West Lindsey District Council

ICT Strategy Roadmap

April 2018

CONFIDENTIAL

1. Contents

2. ICT Strategy / Roadmap

2.1. ICT Vision

The vision within this ICT strategy summarises the overall purpose of our ICT service and is the reason it exists. It is a high-level statement which provides context and gives a constant reminder of what the ICT service is there to provide:

'To provide reliable and fit for purpose ICT facilities which enables the Council to deliver high quality services to customers and to provide modern and flexible working environment for the Council to exploit digital opportunities including those which support the commercial opportunities of the Council'

2.2. ICT Guiding Principles

It is important that we agree on a set of guiding principles or 'rules' which underpin the service and govern the direction our ICT facilities move in. These guiding principles help our ICT team understand the framework they are working within and give colleagues in business teams a clear idea of the expectations they can have about the service as the business moves forwards.

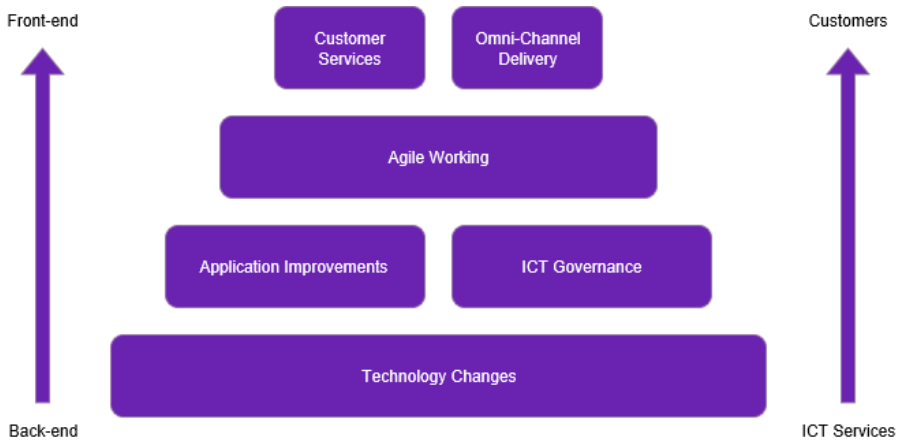
The Principles proposed for our ICT service, informed by staff consultation, are as follows:

- Our ICT service exists to support our strategic business objectives and Corporate Plan;
- Our ICT service and related projects will help ensure that we can deliver cost effective, efficient and excellent customer facing services;
- Our business requirements will drive the technical solutions we adopt, not the other way around;
- We will adopt Cloud and digital enabled solutions as a default position for all new investments in ICT;
- We will support business teams with up to date and reliable IT tools and facilities which will enable them to deliver excellent services, not constrain them;
- We will use technology to provide excellent communications, both internally and externally;
- We will process and secure customer data responsibly to ensure it being used in accordance with local policy and wider legislative requirements;

- We will use the data we hold in our core systems to drive our decision making through better use of analytics and business intelligence;
- All projects and technology investments will demonstrate a tangible business benefit and, where possible, a return on investment;
- We will make full use of our business systems' capability rather than buying bolt on systems or writing standalone spreadsheets or databases; and
- We will look to rationalise our business systems wherever possible, especially in the cases where there are significant similarities between the requirements of service teams.

2.3. ICT Project Deliverables

Sitting below the Guiding Principles are the more detailed deliverables which will form the ICT work plan over the life of this strategy. These strands have been identified through discussions with business users and the ICT team to understand where their efforts will be focussed over the coming years. For clarity, these projects have been grouped into six key components:



This model reflects the fact that there are technology, application and governance requirements which underpin any new change projects proposed in this strategy. This will allow the underlying foundations to be established before new functionality is developed to improve the services offered to staff and customers.

The following sections provide details of the specific project strands, including current issues and areas we will address to form the programme of work. A full list of these projects and estimated durations for their completion is shown in Appendix B. The specific timescales will be reviewed as more details of the scope of each individual project and the interdependence between them is agreed.

As a general point, to ensure that ICT implications are considered before projects are initiated and throughout their implementation, it is essential that our ICT team is consulted during the project approval process. This will allow the team to play a critical part in advising upon infrastructure, licencing, data, cost and resource aspects of a project.

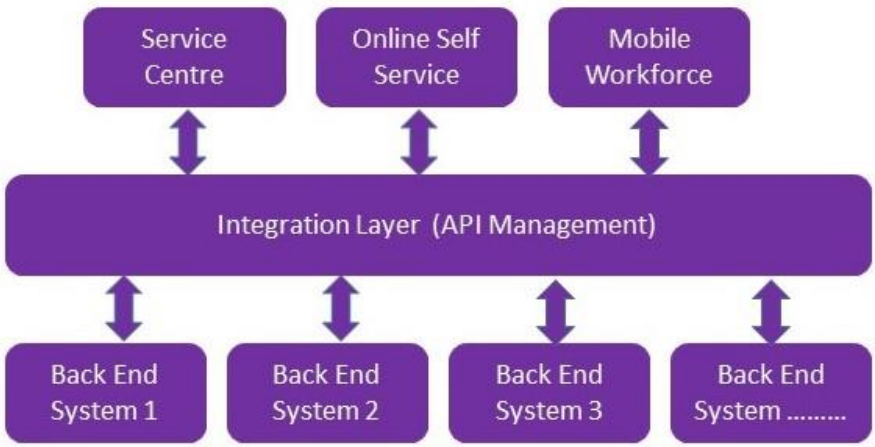
2.3.1. Applications Improvements

As a business, we currently rely on a portfolio of legacy systems, some of which need urgent replacement due to lack of modern functionality, end of contract term, high costs, inability to integrate, etc. Historically, our strategy for application procurement has been driven by the needs of the individual business units in order to deliver specific business functions. This now means that we have a complex matrix of systems, many of which are not integrated or have weak integration, which impacts the ability to provide a holistic view of customer engagement.

An example of this is the fact that we currently have two separate document management systems in place. One is used in the Revenues and Benefits service and the other is used across Planning, Building Control, Licencing, etc. Clearly, having two separate repositories of documents means that the ability for a member of staff to look for a single record of document history for a customer is not possible without searching multiple systems. Added to this is the fact that one of these document management systems has not been indexed effectively; resulting in our staff having to spend significant time searching for the document they need.

Through the consultation undertaken with staff and customers, it is clear that this environment causes inefficiencies, an inability to revise / streamline processes and frustration for all parties; the resulting impact being that our customers cannot easily get multiple issues resolved via a single engagement approach as we cannot achieve a true 360-degree view of the customer. As we continue to drive the digital agenda, the introduction of comprehensive self-service facilities which are fully integrated and can provide real-time end to end process realisation for customer will also be compromised.

However, the supplier market itself has exacerbated this predicament as many are niche solution providers and, whilst modern systems have a greater ability to integrate through standard definition APIs (Application Programme Interface), the age of our application portfolio cannot fully support this opportunity.



A review of the market has identified that there is no one single solution that can deliver all of our services and there will therefore remain a continued reliance on integration as the new 'digital environment' is established.

However, the deployment of an ERP/CRM solution will give us the capability to either utilise existing functionality within the product to replace some of our discreet systems and/or provide a development platform which, through a partnership approach, will provide an additional opportunity to bring functionality into the core product.

That said, there are some developments which have taken place over recent years which will address some of the issues faced but to be truly effective, the establishment of the new systems must force a cultural change which will seek to reduce the silo working which is currently prevalent across the business.

There is the opportunity to reduce the number of individual applications through the introduction of an appropriately sized ERP (Enterprise Resource Planning) system. Some larger Councils have previously procured products like SAP and Oracle which are likely to be too burdensome for us, but new entrants to the market like Unit 4 (Agresso), Technology One and Sage (along with others) could deliver a more fit-for-purpose solution for a Council of our size. These systems seek to address the core components of the 'back office' environment incorporating Finance, HR (and payroll), asset management, procurement, governance and compliance. ERP Systems will also be provisioned with a CRM (Customer Relationship Management) component as part of its core functionality. We have already identified the need for CRM, and benefits could be gained from procuring an ERP solution which has many of the core components that are required for the day to day administrative functions of the Council.

ERP systems will also give the ability to develop additional solutions within the structured environment, although this is often costly, requiring development skills which are often at a premium.

Therefore, many Councils who have adopted an ERP approach still utilise dedicated line of business applications to deliver the core functionality but through a combination of ERP and an API layer. Over time, our strategy will be to migrate (or at the very least integrate) all customer data which exists in the line of business applications into the CRM component so that a full 360-degree view of customer interactions can be more easily maintained. Further, the introduction of the self-serve facilities will become simpler as customers will only need to access one solution given the appropriate security regime. This will also provide a platform for customer self-service request management to be initiated and, in some instances, fulfilled without the need for staff intervention. The use of appropriate e-forms, workflows, authority parameters and timetables will ensure that processes are, where possible, automated and audited.

As part of the current development within our ICT environment, a commitment has been made to deploying the Microsoft Office 365 suite of products which is a cloud-based solution, and which can include Microsoft Dynamics CRM, so it may be that we extend our 365 strategy to incorporate this wider functionality subject to a wider market appraisal. Dynamics CRM is becoming a popular solution with Local Government but again this largely represents a development environment. In line with our Cloud First strategy, Dynamics 365 is a hosted version whereas Dynamics CRM could (if required) be hosted on site. There are examples where companies have invested heavily in development of Dynamics and have migrated all customer data to reside within the solution.

This can be a lengthy and costly development given the number of back office solutions we use.

A decision will be required on whether there are benefits to be gained by adopting the hosted Dynamics 365 solution (as part of the continuing commitment to Microsoft products) over and above a CRM which may be provided as part of an ERP solution. Similarly, Microsoft can offer both accounting and HR solutions although they do not purport this to be an ERP solution (at this time) although there are options already available on G-Cloud. As such, this can only be decided on a case by case basis and the decision will be informed through the development of a more detailed business case, development of a business focussed specification and a procurement process.

Therefore, it is recommended that any aged or redundant systems are replaced (see below) in line with the following principles:

- Specify and procure an ERP solution providing core back office functionality ensuring that the provider can demonstrate integration with other key line of business applications prevalent in the Local Government sector. Also consider if any of the proposed solutions already have fully developed ancillary systems which are embedded within the solution;
- Specify and procure a CRM solution either as part of the above procurement or as a separate procurement where additional benefits can be gained through integration to the ERP solution. In this instance, it is reasonable to expect that the business case for such a procurement will include costs of an established system integrator;
- Specify and procure a number of replacement line of business applications seeking to ensure that the architecture and integration capabilities are in alignment with those of the ERP and CRM solutions. Modern and Open standards such as API should be fundamental drivers when considering the underlying architecture.

The overall objectives of our approach to applications will be to:

- Provide a robust interface between existing component systems using a suitable middleware solution or APIs dependent upon supplier capability;
- Use defined information management processes to ensure data is accurate, up to date and consistent;
- Provide a future-proofed technology platform providing long-term support options;
- Deliver real-time information and a single view of the customer incorporating customer history and live activities;
- Support channel migration through a customer self-service interface and customer apps;
- Provide effective mobile working solutions to allow the delivery of services to customers when mobile and to support flexible working arrangements for staff;

- Provide easy access and consistent services for customers using different access methods (phone, web, social media, etc.); and
- Offer a dedicated front-end provided by the customer relationship management system to manage all requests, integrated with business systems to provide a 'single 360° view of the customer'

The table below shows each of the key business applications we use and recommended actions for each:

System	Comments	Proposed Action
Civica App – Planning, BC, Land Charges, Environmental Health, Etc.	We have already determined that the current Civica solution is not meeting the needs of the business. The functionality requirements are expected to be provided by the introduction of the proposed ERP or CRM solution (depending upon route followed) We will therefore prepare a specification to meet current business needs and build those requirements in to the ERP / CRM procurement.	Remove and consolidate.
Civica Financials – Financial Management	This is a web-based, financial information management solution that provides a range of modules. Recent reviews identified that the solution was not considered to be a capable of supporting Commercial Operations for trading and, as a result, manual workarounds and spreadsheets had been introduced. Whilst we have not undertaken a review of the current requirements for finance, it would seem prudent to consider whether the functionality could be integrated into a more consolidated/integrated solution. We will therefore develop a detailed specification of requirements for this solution. If the corporate approach is the route of ERP, then these requirements will be factored into that solution. If the preferred route is for	Replace if CRM is the chosen solution for the business. Remove and consolidated if ERP is the preferred route.

System	Comments	Proposed Action
	CRM, then a new dedicated financials system will be procured. .	
Firmstep – Self-Service Forms and Portals	Firmstep is a cloud-based forms solution for online communication, providing the capability for integration with back office systems. It is predominantly modular based, and we have the following modules – 'Self', 'Dash', 'Forms' and 'Service' This provides a range of on-line forms which allow customers (or staff providing a supported service) to report and apply for services online and, with suitable integration, log these interactions against the customer's account. Several Councils have replaced legacy CRM solutions with Firmstep's Customer Experience Platform using the functionality of e-Forms (also supporting mobile workers), self-service portal and customer record development. However, there are now more agile options available since the previous traditional CRM solutions were deployed and therefore Firmstep should be considered as one of a number of possible contenders for a new CRM solution. Research has shown that some competing products have greater functionality built in, so it will depend on the business requirements as to how appropriate this solution would be. We will continue to exploit the existing solution in the short-term and incorporate our functionality requirements into a new CRM specification or CRM functionality within an ERP approach.	Remove and consolidate.
Civica Icon - Payments	This is a hosted solution providing the payment engine for WLDC. Based on	Remove and consolidate in

System	Comments	Proposed Action
	recent review information, this software is considered to be an expensive solution. If we consider a broader review of Civica Financials to provide a more consolidated approach to financial management, then payment handling requirements will either be included in the replacement financials system or the chosen ERP solution.	new financials system or ERP solution.
IDOX – Document Management	This product is currently used as the corporate EDRMS solution, except for within Revenues and Benefits, as detailed below. While it is considered to be limited by some business areas, our plan in the short term is to renew the current maintenance licence. During 2018, we will then begin the process of moving documents into Microsoft SharePoint. This is a strategic approach becoming more commonplace to deliver a cost effective, corporate EDRMS solution providing efficient mobile and field-based access to documentation and core information. This approach should be factored into the broader requirements for document management across the revenues and business functions too.	Retain until functional requirements for document management are matched against capabilities of SharePoint.
Information@Work – Document Management	The Revenues and Benefits service utilises this EDRMS solution solely within their service area rather than the corporately adopted IDOX EDRMS. The service is looking to migrate to the latest version of Information at Work, v5.10, once testing has been completed. As this is a closely integrated module to the Northgate Reviews and Benefits solution, any changes or strategic considerations for change to	Replace as part of Revenues and Benefits implementation project (assuming a new system is bought in).

System	Comments	Proposed Action
	that solution would need to incorporate Northgate Information@Work also. As such, this should be factored into the evaluation of alternative Revenues and Benefits solutions and consideration given to adopting a corporate EDRMS across the Council, where at all possible.	
I-Trent – Hr / Payroll	iTrent is a web-based payroll and HR solution that is shared with North Kesteven District Council. Recent reviews have suggested that when it was originally configured and introduced, the complete set of business requirements were either not fully considered or these requirements have evolved over time and is now not entirely fit for purpose. There are spreadsheets used outside the system alongside some manual processes which have created additional workloads. Recent reviews have concluded that iTrent should be comprehensively reviewed and/or re-implemented in order to meet current and known future business requirements. iTrent is commonly used as an HR and payroll solution across many similar organisations and does not have any major functionality limitations as a whole. However, based on the audit and assessment that we have already undertaken we recommend that iTrent undergoes a comprehensive review against current business requirements. If the corporate route chosen is for an ERP solution to be implemented, then these requirements can be incorporated. However, as the future of this system has implications on the existing	Remove and consolidate into ERP if chosen Re-implement or replace if CRM is chosen. To be advised following business assessment of implications for shared services arrangements.

System	Comments	Proposed Action
	shared service for HR with North Kesteven, further dialogue will be required before a decision is taken.	
Lalpac - Licencing	This product is used for licencing in the Council and is part of the Idox group of companies that also provides our corporate EDRMS solution. The requirements for this solution will be included as part of the specification and procurement process for the chosen CRM or ERP route.	Remove and consolidate into the chosen CRM or ERP solution.
Earthlight - GIS	The provision of GIS capability within the Council (and across the shared service more generally) is uncoordinated and a strategic plan for these services does not exist, even though it has the potential to become a key pillar in supporting the digital ambitions of the Council, who can take advantage of GIS to improve the management of corporate data, enhance services delivered to customers through the omni-channel approach and provide improved and accurate data to staff when working away from the office. The corporate GIS tool we use is Earthlight, which is browser/web-based. This software is hosted by WLDC and also shared with North Kesteven and the Central Planning Unit. Historically, this replaced the Civica GIS solution that was also used, although there is an embedded GIS in Civica APP which is also used and integrates with the public-facing GIS, Aurora, by connectors. Aurora is used as the corporate public-facing GIS tool, and is provided throughout the shared service with North Kesteven, the City	Retain until a corporate GIS strategy and requirements are fully known. May be able to incorporate the functionality into an ERP system if that is the chosen route.

System	Comments	Proposed Action
	of Lincoln and the Central Planning Unit. This is also hosted by WLDC. The provision of GIS capability within the Council and across the shared service appears unclear, and a more strategic approach to GIS across the business with a robust roadmap for consolidation and future integration needs to be developed to strengthen this capability and increase efficiencies. Further work will be undertaken to define GIS requirements from an operational and customer engagement perspective. Once that has been completed, we will be in a better position to evaluate requirements against Earthlight and other products in the market.	
Northgate – Revenues and Benefits	The core management solution used to deliver the Council Tax and Benefits service is Northgate Revenues and Benefits. The solution runs on an Oracle database platform; the current live version is v6.16.1.0 with v6.17.0.0 running in the test environment. We have kept up to date with Northgate releases and have upgraded on a regular basis. As a result, the solution is within the current Northgate support and maintenance window and there are no plans to relax the annual upgrade process. Based on our discussions to date, and review of previous documentation, there do not appear to be any major business issues with the Northgate solution, and a recent application audit demonstrated that it was performing well against business requirements.	Replace or repurpose through a formal procurement exercise.

System	Comments	Proposed Action
	However, it is considered a legacy system, with a contract renewal imminent and, as such, a recent recommendation was to undertake a procurement exercise to enable all shared service organisation to explore alternative systems. This recommendation is supported in order to evaluate other solutions and consider future cost savings.	
SharePoint	We are currently using SharePoint 2010 and have plans to move to 2016 early in 2018. In line with the recommendations re:Idox, SharePoint is ideally place to be considered as a potential replacement for delivering EDRMS capability across the organisation and becoming the 'go to place' for corporate information management requirements. We will define the corporate requirements for document management and test against the SharePoint capabilities.	Retain and enhance.
Symphony I-Manage - LLPG	Symphony iManage is used to provide up to date LLPG address information, allowing the maintenance of our property dataset, in accordance with the BS7666 national standard, and to submit regular updates to the Government's National Land and Property Gazetteer hub. This is a well-recognised and commonly used product throughout the sector, with WLDC using the client server version of the product. It is understood that there are cloud options for the provision of this capability from the supplier, which should be further explored in our	Retain and explore business case for cloud version and consider further integration with CRM or ERP as part of that procurement. Consider functionality requirements as GIS is reviewed and if ERP becomes the preferred corporate solution.

System	Comments	Proposed Action
	move to a Cloud First strategy for application deployment.	
Ideagen / Easysite – Web Content Management	This is a cloud Content Management (CM) solution provided by Ideagen, called Easysite, which allows the management of online information for our external website. The product is typically focused for public-sector organisations and appears to provide the functionality and capability required for a modern, fit for purpose CM solution. We will therefore continue to use the solution and give consideration to the functionality when looking at a new ERP/CRM solution.	Remove and consolidate into ERP / CRM solution.
CRM	No corporate CRM system currently exists although there are variants of traditional contact management solutions built in to some of the current systems we use. We will define the business and integration requirements for a corporate CRM solution and approach the market. Consideration will also be given in respect of the ERP procurement as a replacement for financials (and optionally HR) and also to the replacement of smaller systems which may provide general case management functionality.	New solution either as dedicated CRM or as part of a new ERP solution.
Project Office Governance	As part of the new governance arrangements, we will be introducing more structure to the management of projects through a defined programme office. The Council will require a solution which will embed standards and rigour in the management of projects which can be accessed by all project stakeholders.	New solution which may be provisioned through RP or a separate line of business application.

With a greater reliance on IT systems to deliver services, an increase in customer online transactions and more electronic dealings with third parties, a growth in the volume of data held by any local authority is inevitable.

As this growth of data happens, we must make the best use of the asset to assist with decision making and inform the direction of the business. The Systems Development team will continue to provide technical support to allow data extraction from systems and facilitate the use of the data for effective decision making across business teams. As mentioned elsewhere, we have identified the need to improve the human link between business users and the ICT / System Development team. This includes identifying business requirements for reporting and communicating these to technical colleagues to ensure the correct information is extracted. This role could sit within business teams or as part of a newly created Business Analyst role. The decision as to where in the organisation the role is placed will be taken when the review of the ICT service and its structure is undertaken.

The manipulation of data will be enhanced by the introduction of new Analytics tools across the business, which will provide the foundation for proactive service assessment (as opposed to merely reporting on historic information) enabling us to deliver intervention services which will reduce longer term costs overall.

Compliance with data management legislation (such as Data Protection and GDPR) is not an ICT responsibility as the requirements will touch all parts of the business. However, ICT will need to play a part in ensuring compliance by assisting with an organisation wide audit of the data processed and the path it takes through the organisation. Without this, the business cannot be sure it meets legislative requirements.

The task of effectively managing data becomes more important the more data a business has. The business will therefore become more disciplined in the data it retains to ensure it only holds and processes what is needed. Not only does this make reporting easier, it also helps to ensure compliance and reduces storage costs as more data is placed in the Cloud (Cloud First Strategy).

We will:

- Specify and procure an ERP solution providing core back office functionality ensuring that the provider can demonstrate integration with other key line of business applications;
- Specify and procure a CRM solution where additional benefits can be gained through integration to the ERP solution;
- Specify and procure the necessary replacement line of business applications seeking to ensure that the architecture and integration capabilities are in alignment with those of the ERP and CRM solutions;
- Ensure the DPA and Information Governance Officer has support from senior management and identified resources within service

teams to manage data in a coordinated way across the organisation; and

- Continue with a programme of data audit and cleansing to aid compliance with legislation.

2.3.2. Omni-Channel Service Delivery

An aspiration of many organisations is to adopt a model of omni-channel service delivery to support improvements in customer services. There are many examples in the private sector where transactions between customers and the business are seamless across multiple channels of delivery. It should not matter that a customer started their interaction through one form of contact, and then continued by using a different channel, perhaps initiating and managing multiple complex transactions. This is a growing expectation from customers as they experience this form of service excellence in their day to day lives.

It is important to recognise that **omni-channel** delivery is different from **multi-channel** delivery. Offering a service through a number of channels (web / telephone, app, etc.) may give the customer a choice for how they want to interact with the Council, but if the channels are not joined up to provide common data and a reliable contact history, then it is not omni-channel.

The achievement of omni-channel delivery will greatly enhance the service we are able to offer our customers. For example, a customer may register a change to their Council Tax circumstances via our website and then later in the day make a payment using a mobile phone app. They then might receive a receipt to their e-mail account. All these transaction details should be available to a frontline officer to view in the event of the customer calling because they are having difficulties or need to check progress. They should also be available to the customer via online access to their own secure customer record through a customer portal or other digital solution. Clearly, a fundamental part of being able to deliver an omni-channel experience is having suitable telephony solution and business applications in place, with an overarching customer relationship management system to tie together all points of contact.

We need to signpost customers to the correct service provider to reduce the amount of customer service requests which should be presented to other agents such as the County Council. Using technology, the telephony solution can introduce automated signposting which can be supported by the use of readily accessible web pages, mobile apps and social media, which as discreet channels can also signpost specific service delivery agents – County, District, partner, etc. An assessment of the tools available will be undertaken against the current telephony provision with a view to introducing automated ‘bots’ to provision easy to use sign posting features. This will allow customers to merely speak their request which will be directed via an English voice enabled ‘bot’. In this way, we can almost fully eliminate the requests for services which are not part of our portfolio. Once this is addressed, the proposed omni-channel

strategy will be much more effective and generate a significantly enhanced customer experience.

This form of omni-channel delivery is in its infancy in local government and many focus on a model of multi-channel delivery rather than omni-channel. However, as we strive to deliver excellent customer services to meet the growing expectations of customers, then this becomes an area which should be developed. In order gain the biggest benefit at the outset, services which are simple to implement, but which have a high volume of transactions should be treated as a priority with lower volume / more complex enquiries left until the end.

We will:

- Prioritise services which are high volume and simple to be delivered through an omni-channel approach as an initial roll-out, followed by more complex and low volume enquiries in subsequent phases;
- Review business processes for services identified as suitable for omni-channel delivery;
- Continue with the enhancement of the existing telephony solution (and licencing) against defined requirements for customer self-service and omni-channel service delivery;
- Research best practice omni-service delivery both within and outside the public sector to form a delivery model; and
- Form a cross-department project team to build the business case and deliver the resulting project

2.3.3. Agile working

As with many organisations, agile working is high on our agenda. Although the move to working this way is not solely an IT project, there are obvious IT implications that need to be considered in this strategy. Agile working does not only relate to being mobile when out and about visiting customers. It is also the intention that staff can work from other locations including their homes and be free to move between rooms and desks when working in the office (i.e. the flexibility to move around desk positions, in and out of meeting rooms, etc.)

Each desk position in our main Council offices is currently equipped with a screen, keyboard, Cisco telephone and mouse. Each member of staff is provided with a tablet, which they carry with them to an available desk and attach to a docking station for connection to the network and screen, etc. The tablets are not only used by staff who work remotely, but also those staff who work in a fixed desk-based role.

Although, in theory, the current desktop hardware provide flexibility by allowing staff to drop in at any desk, most staff do still gravitate back to 'their' desk to work within their service teams.

The vision for the future is to not have the flexibility of staff constrained by technology or culture; someone who starts a piece of work at one desk should be able to pick up that piece of work and head to a colleague or meeting room and seamlessly continue where they left off. If someone choses to work from another office, café or home, then they will be able to do so without technical issues and have full access to their corporate tools and data as if they were sat in the office. To achieve this, the majority of our staff will continue to have mobile friendly equipment (such as a tablet or hybrid laptop), which is suitable for use when they are working at a desk position in the office but is also portable and allows access to all the IT systems, telephony and data they require. Recognising the fact that, some staff will have limited direct customer contact (finance, HR, etc.) and be largely desk based, we could, with a consideration to cost, use traditional devices for some fixed desk positions. Therefore, prior to the imminent desktop replacement programme being undertaken, we will complete a profiling exercise to understand the different working profiles of our staff. The necessary tools can then be provided to match their requirements. Rather than providing a wide range of devices, which could increase the support overhead, we will offer a discreet range of devices which staff / managers can chose from for their teams.

It is recommended that the majority of our staff continue to be equipped with a tablet / laptop and have the addition of a softphone (with headset) which could be used for making calls on the tablet via 3G / 4G or Wi-Fi connection. When in the office, this equipment will be docked to an attached screen, keyboard and mouse to ensure a comfortable working position and to satisfy any special requirements such as large or dual monitors. Variations to this standard approach would be adopted by staff who have special requirements (such as needing to be permanently desk based or fully field based). An assessment of the split of staff between the different worker types will be completed before the equipment is rolled out.

Another requirement for mobile working is to ensure effective and reliable communication tools for our staff when they are working remotely. Skype For Business (SfB) is used for limited purposes currently, providing staff with an instant messaging tool and visibility of colleagues when away from the office by using Presence facilities. The planned use of SfB as our unified communications tool will provide staff with softphone capability, improved collaboration tools, options to share documents, sharing screens from any device, video conferencing, etc. Arrangements for IM and presence are especially important when flexible working is implemented as they help to remove any burden on staff left in the office who could potentially see a rise in the number of calls they are taking if 'covering' for colleagues who are working flexibly.

Finally, we will also continue the implementation of Microsoft SharePoint as part of the Office 365 project. This tool will allow the use of a corporate Cloud based

store of documents, which would be accessible from any device from any location with a wi-fi or 3/4G signal; supporting the aspiration for 'anytime, anywhere' access – location independent working. Because of the model of centralised storage using SharePoint, staff will be confident that the document they are accessing is the most up to date and authorised version. This also assists with effective data management and version control for compliance.

With the potential growth in flexible working, consideration should be given to a facility to keep staff in contact with colleagues regardless of where they are working, including instant messaging to provide a quick informal information exchange. This could be provided by commercial tools such as Yammer or Facebook Workplace, which can be implemented at relatively low cost and with little technology or support overhead. The features these tools bring include:

- Internal chat groups;
- Following colleagues or project teams to receive instant updates;
- Informal messaging feature;
- Live streams of events;
- Video and photo content to enhance messaging;
- Consultation on topics;
- Event management; and
- Office integration

An internal communication tool will deliver more immediate messaging, particularly from the senior management when a message needs to reach all staff quickly. It will also significantly reduce informal e-mail traffic and the storage associated with the saving of multiple attachments sent to multiple staff and the return of multiple updated versions. With a more mobile workforce, our staff will inevitably spend less time in the office and with that comes an increased need to be able to get key messaging to them quickly and to ensure they don't feel isolated or become unaware of corporate messaging. The use of a corporate tool with forums, chat, comments, etc. will help to keep field staff, part-time staff or those absent, updated with news.

An important consideration of agile working is that as more data and applications are stored in the cloud, we become more reliant on internet connectivity. In the majority of locations, our staff will either have wi-fi or 3G / 4G access and will therefore have full connectivity. However, there may be occasions, in the more remote areas of our district, where coverage is poor and live systems cannot be accessed. Most application providers recognise the importance of this issue and have factored in off-line access into their applications. This allows access to cached data and the temporary local recording of updates until connectivity is achieved and the live systems can be updated. We will ensure that the specifications for any new software procurements include the requirement for offline system access.

The implementation of remote working facilities will be a corporate project, as it touches upon many aspects of the business, including HR, organisational cultural, accommodation changes as well as ICT issues. It is therefore

imperative that each of these areas is represented on the project team and ICT is fully consulted to ensure technical issues are fully evaluated.

We will:

- Form a new agile working project team to commence the project with the involvement of all areas of the business and ICT;
- Continue with the implementation of Microsoft Office 365; including the use of Skype for business and SharePoint to support agile working / corporate softphone rollout;
- Complete a profile analysis of our staff to ensure each is provided with suitable IT equipment to support the way they deliver their role (fixed, flexible, field, etc.); and
- Implement an internal social media tool to maintain communication within a more flexible workforce

2.3.4. Customer Services

Many of the actions in this strategy are designed to help us deliver excellent customer services. This includes offering advanced on-line facilities which customers can choose to use at times convenient to them, and delivering services through a variety of methods, including in customers' homes, in the field, through social media, etc. At present, the self-service facilities offered to our customers via the website are provided through either the use of on-line forms (Achieve Forms) or through third party websites (such as Civica to take customer payments).

The development of excellent customer services is clearly linked to the delivery of omni-channel services and agile working covered earlier in this strategy.

Although a refresh of the corporate website has recently been completed, we will review the services available on the website to ensure the Internet becomes the preferred contact method for customers to use (as seen recently with the shift in delivery approach to charging for the collection of green waste). As our customers' familiarity with web services grows, a fully functional and smooth-running website is a fundamental service offering they would expect, having enjoyed the benefits in other aspects of their lives such as banking, insurance, retail, etc.

We will ensure that any new services offered on the website will meet the existing 'mobile-responsive' standards adopted by the organisation, meaning that they display correctly on small screen mobile devices.

Moving more contact to on-line transactions brings benefits for us as a business and for our customers. Customers will be able to access speedy, reliable and consistent services which are available at times of the day to suit them. The benefit to us is that we can reduce our transaction costs and improve customer satisfaction rates through the delivery of reliable and consistent services.

If we shift services into a more commercial framework, it introduces even greater reliance on information and technology as customers will rightly expect an enhanced level of service where they are paying for it separately. All new services which are being considered in this way should be established as an on-line service by default allowing customers to commission the service, pay for it, manage it and cease it all without staff intervention. This will be a key decision to ensure that customers receive cost-effective and efficient services and that resistance is minimised. Alternate channels for those who are IT excluded will need to be supported by exception.

Feedback from staff interviews shows that we currently manage enquiries from customers requesting or reporting on services which are in fact provisioned by the County Council or other third-party agents. Improvements should be made to digital channels (website, app, social media, etc.) which make it clear what the responsibilities are for each party and, where possible, effective signposting of services should exist between sites. Arrangements can also be implemented using enhanced contact centre facilities which signposts customers for core services prior to an agent acknowledging the contact.

As well as providing improved on-line facilities, we will complete a project to understand what the barriers are which are preventing more customers from using on-line facilities. These barriers will need to be removed to allow greater volumes of access through digital channels. We cannot leave those customers who cannot use e-services behind and we do all we can to help improve customers' on-line skills as this not only benefits the organisation but will also give these people new skills to enhance their everyday lives. This does not mean that we need to invest in the skills uplift, but rather be able to sign-post our customers to other services readily available in the community provided by third-party (often Government funded) agencies.

Customer digital access segmentation

Initially we will focus on promoting and incentivising customers who can be defined as being in segments 1 and 2 above and sign post those in segment 3 to increase the flow of customers through 2 and 3 into segment 1. Customers in segment 4 will require a different level of service which will often be non-digital and we will be able to enhance the service to these customers by

redistributing resources which have been released by customers adopting self-service channels.

The national picture shows that as well as a general increase in internet usage, there has been a change in the method the public use to access digital services away from PCs to the use of smartphones and tablets. To respond to this, we will consider the creation of a new mobile app to sit alongside the corporate website, which will give access to services from smartphone and tablet devices in a true omni-channel approach. The app will be available across the most common platforms and will allow customers to access key services in a simple, user friendly way and at times convenient to them. Although our website is mobile responsive and will resize to suit the device being used, there is still the potential to develop a mobile app alongside this. An app will be able to exploit a device's hardware, to make full use of location-based information, or to provide functionality that doesn't rely on a permanent web connection. However, we are aware that an app has to have a clear and defined use and needs to provide services that people would come back to use multiple times (to justify the time for a customer to download the app and to retain it on their device). We will not build an app which simply mirrors our website's functionality – serving up static information. That functionality will be provided by our mobile responsive web page.

Examples of app usage include details of waste collections, news, reporting (street lights, graffiti, etc.), parking, bookings, updates of applications, etc. Whilst the continues to be a debate on the benefits of apps versus responsive mobile websites, research shows that user behaviours lean towards mobile apps (in particular on smaller screen devices) and most digital leaders – Amazon, eBay, PayPal, Facebook, Twitter, etc. – report a continued uptake in app usage. This familiarisation for customers may increase the speed of take up of our digital offering.

Longer term, customer will start to use new technologies such as artificial intelligence (AI) and virtual reality (VR) to access services. Whilst new to the market, products such as Amazon Alexa, Google Home and Apple HomePod are gaining adoption at a customer level and application developers are diverting significant investment into developing integration for these products. These will further breakdown customer barriers as they will be able to speak their request as opposed to having to access technology and use traditional keyboard input. We will start to future-proof the investment in ICT by building in these forms of future requirements and testing suppliers' roadmaps to determine the opportunities that will become available during the lifetime of this strategy.

To further support plans for improved on-line facilities, we will also consider more self-help tools for customers, such as publishing short videos for some of the most common questions asked. As customers are becoming more familiar with this facility in other walks of life, they will expect it from their local authority. Again, the benefit of this will be that customers have immediate access to advice at a time that suits them, and the volume of routine calls handled via phone, e-mail and face to face would reduce.

We will:

- Continually review on-line services to ensure facilities exist for the highest demand services;
- Ensure the ICT facilities we provide support our corporate approach to delivering excellent customer services, by allowing enquiries to be answered at first point of contact and supporting customer self-service;
- Develop and launch a new customer app to provide a more accessible channel for customers;
- Provide short instructional videos for customers to 'self-help' in suitable areas; and
- Work with the business and customers to identify barriers to on-line take-up and progress actions which are IT related.

2.3.5. ICT Governance

Part of the work completed to research this strategy has been to evaluate the ICT service and its effectiveness in providing and supporting ICT facilities. The conclusion is that the team is helpful, friendly and supportive; dedicated to keeping ICT services available for colleagues. However, day to day support of ICT facilities is not the only important aspect to the business. Equal importance needs to be placed on the future development of ICT to ensure it continues to be fit for purpose and keeps pace with business requirements. We have traditionally lacked strategic thinking within the service, which presents a danger that the business will stand still and fall behind with technology, resulting in an unplanned and irregular investment in the service, which would be inefficient in the long run.

As part of having a more 'planned' approach to service delivery, our ICT team must have regular and effective contact with the service areas they support. The picture gained through staff consultation is that, the organisation has not fully developed that relationship, which has resulted in neither understanding the pressures or priorities of the other, causing uncoordinated effort and at worse, conflict. We will look to improve the business liaison aspect of the ICT team to provide effective links to service teams to help both parties have a better understanding of the context they are working within. Consideration will be given to a defined role(s) of 'business analysis' which will act as the vehicle to deliver a business partnering model.

The way projects are managed within ICT and more widely across the business will be significantly improved by the introduction of the new project management processes. This new approach will undoubtedly improve how effectively the ICT team are able to support or deliver projects by addressing the following issues:

- Lack of understanding of project progress by stakeholders;

- No strategic approach to implementing projects – unclear links to corporate priorities and between individual projects;
- Lack of liaison with ICT and project initiation;
- Changing / conflicting priorities within the overall programme of projects;
- Lack of formal project management disciplines;
- Lack of formal / coordinated business case sign-off or project closure process;
- Unclear ownership of projects; and
- No process for measuring the business benefits

Our ICT service must be fully involved with the strategic decision making across the Council. Without this involvement, there is the danger that ICT aspects of a business led project will be an after-thought and the team will only be consulted about the technical and ICT resource implications of planned projects when it is too late. With regular involvement, the success of projects and the integration of ICT into wider business developments is more likely.

A formal review of our ICT team was not included within the scope of this strategy. However, we will undertake an independent appraisal of the service and structure to ensure it is fit for purpose in terms of supporting effective services and for developing the projects identified. It is expected that any new structure will formally distinguish between strategic project development work and day to day support roles and will also build improved links with business teams to make sure those teams are aware of the ICT context and vice versa.

The review will need to ensure there is a business analyst role within ICT to work closely with business teams to make sure new technologies are being considered. A key responsibility will be to have an external view of the ICT market and be able to identify best practice from within or outside the sector and to consider new proposals from software suppliers.

As well as a review of the ICT structure, further changes will be made to the way the ICT team operates. These changes will make sure ICT is an efficient and professional service comparable to other high performing providers and commercial ICT service suppliers. Examples of the improved measures to be considered will include:

- Wider adoption of formal service standards, which the business can monitor progress against and report on;
- Introduction of a greater number of automated tools for business users to use (such as password resets, incident reporting self-service, equipment ordering, etc.);
- Formalised change management processes to ensure rigorous control over proposed and approved change;
- Implementation of a configuration management database (CMDB) to give an accurate picture of the IT assets used; and

- More disciplined approach to IT procurement to provide a consistent approach which will ensure value for money is being achieved

Our ICT staff have recently completed ITIL Foundation training qualifications and we are using this as an opportunity to begin to compare the 'as is' processes with 'to be' process models in order to update the existing data flow models. ITIL service management terminology is planned to be introduced across the organisation.

An overall training plan for our ICT service is being developed to cover the next 18 months. The teams' current level of capability will be mapped back to the SFIA model ('Skills Framework for the Information Age') and appropriate training for the 'to be' roles will be delivered based on the proposed model of support.

We will:

- Ensure ICT Management review and approve all project proposals before authorisation;
- Complete an independent review of the ICT team roles, skills and responsibilities to ensure it is fit for purpose as this strategy is implemented including a skills audit;
- Introduce an effective business/ICT governance structure;
- Implement a more disciplined approach to ICT service delivery in line with industry best practice; and
- Continue with the development of the training plan for the ICT service

2.3.6. Technology Changes

A high-level review of our technology environment has been broken into the component parts below, to show the existing arrangements and the issues identified. A more detailed assessment of cloud computing and the potential benefits has also been completed and is shown separately.

Overall, our current infrastructure is becoming aged, with several components approaching 'end of life'. It is already recognised that renewal of equipment is required to provide on-going protection to malware attacks and provide the infrastructure to support both digital development and business as usual activities.

Below is a summary of the key technology areas considered as part of this review:

Servers

The current server deployment is working well but is approaching capacity. We currently use a combination of Dell M620 and M630 blade servers in a Dell

chassis as the main server infrastructure, hosting over 130 virtual servers deployed over six physical/host servers. It has been identified that we need to increase the server farm by at least three additional servers to allow for anticipated growth and development. However, this will potentially impact licencing and application requirements and will have to be further considered in line with future requirements and the commitment to our Cloud First Strategy. A full IaaS review will be undertaken to determine the extent of financial and efficiency benefits that may be achieved prior to any further investment in the on-premise solution, especially given the likely changes to the applications portfolio and delivery methodology – Cloud First.

From a capacity point of view, it is likely that this increase will address known and expected requirements for the next two to three years, although our expectation is that this may deliver for up to five years which needs further consideration given the ambitions of this strategy.

Five years would be the maximum life, as from this time the chassis will be out of support and will therefore represent an avoidable risk for the Council. This is a shared environment and it is expected that North Kesteven District Council will be provisioning equipment on a joint basis.

In line with the recommendation for a cloud-first strategy, the Council will continue to explore suitable Cloud based alternatives.

Storage

We have three EqualLogic SANs used for the storage of data and file stores. The current SAN deployment is reliable and is delivering against requirements but is at capacity and is oversubscribed. This will limit creation of new servers and growth of existing file stores. As with the servers, we are looking to increase the number of SANs by two for additional capacity and growth, with similar benefits accruing to those related to the servers as detailed above. As mentioned above, this will be considered as part of the business case for a full IaaS solution.

Cloud

Our vision is to continue to adopt Cloud solutions as the default option and have recognised that this will have a significant impact on the current server and storage infrastructure.

A detailed analysis of Cloud computing, including the risks and opportunities is covered earlier in this report.

End User Devices

We have adopted a ‘one device fits all’ user device policy based on a five-year device refresh cycle. The last hardware refresh was undertaken in 2013, with the next refresh of devices due to be implemented from 2018/19 onwards.

Our policy supports the recommendation to have a flexible working environment where staff can work from any device; secure in the knowledge that each work station is set up in exactly the same way. This gives staff a consistent approach to docking and using their device. Additionally, it minimises the number of different devices that require support.

Our estate currently comprises Samsung laptops and a small number of Microsoft Surface devices. All Samsung devices were purchased in 2013 with the Surface tablets bought more recently. The Samsung devices are now showing signs of age and some have had to be replaced with in-house stock. However, that stock is now depleted; and we are going to have to consider a re-stock of 'new' technology very shortly to replace broken kit.

Email and Microsoft

We have commenced a programme to deploy Office365 and SharePoint Online across the user base of approximately 260 staff for email and file sharing/collaboration. This is in line with the Cloud First strategy and is commonplace amongst Local Authorities and is supported as a strategic direction.

Telephony

We utilise the Cisco Call Manager platform which is licensed for approximately 450 named users. The maintenance contract for this expires in February 2018 and new licence arrangements are in the process of being procured to satisfy immediate support and maintenance requirements and give the potential to improve contact centre functionality, omni-channel contact and agile working developments.

We currently use Microsoft Skype for Business (SfB) for Instant Messaging and Presence. As part of the programme mentioned in 4.3.3 we are migrating this to Office 365. Traditionally SfB and Cisco have not worked well together despite both Microsoft and Cisco reassurances. We will therefore identify an experienced and reliable system integration partner who can properly integrate these products.

We currently utilise a Cisco Contact Centre Express platform for Customer Service and this is licensed for 40 concurrent agents. The maintenance contract for this also expires in February 2018.

External telephony network services are provided by a single ISDN30 circuit, which carries incoming and outgoing calls. We are planning the implementation of SIP trunks as a replacement to the existing ISDN30 circuit in May 2018 This is expected SIP to save us 40-60% compared to ISDN and will provide greater resilience.

Mobiles – 168 mobiles are mainly provided by KCOM on the EE network, these currently have limited data connectivity. The contract for these mobiles expires

in February 2018 and a procurement has therefore been undertaken to select an alternative provider on the EE network.

Management and Support – We have adopted an in-house model for the management and support of our telephony, UC telephony and Contact Centre, with enhanced support, where required, available from the maintenance supplier.

In line with our cloud-first policy, in the medium term, we will be developing a telephony strategy, business case and subsequent procurement process to move both telephony and contact centre facilities to the cloud. The requirements specification will be based upon our changing requirements for telephony / mobility and customer services as detailed in this Strategy.

Work is currently underway to develop our existing telephony contact centre solution into one which is more attuned to our omni-channel objective. This will introduce a number of new channels including webchat, SMS, email, etc. and will enable us to establish an understanding of customer uptake and preferences to inform our longer-term telephony, contact centre and channel strategy. Alongside of this development, we will be further deploying Skype for Business introducing softphone access for desktop usage extending out to mobile users supporting agile working processes.

Until the details of the future telephony strategy are agreed, we will only commit to what is deemed essential expenditure on existing services and equipment which may have a limited life.

Cloud Approach

We have already established a 'cloud consideration approach' and we endorse an approach which tactically deploys cloud services where these are justified through business cases. For example, the decision to move key components of Microsoft Office 365 and providing some security services such as e-mail scanning and wireless access point management in the cloud is a future proof solution.

However, not every cloud solution is right for every situation, and although we will be adopting a 'cloud first' strategy, we consider it sensible to construct a comprehensive business case which considers ongoing costs and risks and the appropriateness of the service to the business before embarking on a 100% cloud service strategy.

The IT marketplace is constantly evolving both in terms of technologies and their relative costs. It is usual to verify assumptions for the optimum architecture through a soft market test that will provide more detailed analysis of the technology alignment, cost and associated risks of the various options which could be available to us.

Soft Market Testing

Prior to any large-scale future infrastructure refresh and investment, and to test value for money and ensure that other new technologies have been fully considered, we will undertake a soft market test exercise. This should consider a five-year TCO model to provide a true comparison of upgrade and replace options, including alternative delivery models. It will consider which technologies will provide the most reliable and resilient services and will allow us to future-proof its IT infrastructure for the short to medium term.

This soft market testing is an initial investigative exercise which would then inform a formal tender procedure for the components and professional services required for a broader infrastructure refresh programme. The tender process would also be simplified as the evidence from the soft market test would allow us to be very prescriptive about our requirements with good evidence for the rationale should the assumptions for the tender specification be challenged.

Whilst the current Cloud policy is serving a purpose, it is still a tactical approach which is understandable given the infancy of the available solutions when the last Strategy was written. It is now time to make the Cloud First Strategy a true strategic approach in line with a number of application reviews and procurements so that we can ensure that our investment in Cloud is coherent and joined up. This would provide the foundation and building blocks for all future Cloud provisioned services.

We will:

- Adopt a 'cloud first' policy for the replacement or upgrade of any servers, storage or applications as the opportunity arises;
- Prior to procurement, construct business cases for cloud / hosted / hybrid solutions when we replace an existing or implement a new application. This would take into account cost benefits as well as requirements for high availability / support;
- Consider the effects of moving to cloud and the need for predominantly OpEx funding when developing future budgeting and financial modelling for our IT services;
- Complete a fully costed appraisal / soft market test of a Private Cloud model as an alternative to an infrastructure refresh;
- Continue with the on-going deployment of Office 365 / SharePoint in line with the Cloud First Strategy;
- Develop a telephony strategy in line with increases in customer self-service and omni-channel delivery requirements and test the market for suitable cloud-based solutions*; and
- Deploy end user devices which supports the requirements for agile working detailed elsewhere in this document

**The telephony strategy will be developed early on in the strategy to ensure all other projects have a reference point. This strategy will be reviewed in 2020 prior to the procurement of a new solution at the end of the current contract.*

3. Appendix A - Background to Cloud Computing

3.1. WLDC – Cloud First

WLDC already has a Cloud Strategy which has established the principles of migrating solutions and services to the Cloud in a tactical manner rather than making a wholesale shift to the Cloud. This is a sensible approach based upon the current IT environment at WLDC but the recommendations of this strategy will put more emphasis on the pace of migration to Cloud services.

Below are a series of considerations that WLDC will continue to consider when making additional investment in ICT services in particular, those which may be customer facing or deployed to enable an agile working environment.

3.2. Definition

The concept of Cloud solutions is derived from multi-tenanted platforms which can be shared by multiple organisations with diverse IT requirements. Typically, these may be:

- Infrastructure as a Service (IaaS), sometimes called Platform as a Service, which is a replacement of the organisation's core servers and storage by a shared Cloud system located in a supplier's managed data centre. In this case the customer's business applications are contracted as normal and then loaded onto the Cloud service rather than the customer's own infrastructure;
- Software as a Service (SaaS), or Application as a Service, where both the application and the infrastructure on which it resides is provided by the supplier and the customer "consumes" the application without any requirement to purchase or support the infrastructure separately.

3.3. Discrete Services

Within these general categories there are a number of other Cloud services such as:

- Backup as a Service where backups are pushed down an Internet connection to the supplier and the customer has no responsibility for the maintenance of the backup media.
- DR as a Service where the customer owns a minimal number of assets for DR and the full service is then commissioned (and paid for) when DR is invoked. Typically, a customer will replicate to a customer-owned SAN in a remote data centre and will then commission servers using an IaaS model when required.
- Security as a Service where various security services are provided by the supplier on shared infrastructure; these may include firewall,

intrusion detection, threat management, web filtering, mail scanning, etc.

- Desktop as a Service: Provision of thin desktop (e.g. Citrix) services within the Cloud.
- Email as a Service: Provides the management of the corporate Exchange server with ancillary services such as email scanning.
- Telephone and/or Contact Centre as a Service: Cloud based telephone and contact centre solutions. An example of the telephone service is Microsoft Skype for Business which can be licensed as part of Office 365.

3.4. Public Cloud Services

"Public" Cloud services are so called because they are services which are commercially available to any organisation and on any multi-tenanted platform there will be small and large organisations across all market sectors.

3.5. Infrastructure as a Service (IaaS)

IaaS is typically provisioned using "Public Cloud" services which are widely available in the commercial marketplace such as Microsoft Azure and Amazon Web Services (AWS). Typically, the charging model for these services is typically based on consumption, i.e. server/processor capacity used and disk storage consumed.

3.6. Software as a Service (SaaS)

SaaS services are gaining very considerable momentum for the delivery of specific applications. Driving this is the rapidly increasing popularity of Microsoft Office 365 for both business and personal use.

A wide range of applications are available through the SaaS model and in many cases (such as Microsoft Office) cloud-based licensing is becoming the standard commercial model. Some organisations are deploying SaaS for financial accounting systems, Customer Relationship Management (CRM) and a number of niche products, particularly around customer profiling, are specifically provided as cloud services.

Care needs to be taken when commissioning SaaS services that solutions can integrate, particularly where applications may be provided by different SaaS cloud providers of SaaS solutions and need to integrate with applications which are hosted internally.