
West Berkshire Council Digital Strategy 2020 – 2023

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1. Foreword by the ICT Portfolio Holder and the Chief Executive

**ICT Portfolio Holder
Cllr. Joanne Stewart**



A handwritten signature in black ink that reads "Joanne Stewart".

Information and communication technology (ICT) and digital services have long been important for the delivery of efficient and effective services to the Council's citizens, customers and service users, but these have really come to the fore during the COVID-19 pandemic which impacted all parts of the UK from March 2020 in an unprecedented manner.

With this backdrop in mind, it is an interesting and absolutely essential time to be launching a new digital strategy, and I am confident it sets out how the Council's ambition intends to embrace new technologies, to enhance working practices and use digital techniques to ensure it can operate as efficiently as possible.

I am also excited by the role the Council will take with our partners in developing the technological infrastructure available to citizens and businesses across the district, such as ultrafast broadband, 5G and the internet of things (IoT) as just some of the examples of where this new digital strategy will lead us.

Chief Executive, Nick Carter



A handwritten signature in black ink that reads "Nick Carter".

Digital technology is of course nothing new and this is not the first digital strategy that the Council has published. Our previous strategy highlighted the importance of securing reliable and fast broadband across our District and we are pleased to report that, whilst this took longer than expected, this project is now complete. It has certainly proven its worth during the challenges of the COVID-19 pandemic.

This new Strategy sets out our ambition for the next three years. Some of what we want to do is a continuation of our earlier strategy – other elements are new. It reflects on our experiences of COVID-19 and as such signals a new commitment to accelerating our digital delivery both within the Council and outside within the wider District.

Delivery has always been a challenge in terms of limited resources and ever increasing demand, but the Delivery Plan that will accompany this Strategy seeks to demonstrate the allocation of new resources and a clarity as to where our priorities will lie over the period of the strategy.

2. Executive Summary

- 2.1 Now more than ever West Berkshire Council is dependent upon effective digital means to interact, communicate with and serve its citizens, customers, service users, partners and suppliers.
- 2.2 This document articulates ambitious aims to embrace digital techniques for the improvement of the Council's service delivery and through the Council's community leadership to help with the development of modern digital infrastructure across the district, such as 5G, ultrafast broadband, full fibre connectivity etc.
- 2.3 The strategy has a clear vision and is based upon sound principles and is arranged in five strategic themes:
- 1) Making Best Use of Existing Systems
 - 2) Making Better Use of Data
 - 3) Creating a Modern Workplace and Workforce
 - 4) Transforming Council Services
 - 5) Creating a Digital District
- 2.4 The ambition is matched with strong governance and resource plans to ensure that the stated strategic aims can be realised.
- 2.5 This strategy contains a high-level Kanban style delivery plan which will be supplemented by a separate detailed plan of how the strategic aims, described within the strategy, will be achieved and by when.

3. Introduction

3.1 Purpose

The purpose of this strategy is to outline how the Council will embrace digital techniques to change how the Council works and to improve its communications and service delivery.

West Berkshire Council, hereafter referred to as the Council has a strategic community leadership role in promoting infrastructure development, economic growth and health and wellbeing across the district.

Modern digital initiatives have a key role in ensuring these services are delivered as efficiently and effectively as possible and in improving engagement and interaction with all of its stakeholders.

3.2 Digital Vision

The Council's vision for digital transformation is to apply the most recent, and future practices, processes and technologies to respond to our customers' raised expectations of our service delivery.

We will aim to redesign our processes and to share and re-use data between systems in order to find the shortest and most cost-effective route from customers' needs or requests to service fulfilment. This will reduce the amount of Council resources consumed by each process.

This optimised service delivery will employ a range of access channels and in many cases will be available outside of the normal operating hours of the Council.

We will aim to proactively communicate with our customers to keep them apprised of the status of their requests until these have been fulfilled.

4. Key Principles

4.1 All Council digitally-enabled processes will be developed in adherence with the following principles

1. **Customer research and engagement** – By listening to our customers we will better understand their needs. Based upon this consultation feedback, and on demand data, processes will be designed to meet the needs of our customers. Processes that are easy to access, easy to use and which will encourage self-service. The term customer includes the Council's citizens, service users and businesses across the district and our internal users (officers and Members).
2. **Carbon reduction** – As the Council has declared a climate emergency we will prioritise the introduction of digital technology and processes which help to reduce carbon emissions, e.g. by reducing travel or unnecessary consumption of resources. We will also use data and analytics to measure carbon emissions and to chart our progress in reducing these.
3. **Security and privacy** – Processes will be designed for resilience and to safeguards the integrity and security of the sensitive and personal data with which the Council is entrusted. We will maintain necessary safeguards against known and emerging cyber-security threats and comply will all current data protection legislation.
4. **Cost effectiveness** – In developing new processes we will aim to ensure these are more cost-effective than those they have replaced. Although cost-saving is not the only driver for introducing digital processes this will significantly strengthen business cases.
5. **Continuous improvement** - We will stay attuned both to the changing needs of the Council and the emergence of new technologies that may present fresh opportunities for innovation and process improvements and adopting 'agile' methods wherever appropriate.
6. **Sharing and collaborating** - In 2019 the Council signed the Local Digital Declaration, committing us to share knowledge of our digital projects where there is an opportunity for potential reuse or collaboration with others. To facilitate this we will aim to:
 - Share the code behind our websites and digital services with our local government counterparts.
 - Collaborate with other councils where we, or they, have a particular specialist digital knowledge that would benefit the other.
7. **Supportability** – The Council has long had a policy of using commercial off the shelf software (COTS) for the majority of its core systems, rather than developing our own software. To ensure that we have capacity to support our systems we will continue with this policy. However that is not to say we will not do any in-house development; we will use forms, workflow and application programming interfaces on our COTS systems to enhance and improve their functionality where appropriate.

5. Strategic Overview

West Berkshire Council's Digital Strategy is described under five main themes:

Theme 1 : Making Best Use of Existing Systems

Ensure the Council realises the full potential of its current business systems and infrastructure.

Theme 2 : Making Better Use of Data

Improve access to, and sharing of, the Council's data to improve Council processes and transactions and to aid decision making.

Theme 3 : Creating a Modern Workplace and Workforce

Ensure Council staff and Council Members have access to the right tools, systems and devices to meet the heightened expectation of our customers in this Internet age.

Theme 4 : Transforming Council Services

Transform Council services so that they are better for our customers.

A service will be deemed better if it is cheaper, more resilient or easier to access through a greater number of channels, if it is available for longer hours or if it has a lower carbon footprint.

Theme 5 : Creating a Digital District

Work in collaboration with partners, local business and Government agencies to improve public digital facilities such as broadband, 5G and public WiFi across the district.

6. Strategy Detail - Theme 1: Making Best Use of Existing Systems

6.1 Introduction

The Council provides a wide range of public services, many of them statutory and many of them that are not provided by anyone else e.g. providing planning consent for building development. As a consequence councils often have more departments, processes and business systems than a typical commercial business would operate.

6.2 Aims

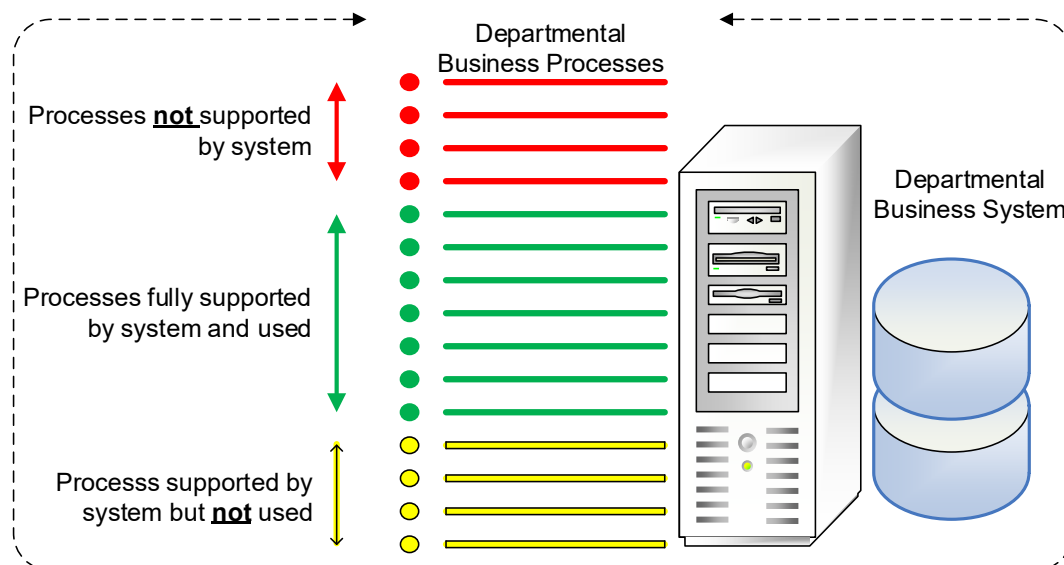
West Berkshire Council currently employs more than one hundred different back office business systems to help deliver its services. It is incumbent upon us to ensure that we utilise these systems as efficiently and effectively as possible to make best use of the time and money invested in them, to provide fit-for-purpose processes and tools for our staff, and good quality services to our customers.

6.3 Objectives

Our objectives under this theme are to:

(1) Maximise functionality and utilisation of current business systems

The schematic below illustrates a typical Council business system and how well it supports the processes required for a department to deliver its services.



Most of the Council's specialist departmental business systems satisfactorily perform the function they were designed for when they are first commissioned. (Represented by a wide band of green in the diagram above.)

However as systems age and/or requirements change there are often business processes not supported within the system's software. (We would expect the band of red to increase in this scenario.)

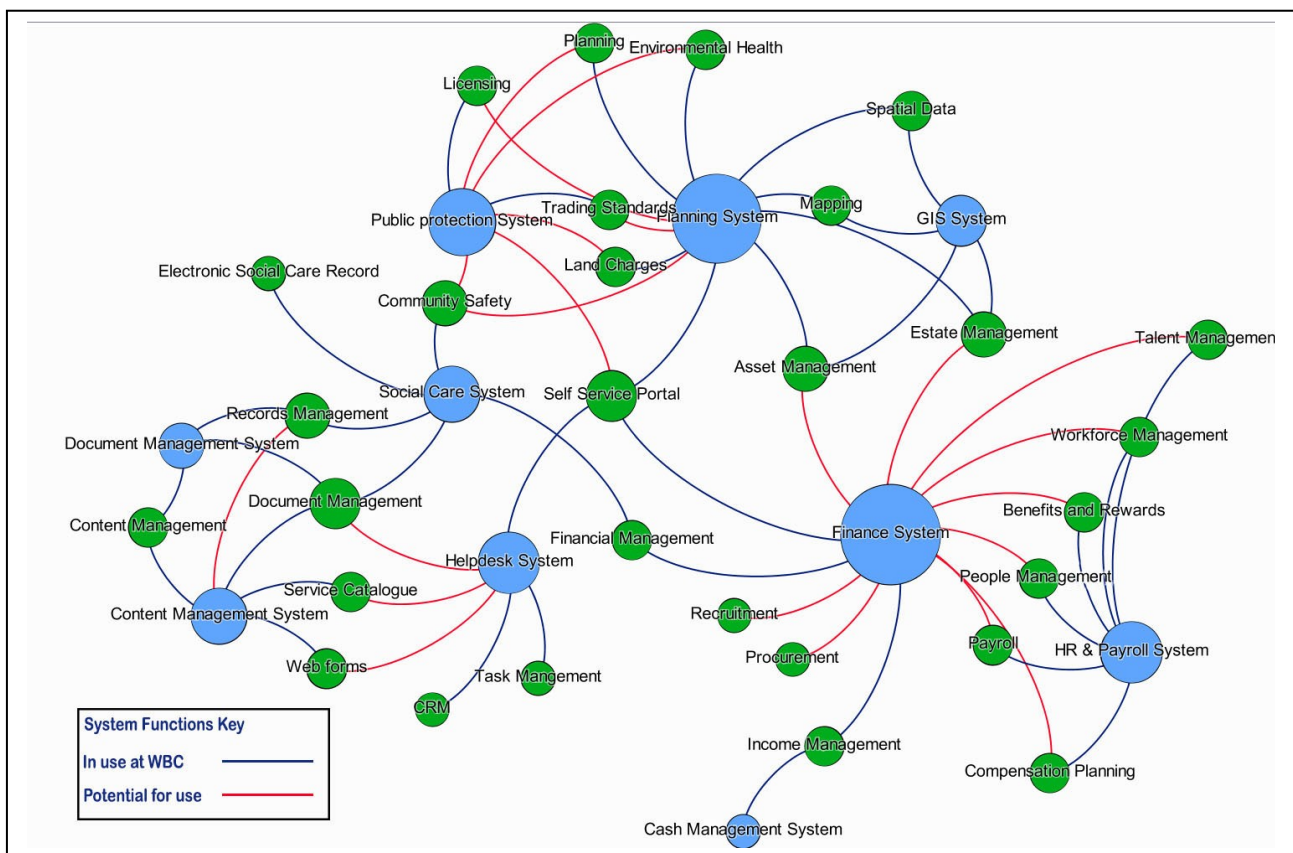
Many systems are capable of providing a greater level of functionality than is fully exploited (amber band in diagram above). This provides opportunities for efficiency improvements.

The Council's Strategy is to formally review the suitability of key business systems to:

- Ensure all available functionality is used effectively. (Systems may need upgrading, or staff may require additional training to fully achieve this.)
- Enhance the system to provide any missing functionality e.g. by providing a more modern user interface, creating data interfaces to other systems, or by adding extra forms or reports to the application. The aim is to avoid business tasks or processes being performed outside of the system e.g. by using spreadsheets.

(2) Reduce system overlap and duplication

With so many systems used by the Council it is inevitable that some systems provide, or have the capability to provide, functions being delivered by other systems. The diagram below illustrates the type of overlaps that exist across a subset of Council systems.



This overlap in functionality provides some opportunity to rationalise the number of systems used by the Council. Although these opportunities are relatively small in number (represented by the larger blue nodes in the diagram above) they have the potential to yield considerable cost savings in both licencing and support and maintenance costs, and to reduce administrative effort because fewer systems are being maintained.

The Council's strategy is to identify and explore opportunities to support multiple departments and business functions using fewer systems, focussing first on high-cost, high-maintenance or inefficient systems and systems due for replacement or major upgrade.

7. Strategy Detail - Theme 2: Making Better Use of Data

7.1 Introduction

All of the Council's processes, even the most basic ones, are underpinned by data about where our customers live, their needs, their obligations and entitlements.

7.2 Aims

The aim of this theme is to ensure our data is held safely and securely, is processed efficiently and is readily available to those who need it for effective service delivery and good decision making.

7.3 Objectives

The objectives of this theme include:

(1) Ensuring good data security

In common with other large organisations who need to maintain publicly accessible information, West Berkshire Council is a natural target for individuals, or groups, with malevolent intent. It is important that the Council continues to invest in the latest security protection systems and threat detection tools in order to minimise the likelihood of a successful malicious or criminal attack upon its business and communications systems, online channels and databases. It is also important that as our systems and data are moved to the cloud, more online transactions are introduced, and the Council starts to use 'smart devices' and internet of things (IoT) devices, that our information and data security standards are not compromised.

The Council has adopted the NIST¹ Cyber Security Framework to help secure its data assets. The framework uses 5 operational functions, which are outlined below:

- 1) **Identify** – Identify and document data assets and their vulnerabilities.
- 2) **Protect** – Record protection measures in place and how their effectiveness is measured.
- 3) **Detect** – Explain how we can quickly detect attacks and their source.
- 4) **Respond** – The *Cyber Incident Response Plan* explains what to do in the event of a successful cyber-attack.
- 5) **Recover** – The Council's *Disaster Recovery Plan* may be invoked after a serious and disruptive cyber-attack.

The Council will undertake to provide regular and appropriate information security training for its staff to ensure they understand how to safeguard the data to which the organisation is entrusted. Security training will be enhanced by improving our threat detection systems so that they will deliver real-time mini-lessons for staff who inadvertently click on a malicious link such as an attempted phishing email or website link.

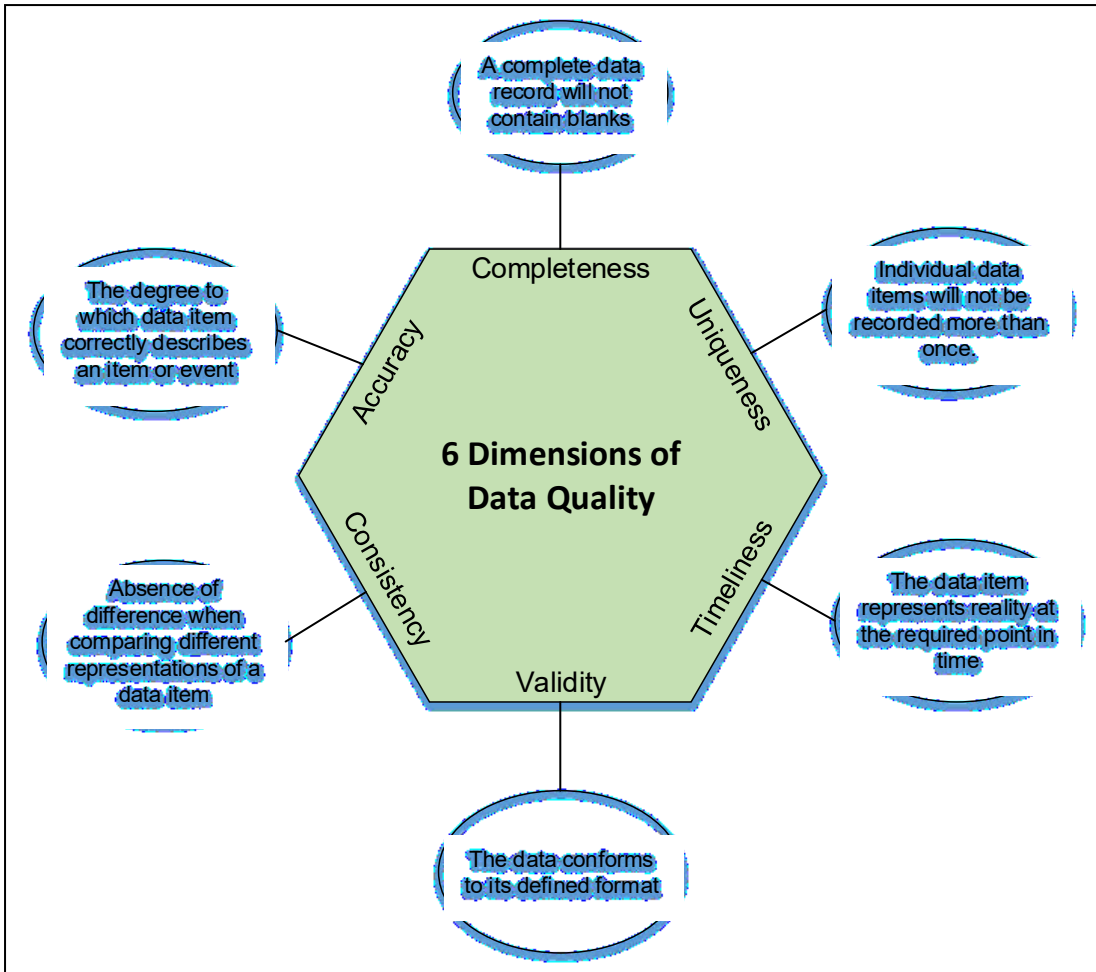
The Council's data security arrangements will also ensure that appropriate consideration is made for business continuity and disaster recovery. With the Council's increasing reliance on its digital systems it is likely that more investment will be required to ensure these systems are continuously available.

¹ US National Institute of Standards and Technology

(2) Ensuring good data quality

The quality of data underpins most of the Council's transaction and supports good planning and decision making.

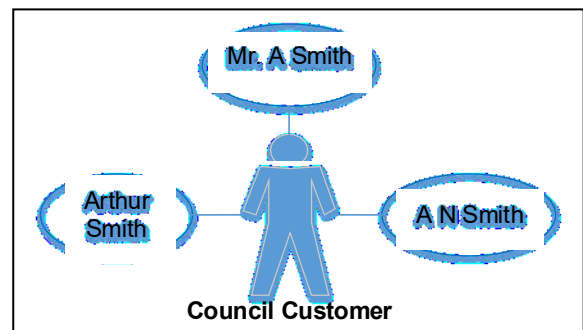
There are 6 dimensions associated with data quality, illustrated in the diagram below



The importance weighting of each dimension will vary for each of the various databases maintained by the Council.

It is not uncommon for specific details of records in the Council's systems to be incomplete or inaccurate.

It is also common for records such as a person's name to be recorded differently on different systems, or sometimes even in the same system. This means that when reports or data analysis is performed on these systems that inaccurate and unexpected results are produced and data trends could be missed.



The Council's strategy is to:

- Employ data validation techniques within systems to assure the quality of data as it is entered into systems.
- Utilise data matching, data verification and machine learning techniques to identify and correct anomalies to improve the quality of existing data in key systems and databases.

(3) Reusing data to reduce re-keying/double entry

There are certain elements of records that are common to multiple systems across the Council, examples include:

- customer names
- addresses
- map-based location data for assets (often referred to as geographic information, or spatial data)
- Council staff usernames (used to allow them to log on to systems)

Wherever possible we will create and use master databases for these common dataset elements and use these to auto pre-populate records, for example to complete an address on an online form. This will help avoid the need for double entry and improve record accuracy. This also provides opportunities to analyse data across multiple different systems by using these common record elements, e.g. location as a key.

We will also strive to make as many of the Council's systems as possible use our **Microsoft Active Directory** user records to facilitate **single sign on** across multiple systems. This will allow fast, convenient and secure logons and help to reduce the user administration burden associated with each individual business system.

(4) Exploiting spatial data and geographic information systems (GIS)

The Council continues to make extensive use of geographic (spatial) data in many of its databases and systems. This provides a detailed understanding of where our citizens live, where our assets should be located, how our resources should be deployed and how our services should be designed to best serve our customers'.

The Council's GIS system currently holds 459 'layers' of data on addresses, flood plains, property ownership, road layouts, school catchment areas, etc. This data is embedded within many of the Council's business processes and systems.

In order that we can effectively maintain and manage the Council's valuable data resource and to provide greater access to it, we are modernising and restructuring our systems so that they are easier to keep up-to-date and so that they can provide more benefit to more people. Specifically our new GIS facilities will allow us to:

- **Automate data management and processing** – Our GIS systems manage numerous updates on a daily basis. We aim to automate all repetitive tasks and data management activities whenever possible. This will improve data quality and integrity, reduce processing times and free up GIS staff resources.
- **Maintain a single source of all GIS data** - utilise our corporate GIS database as our single source of data; a data warehouse to serve all our services and integrations, ensuring quality and confidence in data, avoiding duplication and ambiguity.
- **Publish open data, maps and geo-processing services** – share appropriate data internally/externally in standard open formats to promote data sharing with partner organisations, other local authorities and Freedom of Information (FOI) requesters. This will ensure all systems and users utilising our data have access to up to date, live data and avoid the GIS staff manually processing data requests.

- **Exploit External Data and services** – ensure we maximise the benefits of open data, map services and APIs that are available to us, to incorporate this data and utilise this to inform our decision making.
- **Develop and deploy GIS applications quickly** – assist service areas with their campaigns and projects, utilising our GIS Portal resources to develop and deploy applications quickly and effectively.
- **Integrate geographic data with business systems** – utilise our published map services and automation to integrate our spatial data and address gazetteer within other business systems.
- **Support digital transformation** – use our published data and services to provide mapping, spatial queries and other location based functionality for our website developers.

(5) Improving the accessibility of data

Whilst it is important to protect our data from unauthorised access it is equally important that we make it readily available to those with legitimate access needs. The Council's strategy to improve the accessibility of data is to:

- **Review where data is stored and systems are hosted** - Most of the Council's business systems are hosted on-site in our own datacentres together with the data these systems use and process.

Whilst this arrangement makes it is easier for our IT staff to manage the systems and data and to keep them secure, it can make it more difficult for our users to access from anywhere other than locations connected to the Council's network. It also means that all the support burden for maintenance and updates falls to our staff.

By moving some of our systems and databases to a cloud-hosted environment means they can, with the necessary controls, be accessed by anyone from anywhere with an internet connection. Depending on the hosting model adopted, moving systems to the cloud may release IT staff capacity to be utilised on higher-value tasks than system maintenance.

The two main cloud hosting models for consideration are:

- **Infrastructure as a Service (IaaS)** – Where our systems servers, or data are stored in highly resilient, high-availability external facilities, rather than the Council's datacentres, and accessed via an internet connection. Systems hosted under this arrangement are often still maintained by internal IT staff.
- **Software as a Service (SaaS)** – Where a business system is hosted remotely by the system vendor and access over the internet, usually via a web browser interface. Typically with SaaS there is no, or minimal, software installed on each PC accessing the software.

When considering implementing new systems, or major system upgrade, the Council will adopt a **cloud first strategy**.

- **Use application programming interfaces (APIs)** to securely interact with our systems and data to build new processes that support internal decision making, or provide public facing customer transactions.
- **Create a self-service data culture** by safely extracting data from our, often ‘siloes’, business systems, thus empowering our staff to create their own reporting rather than having it done for them. This extracted data will be used to populate:
 - **Data Warehouses** – Allowing the opportunity to create richer, blended datasets, where it can be used for producing reports, dashboards and other business intelligence (BI). This will provide our staff with more information and better insights for improved decision making.
 - **Data Lakes** – Where it can be used for data discovery and profiling, predictive analytics and machine learning, often referred to as artificial intelligence (AI).

Our users will be provided with business intelligence (BI) tools that will allow them to aggregate, analyse, visualise and share the data.

(6) Providing Business Intelligence tools to aid planning and decision making

Most of the Council’s current business systems provide inbuilt functionality for analysing the data they hold. This data reporting is often proprietary in nature, requires high levels of skills and access rights and can, if not carefully designed, negatively impact the performance of a live system when reports are run.

The Council’s strategy is to provide Council staff with intuitive, self-service analytics tools (e.g. Microsoft Power BI, Tableau or Qlik) to analyse data and produce reports from the data warehouses and lakes, described in (3) above. This means they are no longer as reliant on the availability of specialists with SQL report writing skills.

This change will allow us to:

- Replace static reports with dynamic dashboards.
- Reduce the number of standalone Excel spreadsheets and databases that need to be created to get round the current reporting limitations of some of our systems.

8. Strategy Detail - Theme 3: Creating a Modern Workplace and Workforce

8.1 Introduction

Having the right digital tools available and staff with digital skills are essential for any modern business and the Council is no exception to this.

The UK COVID-19 outbreak in March 2020 has accelerated a move to a more digital working environment and we will capitalise on these developments and the benefits they have brought.

8.2 Aims

The aims of this theme are to ensure that the ICT infrastructure, systems and software which will underpin digitally-enabled services are fit-for-purpose, and to ensure the Council's officers and members have the necessary skills to fully exploit the new digitally-enabled workplace.

8.3 Objectives

The objectives of this theme include:

(1) Improving connectivity to aid flexible working

Many Council staff could already work from a variety of locations (different offices, home, 'in the field'). This allowed the Council to operate with a reduced office estate, reduced unnecessary travel, and because electronic information is more readily available, a reduced reliance on paper-based information.

Over the 3-year period of this strategy we will:

- Increase the availability and capacity of WiFi across Council offices, including assessing the viability of implementing GovWifi, which allows staff, Members and visitors to connect to guest WiFi across different public sector organisations.
- Introduce 'always on' capability to our Council laptops and tablets so that they can be connected to the Council's systems wherever there is a WiFi connection available.
- Equip more devices with 4G connectivity so they connect to the Council's systems from locations without WiFi availability.
- Replace our BlackBerry smartphones with more modern and flexible Android smartphones so people can use the latest 'apps' to support their work.
- Work to make more of our systems available from any location, at a quality similar to that experienced by an office-based worker.

(2) Improving communication and collaboration

Current context;

- Email is the predominant method of communication used within the Council.
- The Council has a strong meeting culture and most of these meetings are held face-to-face in Council offices.
- The Council's day-to-day productivity software (Microsoft Office) has limited capability to allow documents to be shared or updated by multiple people. This means joint authoring of documents is more challenging, and strict manual document control is required to avoid the risk of people working to an out-of-date version of key plans or instructions.

Over the three year period of this strategy we will;

- **Introduce new secure instant messaging (IM)** functionality to supplement email communication, which will allow people to have real-time electronic 'chats'. This should improve teamwork and collaboration, especially for situations where team members are working in different locations.
- **Increase the availability of video-conferencing** by providing equipment in Council meeting rooms, so that customers, Members, or staff may join meetings remotely, and to allow video chat to take place between staff working from different locations.
- **Introduce collaboration software** to help facilitate group discussions and to support meetings where some/all participants are remote. The system should also allow meetings to be recorded or streamed where appropriate.
- **Improve access to data to allow easier sharing** between individuals/teams and provide collaboration and joint authoring tools including document and content management features.

(3) Increasing the digital skills of Council staff and Members

Changing an organisation's culture can often be more difficult than introducing new technology, and becoming a digital council will be daunting for some, requiring our staff and members to learn new skills.

Whenever new systems or digital processes are introduced we will ensure that staff are given specific training to allow them to use them effectively.

Supported by our **Workforce Strategy** and our **Members Development Programme** we will provide training to all staff and Members so that they are proficient in:

- performing digital transactions
- communicating and collaborating with colleagues and partners
- using digital tools and information to solve problems and make decisions
- finding, using and sharing information securely

9. Strategy Detail - Theme 4: Transforming Council Services

9.1 Introduction

Council customers and West Berkshire citizens have seen the services they receive from other organisations (e.g. banks, retailers, travel agents, etc.) transformed through the use of technology. Now more than ever people will expect to be able to transact with the Council through digital means.

9.2 Aims

The aims of this theme are to transform the Council's services and information provision so that they are better for our customers.

There are a number of ways in which services may be judged to be better; they may be faster, more reliable, more cost-effective, be available outside of normal working hours, or employ new access channels which are more convenient to our customers.

We will aim to make services 'greener' too, by reducing the amount of paper and energy they use and to reduce their associated carbon footprint, as well reducing the customer requirement to visit us in person.

9.3 Objectives

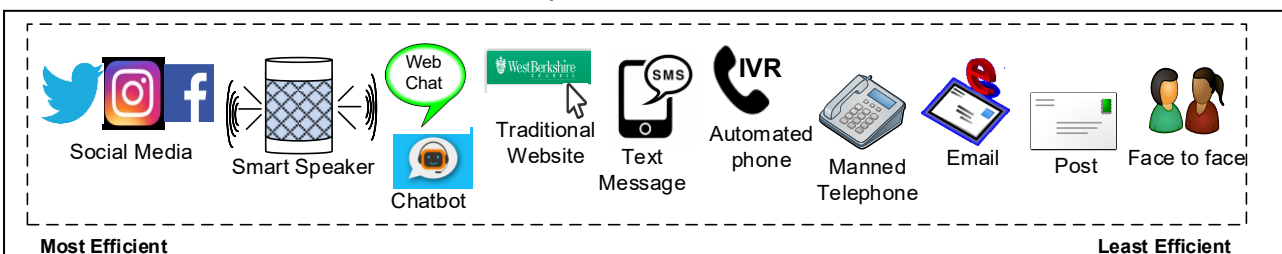
Although the Council has a 'captive audience' for many of the services it provides it still has a moral duty to provide the best possible service to its customers and obtain the best value from the public funding it uses to deliver these services.

The Council service transformation initiatives will include:

(1) Increasing channel choice for our customers (Many Channels – One Service)

Previous Council ICT and digital strategies have focussed on encouraging customer channel shift to reduce the cost of Council customer transactions. Typically a face-to-face transaction is the most expensive and an online self-service transaction least expensive.

The Council's strategy now is to provide a consistent service across a choice of channels for our customers to perform transactions, interact, or share information, so they can select the channel that suits their needs and preferences.



Different generations have different preferences in the way they communicate, so providing channel choice ensures inclusivity, i.e. no one is digitally excluded, and also ensures that all customers have the option to access services using the channel they would naturally choose.

By making the lower-cost digital channels efficient, easy to use and highly available (e.g. by making them available 24x7) customers are more likely to use them.

The main channel choices available to our customers, their relative merits and their future function in the Council's strategy are described below:

- **Social Media:** The Council currently has a small number of manually administered social media accounts. The Council's strategy is to make greater use of social media for information sharing and customer/community engagement. In order to make this more effective we will be investing in tools to help us manage contacts and information more effectively.
- **Smart Speakers/ Personal Assistants and Chatbots:** The Council's strategy is to adapt the information and transactions currently served by our traditional website so that people can easily access them via **chatbots** or by **personal assistants/smart speakers**. Currently over 20% of UK households have smart speakers and their use is expected to overtake that of tablets by 2021.
- **Traditional Websites:** It is anticipated that websites will remain one of the most popular ways people engage with the council over the three year period of this strategy, particularly for people raising complex requests for service. The last full redesign of our online content was in 2015 so we will conduct a complete review of the Council's digital content and how it is structured to ensure it still meets user needs.
We will ensure that all website pages display properly for people whatever device type they use and we will also ensure our pages meet the EU Accessibility Directive and other associated standards for accessibility.
- **Text messaging:** Currently the Council makes very little use of text messaging for customer contacts. The Council's strategy is to embed text messaging into its existing systems and into new process it builds for appointment reminders, bill reminders, and service request updates etc. The Council will explore the suitability of the Government's GOV.UK Notify platform for text messaging.
- **Telephone:** Despite increases in online transactions, many customers will still want to contact the Council by phone. The Council's strategy is to service as many as possible of these telephone enquiries through its Contact Centre supported by modern digital tools, but also to introduce automated options such as interactive voice recognition (IVR) and chatbots. Where a digital service exists we will provide an assisted service to complete this on behalf of customers who cannot complete it themselves, to avoid digital exclusion.
- **Email:** Email is a very effective way to keep customers up to date, or alert them of things they need to know. The challenge is keeping email contacts up-to-date, knowing the message has been successfully delivered, and read by the intended recipient. Incoming email customer enquiries are often unstructured and are labour-intensive to respond to. The Council's strategy is to use targeted email communications where these are safe and reliable and to use **machine learning** interfaces for incoming emails to provide automated, or semi-automated responses to customers.

- **Post:** The Council has a statutory obligation to provide certain information to customer in printed form by post and in many cases the only contact information we have for our customers and citizens is a postal address. However the Council's strategy is to reduce the types and volume of transactions using printed materials by post by providing online portals and e-documents wherever practical.
- **Face-to-face:** Although one of the most expensive means to interact with customers there will always be a need to interact face-to-face, for example when assessing someone's home as part of our reablement service, or visiting premises to conduct an inspection. In these cases we will equip staff with the internet-enabled tools they need to electronically access the Council's systems and information, reducing reliance on paper based processes and avoiding rekeying of information.

(2) **Increasing the Council's scope of self-service transactions**

The Council's strategy is to significantly increase the number of its customer transactions and request for information that can be fulfilled via self-service using a variety of access channels. To achieve this we will employ the digital tools and processes we already use and introduce some new ones. Specifically we will:

- **Increase the use of our corporate case management solution and My Account functionality** to allow customers who wish to, to track the progress and view the history of their requests for information and service.
- **Use application programming interfaces (APIs)** to 'reach into' our back office systems, databases and data warehouses to retrieve data and information required to automatically complete transactions or service information requests.
- **Increase the number of modular building blocks and technical capabilities** in our existing website/digital platform to allow more services to be delivered online.
- **Make better use of the workflow capabilities** in our existing back office systems to automate, or semi-automate processes.
- **Upgrade/enhance our existing back office systems** where these support self-service functionality that is not currently being used.
- **Introduce machine learning software** to support online and voice controlled chatbots.

Transactions to be digitised and made self-service will be prioritised according to the following criteria:

- High demand/volume
- High cost (where the digitised alternative is cheaper)
- Easy to achieve (quick wins)

(3) Digitise paper-based information and processes

Where we still use paper-based records we will move to digitise these so they can be stored and retrieved electronically. This will free up valuable office space and make it accessible from any location and will usually enable the information to be made more secure.

Where we have paper intensive processes and transactions we will seek to digitise these to make them more efficient, both in terms of their processing time but also in terms of reducing their carbon footprint.

10. Strategy Detail - Theme 5: Creating a Digital District

10.1 Introduction

Most of our citizens, in their everyday lives, are now used to ordering goods and services and making bookings online, via broadband connections, or through their smartphones.

As the Council enables more of its services and information to be organised or delivered online, it is key that the district's digital infrastructure is up to the job of supporting these transactions.

Good digital connectivity is also important for retaining and attracting businesses to the district and allowing those already here to grow and develop.

The rurality/low urban density of much of Berkshire means providing leading-edge digital infrastructure is harder, more costly and less commercially viable than in city areas.

10.2 Aims

The aims of this theme are to ensure that West Berkshire is as well served as some of its more urban neighbours in having access to high speed broadband, mobile phone coverage and in the coming years electric vehicle charging points, and that those who live and work in the district have the necessary digital skills to fully participate in the modern digital world.

10.3 Objectives

(1) Ensure digital inclusion

Whilst the advancement of technology has brought many benefits, the UK Consumer Digital Index in 2019 found that one fifth of the UK population do not have foundational digital skills.

If this skills gap is not addressed, many people are at risk of being left behind. In a few years it may become impossible to purchase services such as car insurance, or a holiday, from the high street. In a few years more, in an increasingly cashless society, everyone may need a form of bank account to transact with organisations and individuals. Some central Government functions such as applying for Universal Credit have already moved solely online, and others will surely follow.

The Council will play an active part in ensuring those who live and work in West Berkshire are able to improve their digital skills and will put in place measures to avoid digital exclusion by:

- Making each digital transaction as intuitive as possible so that those, even with basic digital skills can use them.
- Assisting people with Universal Credit and job applications (including by volunteers in West Berkshire Libraries and Citizens Advice Bureau).
- Commissioning providers such as Newbury College to deliver a range of IT courses e.g. basic spreadsheet and word processing skills, video chat and social media skills.

- Providing equipment to Family Hubs and other public facilities to allow members of the public to access online facilities and develop their digital skills.
- Providing IT equipment to help vulnerable people to develop IT skills (such as those in the Hungerford Day Care Centre and the Phoenix Centre).
- Taking advantage of funding opportunities to support the Department for Education's drive to develop adult's IT skills to attain Essential Digital Skills qualifications.

(2) Increase West Berkshire's superfast broadband coverage

The Council is committed, through partnership working with broadband providers and utilising state-aid funding where appropriate to extend West Berkshire's superfast broadband (speeds of 25Mbps per second or faster) from its current level of around 96% to in excess of 99% of the district's premises by the end of 2020.

(3) Increase West Berkshire's mobile phone coverage (4G and 5G)

Due to the rurality of West Berkshire, mobile operators will focus their 4G and 5G coverage, for commercial viability reasons, primarily on the relatively urban West Berkshire areas of Newbury, Thatcham and Hungerford. The Council will work with mobile providers and with Government departments to remove barriers to extending 4G coverage and to create favourable conditions for the early rollout of full 5G services in the district.

(4) Increase West Berkshire's ultrafast broadband coverage

Despite the success of the Superfast Berkshire Programme in bringing superfast broadband coverage to more than 96% of West Berkshire's premises, less than 5% of these connections are provided by end-to-end fibre connections capable of gigabit speeds.

As citizens, businesses and organisations become ever more dependent on ever greater broadband speeds, we will want to ensure our full fibre rollout is achieved much earlier than the Government's current target of full fibre coverage by 2033.

(5) Exploit the recently created West Berkshire LoRaWAN®

A new, low-powered wide area network LoRaWAN® was installed in West Berkshire in 2019 as part of a Thames Valley Berkshire Local Enterprise Partnership funded "Smart City Cluster" project.

The Council will use this network to deploy low-cost internet of things (IoT) sensors across the district. Other councils are using IoT devices to:

- Measure road temperatures for road gritting routes/schedules and to warn road users of potential ice hazards.
- Monitor air quality.
- Identify drains/gulleys that are blocked and may exacerbate flooding issues.

(6) Create an electric vehicle charging network to meet the district's demands

The council is currently in the process of producing its draft *Ultra Low Emission Vehicle and Charging Strategy* and an accompanying *Framework of Actions*. The actions being considered include:

- Help facilitate electric vehicle ownership by undertaking feasibility studies for charge point suitability at locations such as its leisure sites, car parks and on-street locations. This will enable visitors and residents without off-street parking to feel confident they can charge their vehicles when needed.
- Lead by example within our own fleet by replacing car and light-duty vehicles for low emission alternatives.
- Develop guidance for residents without off-street parking.
- Ensure planning policies are supportive of measures to increase electric and hydrogen vehicle uptake.
- Support our communities and businesses by encouraging, sharing knowledge and providing guidance where appropriate.
- Assist innovation and development by trialling new technologies and innovations where opportunities arise.

11. Resources

11.1 Introduction

If the Council is to succeed in delivering the aims and objectives articulated in this strategy it is essential to ensure that sufficient resources are made available.

11.2 Approach to delivery

Traditionally the Council has predominantly used its in-house ICT staff and Digital Services staff to deliver ICT and digital projects and initiatives. Both the ICT and Digital teams have finite capacity, most of which is consumed on day-to-day, business-as-usual activities.

Adopting its traditional delivery approach going forward would unreasonably constrain the Council's capacity and prevent it achieving its strategic aims, therefore the following delivery approach will be used:

- 1) **Build capacity in in-house teams** by:
 - Moving some systems to the cloud, where their maintenance will be performed by an external agency.
 - Moving some tasks currently performed by specialists to generalist staff.
- 2) **Increase the number of staff in key delivery teams** – This could be on a permanent basis or short/fixed term to deliver a specific project or initiative.
- 3) **Hire short-term external project managers and technical contractors** to deliver ICT or digital projects.
- 4) **Use system vendors, or external system implementers** to deliver some of the Council's projects.

As each project or initiative is brought forward, the resources necessary to deliver the initiative will need to be determined and agreed through the Council's governance arrangements. This will need to include:

- The type and quantum of resources needed including their necessary skills and experience.
- An assessment of the availability of in-house resources to perform this work.
- Where in-house resource capacity is insufficient, proposals about how else these resources can be secured and their likely cost.
- Identification of how the cost of outsourcing the work/bringing in extra resources will be funded.

12. Governance

12.1 Overview

The Council has mature governance structures in place, which are frequently updated to take account of new priorities as they emerge, for example when a new Council Strategy is produced.

Governance that is relevant to this digital strategy is that related to:

(1) Prioritisation and commitment of resources

Before a new digital project or initiative is introduced, or adopted, it needs to be described in a Business Case outlining why the change is required, what benefits it will deliver and when, how much it will cost and how it will be delivered.

Business cases are assessed by the relevant Council governance group(s); for ICT and digital projects these governance groups are:

- Customer First Projects Group
- Customer First Programme Board
- Corporate Projects Board

These governance groups are shown pictorially at Annex A

Projects will be given priority if they satisfy some, or all, of the following conditions:

- They contribute towards a Council priority
- They improve customer service
- They reduce costs/save money
- They generate income
- They improve efficiency
- They deliver carbon savings / other environmental benefits
- They are quick and easy to deliver (quick wins)
- They are required to meet a statutory or legislative requirement

Once a project has been approved the relevant resources (people) will be assigned to the project.

(2) Allocation of funding

Digital projects and initiatives may be funded either from departmental (revenue) budgets, from the Council's Capital Programme, from the Council's Transformation Fund, or in some cases from Government grant funding.

Revenue or departmentally-funded projects are usually routine upgrades of existing systems, which often introduce new and beneficial extra functionality.

Projects funded from the Capital Programme are bid for annually by service departments, the ICT Service, or the Digital Services Team. The three year capital programme is refreshed annually and bids for funding are assessed by the Council's Capital Strategy Group and bids are assessed using the same criteria as used in the project prioritisation section above.

(3) Project delivery methodology

The Council's Project Management Methodology (PMM) is used to manage the delivery of ICT and digital projects. The PMM is based upon the PRINCE-2 waterfall methodology. The methodology splits projects into four phases:

- 1) **Project Initiation** – Where the business requirements are first identified and described, and where project sponsorship and funding are secured.
- 2) **Project Planning** – Where the detailed project documents and plans are finalised and risks are quantified. In this phase the necessary project resources to deliver the project are identified and secured and the project governance arrangements are agreed.
- 3) **Project Execution** – This is the main project delivery phase, where the project deliverables are produced and tested with users and stakeholders.
- 4) **Project Closure** – Where the project is signed off, handed over to the operational business, achieved benefits are measured against the original specification and project lessons learned are recorded and disseminated.

Some of the Council's suppliers use agile methodologies to deliver their solutions and the Council may adopt these too, where appropriate, for some of its internal project delivery tasks. Agile is most likely to be used in preference to waterfall when:

- User requirements change frequently.
- A 'minimal viable product' prototype is required to (dis)prove a concept.

14. Measuring Success and Progress

14.1 Overview

The table below outlines, for the various elements of the 5 digital strategy themes, what the Council is aiming to achieve during the 3-year lifetime of the strategy. It identifies for each initiative measurable success criteria. These are baselined, future targets set then progress tracked every six months to one year.

Strategy Theme	Theme Initiative	Success Criteria					Date Achievements Reviewed
		Measure	Baseline	Target	Target Date	Achievement	
Making Better Use of Existing Systems	Maximise functionality and utilisation of current business systems	Core systems analysed to identify any unused functionality	Proposed list of core systems produced (95 systems) 4 specific systems Agresso, Goss icm, Iken, Uniform/Marvin have workflow functionality that is under-utilised	Analyse 25 systems per annum Review these systems to identify process improvements from utilising workflow better	Ongoing		
		Core systems analysed to identify any missing functionality	Proposed list of core systems produced (95 systems)	Analyse 25 systems per annum			
	Reduce system overlap and duplication	Systems/functions identified for potential rationalisation	Overlap between Finance, Payroll and HR systems identified as key area for investigation	Explore Enterprise Resource Planning (ERP) Tool	October 2020 start of feasibility review.		
Making Better Use of Data	Ensuring good data security	Increase the percentage of staff with up-to-date information security training	Worst areas as low as 45 % (Q4 2019/20)	>=85% (Low risk areas) >=90% (High risk areas)	Ongoing		
		Introduce context-sensitive interactive security training e.g. provide short information video when a malicious phishing link is inadvertently clicked on.	No system currently in place	Trial a context-sensitive training system, based on improved threat detection	December 2020		
		Introduce a Security Incident Event Management SIEM tool	Each system has its own security log	Consolidated security logs	March 2021		
		Ensure business continuity (BC) and disaster recovery (DR) arrangements are fit-for-purpose	Only high priority (priority 4) systems are included in rapid restore DR facility	Increase scope of DR facility to include proportion of priority 3 systems	March 2021		
	Ensuring good data quality	Introduce machine learning data analysis techniques to WBC.	No machine learning techniques in place.	Machine learning data analysis techniques piloted on data of a core WBC system.			
	Reusing data to reduce re-keying/double entry	Improve quality of our Active Directory (AD) database	AD is fit-for-purpose for current use	AD fully populated with all relevant data to support new systems and functions			
		Increase the number of Council systems that use single sign on (SSO)	20% of systems use SSO	All systems with more than 50 users to have SSO implemented	December 2023		
	Exploiting spatial data and Geographic Information Systems (GIS)						
	Improving the accessibility of data	Review where data is stored and systems are hosted	99% of system hosted inhouse 99% of data hosted inhouse	Consider cloud options whenever major upgrades/replacements are proposed. Immediate targets: Agresso, CareDirector	July 2021		
		Use application programming interfaces (APIs)					
		Create a self-service data culture (Create more data warehouses)	6 data warehouses currently in use	To meet requirements/demand			
	Providing BI data analytics tools to aid planning and decision making	Create a self-service data culture (Create a data lake)	No data lake currently in existence	TBC	TBC		
Provide BI tools to all Council staff who require them		<50 users currently using BI tools	Trial rollout of Microsoft Power BI to staff who are expert Excel users/data analysts	December 2020			

Strategy Theme	Theme Initiative	Success Criteria							
		Measure	Baseline	Target	Target Date	Achievement	Date Achievements Reviewed		
Creating a Modern Workplace and Workforce	Improve connectivity to aid flexible working	Increase Council office WiFi Coverage	Full coverage WiFi (N600 standard) available in all 'corporate offices'	Full coverage WiFi (AC1200 standard) available in all 'corporate offices'	March 2021				
			Partial coverage WiFi (80211G standard) available in Shaw House	Full coverage WiFi (AC1200 standard) available in Shaw House	March 2021				
			Partial coverage WiFi (various standards) available in all 36 Council offices	Full coverage WiFi (AC1200 standard) available in all 36 Council offices	Dec 2022				
		Increase percentage of devices with 'always on' capability	2% of WBC laptops with always on	95% of WBC laptops with always on	Sep 2020				
	Improving communication and collaboration	Increase percentage of smartphone estate using modern Android phones	Introduce new secure instant messaging	1.3% of WBC smartphone estate android based (Remainder BlackBerry)	100% of WBC smartphone estate to be android based	Jan 2023			
				Our Openscape unified communications system, available to 1027 users (57%) provides IM functionality, but this is little used.	Utilise Teams IM once the application is rolled out to a critical mass of users (500+ users).	TBC			
				Increase the availability of audio-conferencing and video-conferencing equipment in Council meeting rooms	Some portable equipment in use in small meeting rooms	Trial a System in a Market St. Committee Room	September 2020		
				Introduce collaboration software		Rollout Office 365	18 month programme from August 2020		
				Improve access to data to allow easier sharing					
Transforming Council Services	Increasing the digital skills of Council staff and Members								
	Increasing channel choice for our customers	Reduce expenditure on printing and postage	£400k pa in 2018/19	Reduce expenditure by 10% p.a.	Financial year ends				
	Increasing the Council's scope of self-service transactions	Use application programming interfaces (APIs)	Around 20% of the Council's systems have APIs. The majority of these are currently used for some purpose.	Increase use of APIs where these exist to meet digitisation requirements/demand	Ongoing				
			< 20 of the Council's systems have APIs (<20%)	When procuring new systems give extra weighting to those with APIs	Ongoing				
	Digitise paper-based information or processes	Increase the number of modular digital building blocks and technical capabilities	38 building blocks/technical capabilities identified for a good Digital 'Ecosystem' 20 of these are key elements. WBC has 17 of the 20 key elements, but some of these are inflexible or difficult to use/integrate	Review/replace inflexible building blocks. Find solution for missing elements e.g. SMS sender					
			Make better use of workflow capabilities	4 specific systems Agresso, Goss icm, lken, Uniform/Marvin have workflow functionality that is under-utilised	Review these systems to identify process improvements from better utilising their workflow capability				
			Upgrade/enhance our existing back office systems						
			Introduce machine learning software						
	Creating a Digital District	Ensure digital inclusion							
		Increase West Berkshire's superfast broadband coverage	Increase the percentage of west Berkshire premises that have access to superfast broadband (24Mbit/s or above)	Superfast coverage 96.2% (Oct 2019)	99.7%	Mar 2020			
Increase West Berkshire's mobile phone coverage (4G and 5G)		Increase West Berkshire's mobile phone coverage (4G)							
			Increase West Berkshire's mobile phone coverage (5G)	Negligible coverage outside of Newbury					
Increase West Berkshire's ultrafast broadband coverage		Increase the percentage of west Berkshire premises that have access to full fibre ultrafast broadband	Full fibre Ultrafast Broadband Coverage < 5%	Create business case to draw down Government funding for full fibre connectivity under its Future Telecoms Infrastructure Review (FTIR) programmes	Recommendations report September 2020				
Exploit the recently created West Berkshire LoRaWAN									
Create an electric vehicle charging network	Increase the number of EV charging points across the district.	78 Charge points currently deployed							

Glossary of Terms

Acronym	Stands for	Description
5G	5 th Generation standard for mobile phones (Supersedes 4G)	Although the standards are still emerging and rollout is at an early stage 5G networks are forecast to be more secure, stable and available than the 4G networks they supersede. With speeds expected to be up to 100 faster, with extremely low latency.
GIS	Geographic Information Systems	Systems and software for capturing, storing, analysing and manipulating geographical data for assets owned, managed or served by the Council.
ICT	Information & Communications Technology <i>Often formerly known as information technology (IT).</i>	ICT comprises the computer hardware, networks, data storage, software, programs, systems and services that enable people to communicate with each other, using a wide variety of channels.

Term	Description
Digital Services	A digital service is a service, or transaction, that is delivered with little or no human intervention. A common example is the online streaming of music or videos which has largely replaced the purchase and ownership of physical music or film media by individuals.
Internet of Things (IoT)	A development where everyday and previously passive objects are made 'smart' by being connected to the internet. Examples include smart street lights, smart electricity meters, smart TVs, internet connected vehicles.
Local Government Digital Service Standard	A standard published by LocalGov Digital . The Standard suggests a common approach for local authorities to deliver excellent quality, user-focussed, value for money digital services.
Superfast Broadband	Broadband service with a download speed in excess of 24Mbps usually delivered wholly or partially via fibre optic cables.
Ultrafast Broadband	Broadband service with a download speed in excess of 300Mbps – 1Gbps usually delivered wholly via fibre optic cables.

ICT & Digital Governance Schematic

