to separate from the relationship?
Could there be a high supplier body churn => low context of actors?	If we entered into SFoES relationship, is there a danger that we cannot define a contract that prevents a supplier cycling their employees through the account in such a way that their lack of situational and business awareness impacts the outcome?
Do we have permanent people anyway?	If we already have an effective or potentially effective permanent team, there would have to be a very compelling reason to move the function to SFoES.
Broad world view required?	Is this a function that requires broader industry experience suggesting SFoES? Or conversely requires a broad view of the LBI business spectrum suggesting in-house?
Do we achieve scale through 'cluster of services'?	Is there a cluster of functions that can be bundled together to create scale? And does this bundling generate a package that benefits from SFoES?
Leading edge…can we keep up with the pace of tech change?	Is the function one where the rate of technology change would make it difficult and expensive for an in-house team to 'keep up'? For example, data platform technology is very fast moving with new products launching at a rate that is an order of magnitude faster than mainstream IT.
Tools & methodology - can vendor bring more/better?	Bringing in established processes with the requisite toolsets can be one of the strengths of external sourcing. As with cloud, the costs are leveraged over a much larger customer base making the unaffordable affordable.
Conflict of interest and/or trust	A simple example is security testing where, to have a vendor test their own product would be a clear conflict of interest. It is not necessarily saying that such testing should always be in-house – but there should always be separation of duties.
Statutory or non-delegable position	Few if any statutory positions (such as an S151) in IT, nevertheless the head of cybersecurity and the head of Enterprise Planning are not roles that could be delegated to a vendor with confidence.

The IT leadership team conducted two workshops in November 2018 to obtain a consensus view on the most appropriate sourcing arrangement based on the then current organisational functions. This paper maps those results on to the future functional view as in the table below.

Please note that

- where the term '**agency-based**' is used it implies that the sourcing/top-up is achieved through individuals with no particular organisational alignment. They simply add capacity.

- **Interims** are considered to be at a higher consultancy level of expertise than agency workers and also not organisationally aligned to a vendor or at the least have formal separation between their consultancy and product/service offerings.

- The term '**partner**' is used when there is expected to be an overarching umbrella relationship/agreement with a supplier under which specialists are provided AND there is additional organisational value to the engagement (such as methodologies, organisational resources/knowledge or a deep understanding/experience with LBI).

- **In-house** is for functions that are staffed by permanent employees. At times agency or interims may be necessary to cover vacancies but the focus will always be to hire and develop permanent staff.

Function	Recommended Sourcing Model
Enterprise Planning	
Enterprise Architecture	*In house*
Solution Architecture	*In-house with agency-based top-up for projects if needed*
Lifecycle Management	*In-house*
Strategic Partner Management	*In-house*
Security, Resilience and Cyber Risk Management	
Cyber Security Strategy	*In-house*
IT Security Assessment	*In-house*
Business Continuity & Disaster Recovery Planning	*In-house with external agency-based top-up for refresh projects*
PEN and related testing	*External Partner*
IT Forensics	*In-house*
Programme Delivery	
PMO	*In-house*
Programme/Project Management	*In-house with external partner for top-up capacity*
Project Pipeline and Initiation Management	*In-house*
Project Support	*In-house with external partner for top-up capacity*

Function	Recommended Sourcing Model
Application Services	
Analysis and Process Design	*In-house*
Website platform services	*In-house (based on current permanent workforce)*
Intranet development & support	*In-house*
Application and SaaS Integration	*In-house*
Application Support Services	*In-house*
Operational Services	
Asset Management	*In-house*
Database Administration	*In-house*
Network and Infrastructure design	*In-house with specialist external support (agency, outsource work package or interim) as appropriate.*
Cloud and Data Centre Operations	*In-house*
LAN, WAN, Firewall and Telco services	*In-house management with products and related services procured externally*
Service Desk	*In-house*
ITIL process management & reporting	*In-house*
Data Platform Services	
Data ecosystem design & implementation	*In-house with specialist support from external partner*
Data harvesting & curation (ETL/ELT[6])	*In-house with specialist support from external partner*
Operational design	*In-house with specialist support from external partner*
Analytics Toolsets and environments	*In-house with specialist support from external partner*
Commercial & Performance Services	
Procurement	*In-house with external agency-based top-up for projects if needed*
Contract Management	*In-house*
Performance Reporting and Forecasting	*In-house*
Business Compliance & Assurance	*In-house*

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[6] ETL = Extract Transform Load (for Data Warehouse), ELT = Extract Load Transform (for Data Lake). See this for more explanation.

Function	Recommended Sourcing Model
Risk Management	*In-house*
ITIL Management Activities	*In-house*
Business Relationship Management	
Strategic Relationship Management	*In-house*

Note

It is important to recognise that the above informs the organisational structure and capability but does **not** replace the sourcing decisions for individual projects. For example, a project may decide to procure a work package from a supplier as a defined outcome – and that package may include activities which would normally be performed by in-house staff.

Staffing and structure

Changes to scope

Prior to considering the proposed staffing models it is appropriate to look at the scale and scope of activity and to consider that there is one area of current scope for Islington Digital Services that is reduced with this proposal. It is the division of duties in relation to our website capability, which has been under consideration for some time. Prior to the Shared Digital termination, it was put in abeyance whilst the impact of the transition was understood. The principle behind the new structure is to retain the following within IDS:

- Services to maintain Sitecore as the Content Platform

- Integration of the website with applications and other services

- Code Development and widget/component integration

The expectation is that content creation and editing will be transferred to Corporate Communications.

The above is a somewhat simplistic statement as there is currently significant blurring between the content and the content platform. The result is that there is too much customisation and often content updates require technical input. In addition, we have a legacy of the old 'forms' engine which was not migrated at the adoption of Sitecore.

The result is a blurred division of duties and it will require active work to drive to a clean structure.

Organisational structure

The functional sourcing model informs the organisational structure. Two areas of challenge associated with our organisational scale are

a) determining the optimal number of people for a multi-person function
(e.g. Service Desk – low Service Desk staff numbers may reduce IT costs – but will drive productivity losses for our customers which may be more expensive)

b) Covering the span of work where we cannot justify a whole person for a single function
(e.g. Forensic analysis has a sporadic workload and it would be unaffordable to have an employee assigned only to this work)

The structure has to strike the optimal balance between all the opposing elements to create an effective and sustainable organisation that can organically move the skills base as technology evolves. It must also have built in flex to be able to respond to the changing demands of our customers and external events.

Clearly, reconciliation of the structure with the IT budget is necessary

Please note that this paper will be presented for endorsement before all aspects of the reconciliation can be performed and staff/Union consultation can be completed. For example, new roles will require assessment which will in turn drive salary costs. The rate of recruitment and retention will be significant in determining the actual revenue run rate for IT as will the final determination of what is funded by IT versus the funding from customers.

This paper is therefore requesting endorsement at a macro level based on a high level budget reconciliation of proposed staffing numbers partnered with a commitment by the CDIO to meet the budget envelope using the available levers.

The levels of staffing are actually limited by our ability to recruit. And the staffing principle is that we should aim for fewer people of higher skill levels. The budget will be constructed on this basis.

A staffing/accommodation analysis was undertaken recently and the following table showed the proposed staffing trajectory for IT (based on the current structure).

	Q3 2018/19	Q4 2018/19	Q1 2019/20	Q2 2019/20	Q3 2019/20	Q4 2019/20
Establishment	**168**	**168**	**140**	**115**	**115**	**115**
Vacancies	55	65	38	10	3	3
FTE	64	75	85	90	100	102
BAU Contractors	17	17	15	13	10	10
Inside Interims	2	2	2	2	2	0
Sub-total	**138**	**159**	**140**	**115**	**115**	**115**
Outside Interims	3	3	3	3	2	2
Total	**141**	**162**	**143**	**118**	**117**	**117**

The points to note with table are:

- The FTE line shows a net gain of roughly 10 staff per quarter. Realistically this is the maximum growth rate we could expect for permanent staff and relies on a low attrition rate.

- The vacancies are very high and would continue to be so if measured against the *current* establishment.

- The establishment has been dropped to 115 as of Q2 2019/20 (excluding consultant interims) to reflect a more realistic establishment number.

- The projection is based on the current structure and does not include new functions such as data capability or Digital Education.

The learnings from this exercise are that a future organisation
a) should be much leaner
b) needs people with a high level of skills (recruitment or training)
c) uses partner organisations more strategically
d) has a lower level of contractors/agency workers in long term roles?
e) focusses on new areas that support the council's future needs.

To make this achievable, we will need to be open to a market-aware approach to remuneration. A rigid grading scheme will undermine transformation with either an organisation that is cheap and ineffective (high number of unfilled positions) or effective but expensive (high number of contractors/interims).

It is recommended that the Organisational Structure, as presented separately , be approved for staff and union consultation.

Skills Uplift and Staff Development for IDS

Over the period of Shared Digital, a series of key factors have collectively impacted the relative skills level of staff.

1. The attrition rate grew significantly leaving a high number of vacancies – some senior; but

2. recruitment into these positions was limited; and instead

3. staff were promoted into positions for which they had not yet attained the skills or experience to equip them for the job; And

4. with the limited recruitment they could also have been expected to continue covering for the position they were promoted from; yet

5. training for individual staff was very limited, so the staff above struggled with workload and to gain the necessary competencies

The impact on morale was also significant and it is important to reinstate and reaffirm our commitment to staff education.

It is our aim that all our staff are engaged with continuous professional development, appropriate for them and driven by them, with our support, to accelerate their career. Therefore:

It is recommended that all IDS managers appointed into the new IDS structure, are required to have a development conversation and recommend to the CDIO an agreed training plan for approval.

The above is not a carte blanche cheque for training and the overall plan must be within the IDS budget. This will require the phasing of training priorities and some innovation in finding cost-effective training options. For example, Microsoft offer 'free' training in a variety of technical areas as part of our licensing agreement with them. We have also brought in guest speakers who freely give their time to pass on their learnings to others.

In summary, technology is fast-paced and constantly changing. Without education our staff will fall behind in their professional development and may well seek employment elsewhere.

Cultural change

The organisational change in itself will not change the IDS culture. That may take many years. However, there is already some evidence of positive change as documented through unsolicited feedback on field service staff attitude and delivery.

However, the changes will support positive change in the following ways:

- The new structure will mark the end of a long period of organisational uncertainty

- It will reinforce alignment to the vision and create a sense of purpose

- It will provide Islington-oriented leadership that is more relatable and a short chain of command that fosters direct and honest communication through the layers

- It will reinforce the 'customer' ethic in all we do to create a service culture which will result in positive and reinforcing feedback

- Decisions will be made quickly which will create a sense of empowerment and 'can do' attitude. This is the starting point for genuine innovation.

- Empowerment supports the adoption of more personal responsibility reducing/eliminating the 'treacle effect' where nothing happens without constant management intervention.

- Stronger time management will be required – through timesheeting and more disciplined work allocation, to ensure we work on agreed priorities and understand our staff utilisation and the associated costs.

- The accountabilities will be clear within the structure and customers will 'know who owns what' and at the same time…

- Decisions, solutions and delivery will be executed through collaboration and consensus with high buy-in and motivation from staff.

- Our customers and suppliers will be seen as part of our extended team – valued and treated with respect.

- In this environment, personal resilience will improve and reduce stress and sickness levels.

This paper does not attempt to replicate the wisdom of the hundreds of books on culture change. However, having a strong vision coupled with effective communication is always a good starting point.

Governance

The overarching corporate governance model is defined in the constitution and is taken as a given. Our operational governance enacts 'corporate grip' within the constitutional boundaries – but in a way and format we chose to adopt. For example, it is important for us to control the release of software into our production environments through IT governance to ensure our collective constitutional obligations are met.

The experience of the Shared Digital model has reinforced the need to have Digital leadership that is tightly aligned to the corporate priorities and business group directions. At the same time, it is important to drive consistency and discipline into the organisation to ensure we maximise our relatively small scale to get the greatest efficiency. Highly localised decisions within the council will create operational divergence, incompatibility, fragmented data, high unit cost and reduce our ability to operate as a single council. Individual directorates may feel like winners – but overall the council loses.

As a result, in all effective technology dependent organisations, the role of the CIO/CDIO is used to bring effectiveness, convergence and efficiency. This role must be supported by an authority over the procurement and use of technology. The CDIO authorities are articulated in the next section and are a foundation for a disciplined organisation.

Operational Governance within IDS will be enacted in accordance with the ITIL framework (see Appendix A). This framework specifies the processes needed to operate IT effectively and specifies such things as the Change Management process – the process that authorises the release of new software and infrastructure into the production environment.

It is recommended that the CDIO be designated as the governance authority for all ITIL processes.

The CDIO will create and submit IT related policies for approval from the appropriate governance bodies. This will include contributing to the Acceptable Use of Council IT policy. The Corporate Director of Resources, would be the signatory on reports submitting the polices to the appropriate governance bodies.

The IDS Programme Management Office (PMO) operates as a subordinate to the corporate PMO and will adopt the same tools, processes and governance (including project business case governance) as far as is practicable.

For the purposes of this document it is relevant to highlight the following elements of the Corporate Governance model which are intended to improve performance and focus productivity and resource in areas which benefit the delivery of Council priorities.

Governance element	ICT involvement	Role
Project Delivery Board	CDIO representation	Senior view. Provide steer around ICT prioritisation where projects may be competing for ICT resource
Directorate Management Team (DMT)	ICT Managers allocated to each directorate board	Provide oversight of ICT workload and cross Council ICT allied activity e.g. data
Programme Design & Compliance Board	Enterprise Architect	Ensuring solutions are compatible and aligned to ICT strategy
Directorates pre-project stage/ Work up of documents	ICT Business Relationship Manager (BRM)	Advisory, guidance & support role

In some cases, the special needs of IT projects will be reflected into the IDS PMO modus operandi. The authority of the CDIO in the PMO processes will be equivalent to that of any other service director.

Given the speed at which Shared Digital was concluded, a new internal set of ICT Governance standards and processes has had to be designed at speed as an interim measure to accommodate the return of projects from SD to sovereign and the realisation of the scale of the degradation to the Islington ICT infrastructure.

The summary of the projects is as below. The column 'Shared Digital' is a count of the projects under the oversight of Shared Digital pre-separation. The 'Islington Digital Services' column is a count of the projects under the oversight of IDS as of January 2019.

This represents a pipeline with high unsatisfied demand – that has grown significantly as the Islington directorates now engage with IDS as their technology provider. It represents a stronger willingness for Directorates to engage rather than bypass IT – but will also challenge our capacity to deliver.

Gateway	Shared Digital	Islington Digital Services
1	5	41
2	13	23
3	4	1
4	3	2
5	16	26
6	4	0
Programmes	3	0
Undefined	12	0
Totals	**60**	**93**

Stage	Shared Digital	Islington Digital Services
Pre Project	22	65
In Flight	19	28
Closed	4	Not applicable
Misc	15	Not applicable
Totals	**60**	**93**

Other key points to note are as follows:

- A PMO function has been established within IDS to support the return of the projects from Shared Digital to sovereign state and the requirement to maintain progress on existing business project 'work in progress'. The PMO is currently managed by an Interim ICT Delivery and Transformation Programme Manager.

- The structure and resourcing of the PMO (Programme Management Office) will form part of the re-organisation as will the evaluation of skills required to fulfil an aspiring project Management function

- Projects have been stratified to align with the level of Project Management skills and expertise, delivery pattern and governance required:

- A Priority One list of projects has been determined, which, by definition are those projects that urgently require attention to maintain service stability and/or ensure progress on interdependent projects whose critical path would be significantly impacted by their delay

- Given the time elapsed and the different pathways the three authorities have chosen for their ICT provision; it has also been necessary to revisit some key Shared Digital decisions to ensure that they are compatible with the IDS strategy.

- Infrastructure and larger ICT projects will have their own Project Boards the membership of which will be informed by the CIO as Project Sponsor and ICT Programme Delivery Manager. Wherever possible this will include business representation to ensure a wide scope of stakeholder interest is represented

- Project tools have been aligned to one common Microsoft Project on-line package which enables consistency between corporate and IDS and enables collaboration and transparency.

From the above it is clear that our Project Management resource requires development and support and there is a clear understanding within the Management Team that there is a need to upskill and improve this critical area of our service alongside managing the culture change as per the earlier discussion in this report.

The CDIO Authorities

As above, a centralised IT model can only be effective and support organisational transformation if there is sufficient 'corporate grip' to ensure all activities and authorisations are enacted under the umbrella of CMB authorities. To make this practical in a day-to-day sense, authorities are delegated to Directors and other staff as appropriate. In the IT world It is common practice to delegate certain authorities to the CIO/CDIO of an organisation to ensure technology deployment and use is cost-effective, safe and appropriate to support the organisation's goals.

It is recommended that the authorities as defined below be endorsed and delegated by CMB to the office of the Chief Digital and Information Officer (CDIO).

The CDIO may in turn delegate specific authorities to subordinate roles.

The CDIO is a required authority to approve:

1. The specification and acquisition of any equipment which will (or could) be connected to the corporate network - irrespective of who is funding the purchase.
   Acquisition includes purchase, lease, rent, loan or any other mechanism that makes the item in question available for the use of LBI members, staff, contractors or community groups.

2. The acquisition of any mobile, desk or soft phones; tablets; printer; scanning device; or multifunction device irrespective of whether or not it is connected to the corporate network.

3. The appointment of suppliers of technology and/or IT and Data services including data analytics services and cloud suppliers such as cloud computing infrastructure or Software as a Service.

4. The mandatory requirements for the connection of privately-owned devices to the Council's non-public services. (A private user is under no obligation to accept these requirements – but without them connection will not be allowed.)

5. The appointment of any supplier of technology or services related to Cybersecurity.

6. The use of External Data storage for council data and the transport of such data to the storage. (GDPR and information-sharing oversight is separate and additional to this authority.)

7. The establishment of and connection of any council network to an externally managed or controlled network.

8. The transport of data to and from the Council networks including FTP transfers and other point to point transfers from non-LBI organisations.

9. All IT and related policies which concern the sourcing and prudent operation and protection of technology assets and corporate data.

It should be noted that in many instances the CDIO will not be the only authority required. For example, the above may also require authorisation for data sharing agreements and financial expenditure in accordance with the Council's Constitution.

Financial Model

The lack of granularity of IT costs and 'shared' approach in the old model means that there is not a good baseline of actual costs for the various IT functions – and there is a blurring between BAU and project work with little understanding of where staff time is attributed.

A budget baseline has been created for the upcoming financial year and it is based on a mix of science (salary costs) and allocation of the remaining budget.   It is as follows:

£16,057,400	**Gross Budget**
£7,122,794	Contract costs
£800,000	Laptop refresh cost
£8,134,606	Remaining available budget - staff & other costs

*It should be noted at the outset that this budget is the envelope within which the financial model must be made to operate. Activities outside of the current scope of work must either be funded by internal savings or by an additional appropriation – if granted. Whilst at this stage there may be insufficient detail to bottom-up cost the new operating model and associated structure, it **will** be elaborated to fit within the financial envelope.*

To meet the productivity and savings targets for the future it is imperative to introduce more disciplined and granular cost measurement.

The definitions below describe the basic dimensions for effective financial management in an IT environment. They are assisted by good ERP and/or systems to support the processes but they are not reliant upon them.

The first definition is around **Operational** and **Discretionary** costs.

Operational costs are those that are required 'to keep the lights on' and provide the day to day IT activities. These services include everything from Server/Network operations to the Service Desk and also include non-project changes such as patching and minor-release software upgrades and security changes.

Discretionary costs are those associated with authorised change – from service requests to provide a tablet through to major change programmes. These are costs where the budget must be identified and its use authorised on a transaction by transaction basis.

From an IT perspective, Operational costs should (continue to) be absorbed within the IT budget with cost accounting to support analysis. For example, it is important to measure and benchmark the costs associated with the provision of the Service Desk function to understand if there are opportunities for efficiency – or whether more resources should be added to improve customer productivity.

Discretionary costs will be recovered to a cost code. This recovery may be directly billed to a customer project, a customer cost centre, or not billed to the customer and instead recovered against an IT cost code so we can understand the cost of the 'free service'.

The reason for recovery is to ensure that discretionary activity does not 'rob' operational budget and put the organisation at risk through operational underfunding.

This table summarises with examples:

	Non-recovered	**Recovered against IT revenue budget**	**Recovered against Customer Cost Centre /Project/Budget**
Operational Costs	All BAU Revenue Costs	Application Support Complex FOI responses etc	IT Revenue Baseline uplift for ongoing support costs for new projects.
Discretionary Costs	-	Customer-driven costs that we choose to not recover (e.g. Mobiles, Laptops & Office 365)	Projects Service Requests All Capital projects/purchases

The cell shaded in blue is an area of interest and internal decision making as it is often about driving desired behaviours. Currently it is simply pragmatic to centralise costs in this cell rather than bear the transactional overhead of disbursing costs. It also contains the necessary budget and prevents leakage both to other 'priorities' or the procurement of non-approved equipment/services. The downside is that customers tend to consider this as a 'free service' and behave accordingly. A current example would be the provision of laptops. It would be cumbersome to manually recover costs against each group but we see examples of business cases that add staff and make no accommodation for the additional IT costs as they are seen as 'free'.

Another area of note is the uplift in BAU costs that projects generate for IT. These include software support/subscription charges, increased capacity, hosting or server charges etc.

These two areas are significant contributors to IT budget pressures which cannot be absorbed ad infinitum.

Recharging costs to customers is a behaviour driver and the introduction of an ERP will lower the processing barrier to the recovering costs from the source business operations.

The natural follow-on from the above is that all IT staff will need to move to time sheeting. For the sake of consistency and fairness this should apply to all roles up to and including the CDIO.

The following table demonstrates the timesheet recovery principles for various position types:

Non-Recoverable/Fully funded positions

Function/Service	Cost basis	Rationale/explanation
CDIO & Direct Reports	Personnel Costs	These functions are needed for the effective running of any significant IT shop and are not elastic.
Enterprise Architect	Personnel Costs	Takes an independent all of organisation view.
Relationship Managers	Personnel Costs	In theory you could recover costs from the customers but it would set the wrong relationship ethic.
Data Scientist/Analysts		In time the analyst level costs could be recoverable but as a function, Data is still too immature to bill on a project recovery basis. It would discourage uptake.
BAU Application Support	Personnel Costs	Maintaining applications is not a discretionary activity. It is necessary to ensure new applications transfer support funding into IT to cover growth.
Service Desk	Personnel Costs	In theory you could recover costs from the customers but it would drive poor behaviours – I.e. users may not report cyber-security incidents.
Contract Management and compliance measurement		As per application support, these are not discretionary activities and it is in the organisations interest to ensure functions are performed effectively.
Operational Assurance	Personnel Costs	Similarly these functions assure the delivery of key services and resourcing to an appropriate level is not discretionary or elastic.
Core PMO	Personnel Costs	As an assurance role they should be fully funded.

Recoverable positions

Function/Service	Cost basis	Rationale/explanation
BA	100% / 70%	They are there to contribute to projects
Tester	100% / 70%	They are there to contribute to projects
Application Developer	100% / 70%	They are there to contribute to projects

Function/Service	Cost basis	Rationale/explanation
Project Manager	100% / 70%	They are there to contribute to projects
Programme Manager	~15% uplift on Project costs	It is generally simpler for PMS's recovery rate to include a percentage for recovery for programme management (rather than dividing small amounts of their time over many projects)
Trainer	80% / 70%	They are there to contribute to projects but need non-class time to upskill
Solution architect	50% / 50%	They are there to contribute to projects but also have a broader enterprise role.

It should be emphasised that **it will take time to move to this model** and should be done at a pace and an organisational level commensurate with the roll out of ERP capability to minimise any administrative burden. It should also be done on the basis of one-time budget equalisation – I.e. if a previously funded service is flipped so as to be charged to the customer, the corresponding budget should be returned to them as a one-off exercise. The point is to drive good behaviours – not to make windfall profits.

To be clear, this paper is recommending that good IT/financial practices are put in place as we grow our ERP capability - but is leaving any decision to move to a recharge model to the discretion of the S151 Officer.

Ultimately it may be pragmatic to grow that maturity of this model by implementing as cost centres **within** IT rather than recharging to the customers. This does give transparency around the cost pressure areas and positions IT to at least undertake the budget conversations with the centre from a position of data-based knowledge.

A common point of contention is where the cost to a project of an internal resource is lower (or zero) than the cost of an external resource which is billed at market rate. There is an inequity in that it may be a lottery for the cost to projects for these resources which makes financial forecasting difficult. Solutions include setting the internal rate the same as the market rate; averaging the cost (works as long as the ratio of internal to external is maintained); or making such functions totally insourced or outsourced. In general, the solution is a compromise and driven more by the need for specialist external skills or internal local knowledge than assuming all Business Analysts (for example) are equivalent.

It is recommended that this financial model be approved by CMB based on the endorsement of the S151.

Technology renewal

As with all infrastructure, if your IT is not maintained and refreshed regularly the cost of later remedial works increases dramatically and so avoidance and delay are ultimately false economies. This was demonstrated within the NHS recently on its Microsoft platforms which are now facing a bill of over £1billion just to meet security standards and move into vendor support, following a few years of underfunding. In technology terms we're in the same position.

Before we can truly support business change we need to ensure our core infrastructure is up to date, robust, fit for purpose today and well supported. We then need to ensure we have an affordable and sustainable architecture plan to avoid a repeat of the current situation.

Architectural Directions and Principles for lifecycle management

Our core IT infrastructure will continue to be centred around the Microsoft Enterprise platform (currently Windows10 and Office 365) and their roadmap for transition to the Cloud for end user computing, productivity, collaboration and data storage.

We have also defined the current Enterprise architecture which will be used as the base position on which to map our adoption path for Software as a Service and Cloud services over the next 3 years.

Critical to sustaining our IT systems and services is the lifecycle management programme across the Enterprise, based on the following principles which will be applied at product, supply and service levels and managed by the Enterprise Architect through the Configuration Management database (CMDB):

1. Technology roadmap, covering upgrade path and regulatory compliance

2. Commercial cover including whole life costs, contract term to match business need, contracted service levels and protection from company or service failure

3. Interoperability, how the systems fit with each other and together

4. Infrastructure needs, support, resilience and renewal

5. Business continuity and disaster recovery

End-of-life Infrastructure & Applications

Our current core IT environment is end of life and/or functionally deficient and needs to be brought up to date in three areas:

1. Microsoft Windows 7 will no longer be supported at all from January 2020 and must be upgraded to Windows 10. This project is in train and is expected to be completed by January 2020

2. In parallel with this is the need to consolidate and standardise the devices and environment we provide for our staff – end user computing. This project is live and also expected to complete by January 2020

3. Our networks are not sufficiently resilient or of a scale that meets our needs and the project to address is expected to complete by June/July 2019

4. Our Wide Area Network (WAN) is moving to a more flexible, performant, greater capacity and reliable technology. The project to migrate all of our links to the new WAN has begun and (subject to various physical surveys) should complete in the summer of 2019.

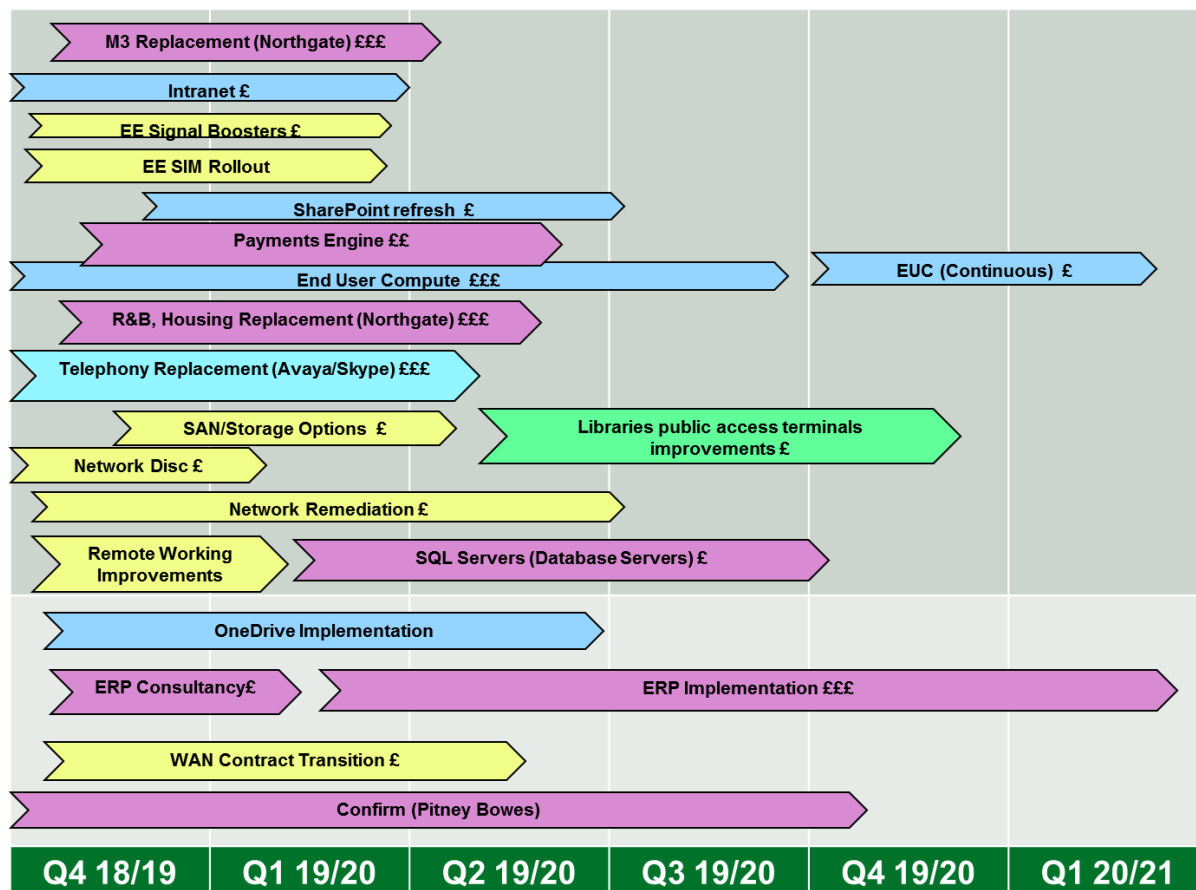The following business applications are approaching or at their end of life and need urgent action:

- Northgate Revs & benefits, Housing

- Northgate M3 (Environment, Planning)

- Avaya Telephony (Customer service & call centre applications)

- Public Access terminals at Libraries

The roadmap has set out a proposed timeline for tackling both the core infrastructure and end of life business systems. See below for highlights.

18-month Roadmap Highlights

The following chart represents the high level view of the near-term programmes to support the technology roadmap. This is still evolving but it gives a sense of the scale of the work required – and the short timeframe within which we have to work.

M3 Replacement (Northgate) £££					
Intranet £					
EE Signal Boosters £					
EE SIM Rollout					
SharePoint refresh £					
Payments Engine ££					
End User Compute £££			EUC (Continuous) £		
R&B, Housing Replacement (Northgate) £££					
Telephony Replacement (Avaya/Skype) £££					
SAN/Storage Options £		Libraries public access terminals improvements £			
Network Disc £					
Network Remediation £					
Remote Working Improvements	SQL Servers (Database Servers) £				
OneDrive Implementation					
ERP Consultancy£	ERP Implementation £££				
WAN Contract Transition £					
Confirm (Pitney Bowes)					
Q4 18/19	**Q1 19/20**	**Q2 19/20**	**Q3 19/20**	**Q4 19/20**	**Q1 20/21**

Priorities for New Capability

The strategic business relationship management function within IDS will ensure the demands from business areas are aligned to the Council's strategic priorities (strategic business plans, Islington 2020) and the pipeline for new services and solutions is brokered to:

- take into account competing demands
- not exceed the available technical and operational capability
- ensure core services continue to function well and are not compromised
- Ensure compliance with the CDIO Authorities
- Provide good value to the Council

This pipeline will set the investment profile for IDS additional services alongside the resources required to sustain and refresh core services.

IT investment is primarily an enabler for service transformation to increase productivity, drive value and release resources through self-service and streamlined operations via a "once and done" approach to service delivery. Cost reductions (savings) will typically be realised through business budgets and not those of IDS and it is essential that business cases for new capability have clear line of sight to how and when those savings will be released.

The Public Sector has a long tradition of collecting data and has an impressive back catalogue of valuable information, with consent to use it for service delivery. The ability to make use of that data through advanced analytics to inform strategic and operational decision making has only recently reached a point where the hype has become reality in terms of affordability for the tools needed and the skills of data analysts to meet business expectations.

The evidence of the power of data to drive whole systems change is overwhelming. Examples include the reinvention of retail, banking and insurance through supply chain management and personalisation to fundamentally change industries and encourage people to live healthier lives respectively.

Unlocking the power of data is dependent on 3 things: quality, ease of access and consent to use. The Council's proposed data strategy sets out how we can make use of our data to transform services.

Cybersecurity

Cybersecurity remains an ongoing threat to the functioning of the council and a failure could result in a public failure to meet our statutory obligations. A recent update to CMB (December 2018) outlined the threats and our defensive measures which will not be repeated here.

However, it is worth noting that it is well recognised that cybersecurity is not a function that 'takes care of the problem' in isolation. The practitioners in this area must ensure technical robustness, executive awareness & buy-in and increasingly, user education and awareness of their role on preventing security and privacy incidents. The positioning of the cybersecurity practice in IDS also provides a close relationship with the proposed Digital Education group which will be the front line for raising awareness with staff.

This plan acknowledges the importance of raising the bar for cybersecurity across all dimensions of the IDS's activities.

Risks & Resilience

This section provides an overview of the risks to a) executing this plan; b) the key technology risks currently in play; and c) the general approach to creating 'resilience' which provides general mitigation to technology failure. The risk scale is as follows:

Impact scale =>	Insignificant	Marginal	Moderate	Critical	Catastrophic
Likelihood scale =>	Rare	Unlikely	Possible	Likely	

A)   Risk Analysis for this Business Plan

Risk	**Impact/ Likelihood**	**Mitigation**	**Residual I/L**
Staff become disengaged	Critical/ Possible	Strong communications, clear plan, fairness, address 'what's in it for me', strong sense of purpose	Critical/ Unlikely

Risk	Impact/ Likelihood	Mitigation	Residual I/L
Delays in recruitment and selection of critical staff impacts the speed at which the new structure can be fully implemented and become effective	Critical/ Likely	A resilient recruitment plan is produced to ensure timely resourcing to deliver strategic objectives: Market-led remuneration packages are proposed to attract and retain key staff. Chosen recruitment partners are well briefed and prepared.	Critical/ Possible
Supplier market reacts slowly to the new ICT landscape	Moderate/ Possible	Strong engagement with suppliers & clarity of purpose around medium-long term market requirements. Use of G Cloud	Moderate/ Unlikely
Non-acceptance of IT authority with continued 'Shadow IT' activity undermines the plan	Moderate/ Possible	Strong communications and delivery performance from IDS to make the right way the easy way. Buy-in from CMB to back the CDIO authorities.	Moderate/ Unlikely
Poor change management causes reputational damage to ICT & the wider Council	Moderate/ Possible	Transparent stakeholder comms which are clear about the critical state of ICT and seek support of all. Areas deemed critical to service delivery encouraged to review high level plans to mitigate any loss of ICT service during this transition period. HR processes followed rigorously overlaid with strong people-care.	Moderate/ Unlikely
There is insufficient funding to execute the plan successfully.	Moderate/ Possible	Continue to mature the cost model and drivers and prioritise most important aspects of the plan	Moderate/ Possible

B) *Technology-related risks for the broader organisation*

Risk	Impact/ Likelihood	Mitigation	Residual I/L

Risk	Impact/ Likelihood	Mitigation	Residual I/L
Technology failure due to unsupported applications/ infrastructure leading to delays in delivery of cost-cutting projects, poor service and reputational damage.	Catastrophic/ Possible	Priority One projects/ so-called 'cliff edges' identified and action taken to accelerate remediation. Accurate mapping of critical dependencies within projects and programmes undertaken.	Critical/ Possible
Inability of IDS (in conjunction with directorates) to progress services in-keeping with technology developments and end-user expectation.	Critical/ Possible	Maintain proactive attitude and encourage close stakeholder relationships via the Business Relationship Managers. Upskill staff and establish supportive vendor partnerships.	Moderate/ Unlikely
We do not deliver IT projects which will enable/optimise business transformation across the Council.	Critical/ Likely	Maintain strong reporting and monitor very closely interdependencies between projects. Establish flexible supplier relationships.	Moderate/ Likely
There is insufficient budget to operate IDS effectively or invest in the necessary infrastructure to avoid failure.	Critical/ Likely	Prioritise initiatives to the most cost-effective and keep transparency over the service/cost trade-offs. Seek cost recovery where appropriate. Manage best value from suppliers.	Moderate/ Likely
The End user Computing project does not deliver a solution that meets the business and end user needs of the council and its staff.	Critical/Possible	Ensure the project definition is centred on the user and not driven by technology components. Adopt standard architectures & establish a well-represented end user community for testing.	Critical/unlikely
The council's networks and cyber-defences are not capable of protecting systems and data from hostile actions and do not provide sufficient capacity to meet business need	Critical/Possible	Design and implement the council IT security model to meet current recommended industry and UK government standards. Adopt appropriate all-of-government cybersecurity offerings.	Critical/Possible

The lack of strong resilience for the council's IT is of concern and represents an ongoing risk. The business case to **not** move the data centres was approved by CMB in late 2018 as such a move would have been expensive and would not solve the resilience problem. The problem is the lack of **failover** capability to alternatively provisioned capacity should our primary data centre (222 Upper St) fail in some way.

With the current state of applications and hosting, the path to providing resilience is long and expensive. In the short term we need to manage the risk and ensure we have good backups and resilience for the most critical applications (as far as their architecture allows).

As we upgrade applications we should move to Software as a Service with providers who provide resilience for their services, or, where we must still procure at an infrastructure level, we provision the infrastructure in Azure cloud, where there are options through which resilience can be achieved. These include:

- 'active-active' where dual sets of infrastructure share the load all the time

- 'hot/warm/cold standby' where a version of the application/infrastructure is ready to be brought into service within varying timeframes

- 'restore from cloud' where a new set of cloud infrastructure is provisioned and the data restored from cloud to pick up from the last backup point.

The two key factors to consider for us are:

1. RPO (recovery point objective) - the time for which data (generated before the failure/incident) is lost

2. RTO (recovery time objective) - the time from the point of failure/incident to restoring operations to normal

There is naturally a higher cost for shorter RPO/RTO's and the answer will be driven by the business continuity demands. In reality there are very few applications for councils that cannot tolerate a reasonable outage time – up to one day, before operations are critically affected. However, this can be nuanced – e.g payroll can tolerate long outages as long as they are not near a pay run at which point it becomes critical.

Mass retrofitting of good Disaster Recovery is not an affordable option. Therefore, at each investment point, a well-considered decision will be made to determine the appropriate DR approach in consultation with the affected business and in line with the guidance from the Resilience Board.

Conclusion

The above plan is a wide ranging view of the foundations for a transformed IT service. Not all aspects of the plan are fully analysed or articulated as yet – these evolve as part of the journey. It is necessary to have an agreed and cohesive starting point, which can be updated over time as we learn and understand more.

In conclusion it is recommended that this plan, in its entirety, is approved by CMB for execution through the appropriate organisational and change processes.

Appendix A - Industry Standards

Project and Programme Management

The Association of Project Management (APM) is one of the foremost professional bodies in this field and has established a set of Chartered qualifications for the various professional roles involved underpinned by a set of well recognised standards which practitioners must prove that they meet to achieve accreditation. These are not specific to the IT industry, but are more generic around what is needed to support successful project delivery.

PRINCE (PRojects IN a Controlled Environment) 2 is an internationally recognised methodology for use in managing projects and came from the UK government IT profession in the 1990s. There are 7 principles defined in PRINCE2:

- Continued Business Justification:
- Learn from Experience:
- Defined Roles and Responsibilities:
- Manage by Stages:
- Management by Exception:
- Focus on Products:
- Tailor to Suit the Project Environment

IDS will adopt PRINCE2 as the methodology for project management across the functions and develop the staff's capabilities through the APM model for professional standards and competence.

ITIL

ITIL, an acronym for Information Technology Infrastructure Library, is a set of detailed practices for IT service management (ITSM) that focuses on aligning IT services with the needs of business.

ITIL describes processes, procedures, tasks, and checklists which are not organization-specific nor technology-specific, but can be applied by an organization for establishing integration with the organization's strategy, delivering value, and maintaining a minimum level of competency. It allows the organization to establish a baseline from which it can plan, implement, measure and validate compliance across the IT environment.

IDS will be implementing the ITIL practices as the core model for ensuring effective service management and will develop our staff capabilities under the ITSM Framework to enable successful implementation.

Project Support Tools

There are a wide variety of project support tools in the market place and a reasonably competitive market for cloud based solutions. In keeping with our consolidation of the core IT around Microsoft, we will be implementing MS Project Online as our default support tool, including the timesheet function for effective resource management.

MS Project Online will provide the council with transparent accountability of costs against project delivery, the ability for IDS to map out resource needs going forward against demands (linked to the Enterprise Architecture and technology roadmap over time) and a basis on which a resource plan can be built and managed to meet core and added business needs for technology implementation, management and refresh now and in the future.