Wiltshire Council

Where everybody matters

Wiltshire Council

ICT & Digital Strategy:

Digital Wiltshire 2022

A Strategy and Three Year Plan for April 2019 to April 2022

(Summarised Version)

3 April 2019

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Contents

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1. Executive Summary

After the creation of Wiltshire Council as a unitary in 2009, significant effort and investment went into the creation of Information & Communications Technology (ICT) that would meet the needs of the unified organisation. This was seen as a successful exercise. In the years that followed, however, developments in ICT have been led primarily by the requirements of the separate business areas. This approach has created a complex variety of systems, a lengthening list of outstanding requirements for new business applications, and a burgeoning need to update the supporting technology. For the ICT Department to properly support the organisation, the council needs a sound ICT & Digital Strategy that matches and supports its strategic aims and enables it to keep in step with developing technology. This paper develops and presents such a strategy.

The council's high-level strategic aims have been well-articulated, with the key priorities being:

- Growing the Economy;
- Building Stronger Communities;
- Protecting the Vulnerable;
- and in all this, being Innovative and Effective.

It is vital that all technology provision supports these core aims, and so **corporate plan alignment** is a fundamental principle of this strategy. The ICT & Digital strategy maps to these key priorities, as is shown in Figure One below:

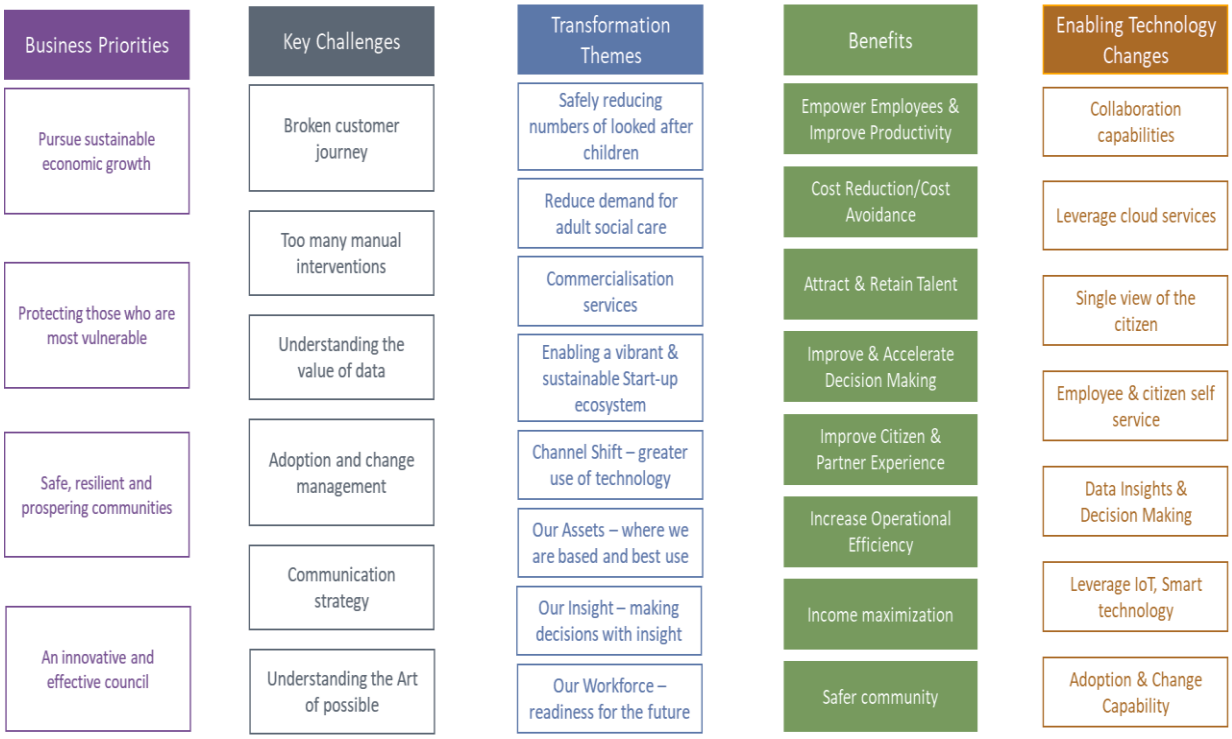

Figure One: Delivering the Business Priorities

At the more granular, departmental level, the council's many functions support the corporate aims. As a unitary authority Wiltshire covers all local government responsibilities, through the provision of some 380 individual services within 15 Directorates, grouped under 3 Corporate Directors. These

rely on the daily use of ICT including the provision of laptops, email and other productivity tools, internet access, file storage, telephony, video conferencing, instant messaging, printing, and so forth, plus specialist cross-business applications such as SAP for finance and HR. Also, most functions have their own line-of-business software applications, sometimes supplemented by home-grown databases and spreadsheets. Ensuring the provision of the best possible corporate systems, and that they are used to best effect, while **rationalising and updating specialist line-of-business systems**, is a key part of this strategy.

Thus the council is wholly reliant on ICT, and as is typical in councils, around 70% of the ICT team's work involves keeping services operational. This is visible to end-users through such functions as the Service Desk, where they report incidents and make service requests, but most of this essential work remains unseen, being undertaken by a range of staff with specialist technical skills. Over a period of years, primarily due to austerity in the public sector, much of the technical infrastructure that supports the council's ICT has been under-invested in, and become aged, unreliable, difficult to support operationally, and hard to maintain in a secure state. Similarly, there has been a lack of investment in staff skills. **A substantial 'catch-up' programme of work is now essential**, built around sound architectural principles including **Cloud First** and **Software-as-a-Service**, and is proposed in this strategy.

Meanwhile, technology develops apace, and as an **innovative council** Wiltshire seeks to be at the leading edge in its adoption, and sees its importance in meeting its strategic aims. Of even greater importance than 'traditional' ICT is Digital technology. Digital is disrupting everything and providing unprecedented opportunities, and we are living in a time of enormous change. It has been said that change is happening 10 times faster and at 300 times the scale of the first Industrial Revolution—and thus is having a major impact. As Digital becomes ubiquitous, it is rewriting the way local authorities are delivering their corporate priorities and meeting business challenges. As Wiltshire Council continues to face austere times, the need for change has never been more important and the need for Digital transformation more relevant. It provides the opportunity to redesign our service delivery, to allow our residents to have more control over how and when they access their services, to collaborate efficiently with communities and partners, and to support a culture of innovation. The council therefore published a high-level Digital Strategy in 2017 (Ref 1), and launched a major Digital Programme in 2018 with Microsoft, aimed primarily at streamlining the way customers deal with the council, but also seeking to achieve internal efficiency improvements. It is the ambition of the council to be **'Digital by Choice'**, so that customers will choose to interact with us through digital channels, rather than by phone, email, letters or face-to-face, because digital interaction will be compellingly easy, quick, and convenient. **Digital enablement** will be important to this, achieved by ensuring high quality broadband coverage throughout the county, and helping and empowering those users (mostly but not exclusively older people) who currently lack digital skills. Digital enablement of the council's own staff is also a strategic need, and in addition internal **culture change** is a significant part of the current Digital Programme. This is an area that has had insufficient attention in the past, when it has been apparent that simply introducing a technology into the business has not always led to its successful adoption, or the realisation of anticipated benefits.

The current Digital Programme exploits developments in **Artificial Intelligence** (including 'robotic process automation') and **Business Intelligence** to improve the efficiency and effectiveness of the council's operations. As AI develops further, with self-learning systems emerging that can perform

more of the work currently done by people (but faster, cheaper and more accurately), the council will look to adopt this technology. To directly serve the needs of the vulnerable, the council will increasingly use TECS (Technology-Enabled Care Services), including easy-to-use, voice-activated systems, providing support within the home. Predictive analytics, which will involve making better use of the large amounts of data the council already collects, will be developed to enable **data-driven decisions**, to help social care and other areas to understand problems earlier, and to allow interventions that are both more effective and avoid greater costs downstream. There will be support at the local community level, helping people to use information and communications systems, including where appropriate the council's systems, to connect, communicate and share information, thereby assisting and empowering them in their self-support, and contributing further to the development of strong communities. These and other initiatives will also help the council meet the looming social care challenges of an aging population, living longer but not always in good health, and sometimes with the added burden of isolation and loneliness.

Other digitally-related technologies will come to the fore over the timescale of this strategy, and it is likely that the 'Internet of Things' will start to figure not only in our work on 'smart cities', but also in smart workplaces and smart homes, and these and other developments will contribute to the growth of the county's economy.

The council seeks to become more **entrepreneurial** to maximise its income, and ICT has an important role to play in enabling this too. Any business unit must understand its costs in detail, must plan resourcing and future workload, advertise its services over the web, monitor work in progress, invoice customers in an accurate and timely fashion, track payments and debt, and so forth. Many of these tools are readily available, either from existing corporate applications or as small-business cloud-based systems, and it will be possible to offer packages of business support tools to help what will be, in effect, internal business start-ups.

An examination of **best practice** in the sector, based on the recently-published ICT & Digital strategies of other councils, along with advice from central government, shows that in the proposed way ahead we are strategically-aligned with others. The vital importance of a sound ICT infrastructure is universally recognised (hence the proposed 'get-well' programme), and the technical approaches we espouse (Cloud first, Software-as-a-Service, a focus on cyber-security, etc.) have been adopted by all. The power of Digital and AI is driving innovation throughout the sector, and the need for enhanced digital skills within the community, and within the council itself are also recognised. The longer-term impact of AI on employment, and the need to prepare our residents for the jobs that will <u>not</u> be automated, is a consistent theme in both local and central government.

This strategy makes specific proposals in terms of end-user devices, service desk support, and the need to rationalise the 1200+ software applications in use. It defines the architectural principles we will apply, and outlines the future of the council's telephony, including mobile phones. It details essential improvements to the underpinning infrastructure (servers, databases, and information storage), and explains how security improvements (of which many are in hand) must continue. The need to better address Disaster Recovery is outlined. Better wi-fi for visitors is proposed, plus renewal of printing/copying facilities - and a move to a low-paper culture. Ways of helping users to make better use of existing technology are described, and the importance is stressed of achieving a 'virtuous circle' of measuring user satisfaction with ICT, acknowledging shortcomings, and acting upon them. This and other proposed means will help to **rebuild the relationship of trust** between

the business and ICT, which is anecdotally reported as being poor, but has not been objectively measured for many years, another issue that will be addressed.

The importance of good **governance** is outlined, covering both the BAU operations, but also projects for new ICT systems. Strong governance will allow progression from the current era of order-taking, with a long wish-list of projects to be done, into a new era of strategic planning, robust business cases with future savings factored into budgets, and a strong focus on benefits realisation.

The functions of different technical specialities within the ICT department are described, and it is proposed that a **future departmental structure** be formed along these functional lines (subject to consultation).

To bring together the above, a **'Vision for 2022'** is proposed, describing a future state for ICT & Digital within the council, and this is summarised in Figure Two below:

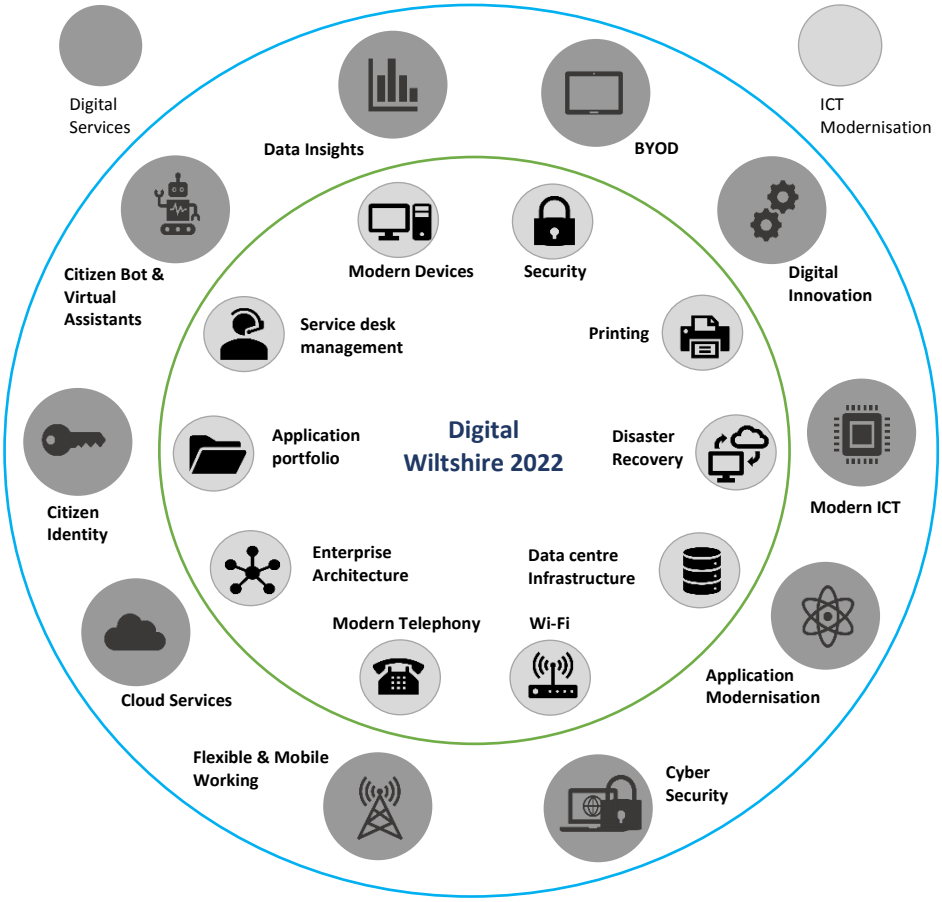

Figure Two: Summary of the Vision

This vision is ambitious but achievable, and will bring the council's ICT into a state that will operate reliably, securely and cost-effectively. To achieve the transition from the present state to the 2022 vision, a **Roadmap** of key activities is proposed, along with indicative costs.

Importantly, it is proposed that ICT is **maintained** in a good state into the future, to avoid it once again falling behind. In the same vein, it is important that this ICT & Digital strategy document is periodically reviewed within the governance process (ideally at annual intervals) to ensure it remains correct and relevant, in terms of both evolving organisational needs and developing technology.

2. Introduction

Most organisations of any size rely totally on Information and Communications Technology (ICT) for normal business functioning, and soon discover in the event of ICT outages that they cannot operate effectively. As the world becomes more connected, workforces more distributed, and information increasingly held in digital form, the need for effective and reliable ICT becomes ever greater. Technology continues to develop apace, (the technical drivers for this are explored later), and the opportunities for more effective and efficient operation continue to develop.

In some organisations, the ICT department may be reduced to focussing on keeping the existing service operational, leaving it to the rest of the business to determine how they want technology to develop, what innovations to adopt, etc. This has occurred to a degree in Wiltshire Council, and experience in other organisations has shown that this 'order taking' approach is rarely effective, and typically leads to not only an overloaded ICT department with a backlog of new systems to implement, but also a fragmented landscape of local spot-fixes, incompatible systems across the organisation, duplicated functionality, and sometimes dead-end technology that soon needs replacing. The overloaded ICT department will meanwhile be encouraged to 'prioritise' the organisation's long wish-list, typically with limited success, while constantly fire-fighting and switching its focus to the latest, 'must-do' quick fix.

These problems normally occur in an organisation lacking an ICT Strategy. Sometimes, ICT specialists create what they believe to be an ICT Strategy, but is actually just their own wish-list of technical projects to keep the lights on and the costs down – server upgrades, network modifications, application upgrades, adoption of cloud services, and so forth. While very sensible and absolutely needed as a 'to do' list, this approach fails in that it does not recognise the central, indeed sole purpose of ICT – which is to serve the strategic aims of the business. Thus, any worthwhile ICT Strategy must start at that point, then work down from there. Of course, organisational goals are necessarily high level, and so the next step is to explore the goals of the departments that make up the organisation, and determine how technology can help them to fulfil them. Note that again, this must not be an 'order taking' process, but rather a discussion of both the 'art of the possible' that ICT enables, usually informed by what similar organisations are doing with their ICT in this area, and an understanding of current and emerging business needs, ideally expressed as requirements and opportunities, not technical solutions.

This must be set in the context of technological change, which continues apace thanks to a phenomenon called Moore's Law, which shows that computing power doubles every two years or so. This has held good since 1970, and shows no sign of abating. The consequences have been, and implications for the future are, profound. Thanks to ever more powerful computers, the development of the internet, the adoption of mobile technology (85% of UK adults now own a smartphone), and much more, we are now living in the Digital Age, and that is changing our workplace and our daily lives. But there's more. Developments in Artificial Intelligence and robotics mean that many tasks currently undertaken by people will be open to automation. This brings its own opportunities and concerns, and these are discussed later. Suffice it to say that technology

marches on, at pace, and an ICT Strategy must take note of these impending changes and plan accordingly.

As a Local Authority, Wiltshire Council provides a wide range of services (far wider than most private sector organisations), and so employs a large range of different specialists, and – inevitably – hosts a range of different working cultures. ICT is one of those functions that works right across the organisation, and so must understand and respect those widely varying ways of working. ICT must also understand what is best practice in the sector, taking note of the successes (and failures) of others, while always seeking to be innovative, to the benefit of the business. Again, this highlights the crucial need for ICT to be in constructive dialogue with departments right across the business, and externally too.

It is necessary to take an incisive and realistic view of the current state of ICT in the organisation. This will help determine how fit-for-purpose the existing infrastructure, applications and end-user equipment is, how well the ICT team serves the organisation currently in terms of its structure, processes and relationships, and what shape the team is in to move things forward. Many ICT strategies focus only on the new and exciting projects to be done to move the organisation forward, but these must be built on a sound base if they are not to fail in the future, and an honest appraisal must be undertaken to understand what must be remedied, to underpin future success.

From all of the above, it is possible to create a vision of a desired future state, in terms of the use of information and communications technology across the business, and how it is supporting the organisation's strategic aims. This definition of the desired future state must be understood by all, and supported by all, so that the ICT department and the business can work together to deliver it. It will be a moving target – the world moves on, as does technology, and so it will need to be periodically revisited, typically on an annual basis. But if well-formed, and both realistic and aspirational, it will inspire and inform all those involved in its realisation. It will be the lodestar that guides all ICT activity.

The gap between ICT as it is, and ICT as determined by the vision, forms the basis of the plan of action. This is usually best expressed as a 'roadmap' – a graphical representation of what needs to be done, when, with any dependencies being highlighted. The roadmap – which must have some slack built in, to cater for the unexpected (be that central Government initiatives, or project delays), is now the definitive plan of ICT activity. It has been formed from the organisational and departmental strategic needs, and so replaces the former list of projects that had emerged, bottom-up, from the organisation. It does not need prioritising, it is already prioritised.

3. The Council's High-Level Strategy

The starting point for any ICT & Digital Strategy is the council's top-level business plan, which currently covers the period 2017-2027 (Ref 2). The council's vision is "To Create Stronger Communities in Wiltshire", which will involve building on past success in improving people's lives and helping businesses relocate to Wiltshire, working with local communities and partners, and investing in technology to make it easier for residents and businesses to engage with the council and resolve matters more quickly. That in turn breaks down into several key priorities:

- **Growing the economy**: including growing the skills of the local workforce, attracting and retaining high value businesses in Wiltshire, and doing so by having high quality education,

good transport links and employment sites, and sufficient housing in clean, safe, attractive environments.

- **Strong Communities**: whereby people take responsibility for their well-being, build positive relationships, and get involved in their communities, succeeding to the best of their abilities, and feeling safe where they live and work.
- **Protecting the Vulnerable**: so that all residents have a good start in life, and go on to live healthy and fulfilled lives through to a dignified end. This will include early intervention, prevention, and promoting community inclusivity. Health and social care will be delivered seamlessly and to the highest standards, and the council will work with health and the voluntary sector to provide appropriate, local, cost-efficient and good quality care packages, support and facilities.
- The council must be **Innovative and Effective** to deliver these priorities, taking where necessary difficult decisions, focussing on income generation and a more commercial approach, working with businesses for mutual benefit, and by doing so meeting rising demands.

These clearly-stated, strategic and enduring aims inform everything the council does, and as will be seen below, the ICT & Digital Strategy will both directly and indirectly support them.

4. Departmental Strategic Needs

As a unitary authority, Wiltshire Council covers the full spectrum of local government responsibilities, through the provision of approximately 380 individual services within 15 Directorates, led by 3 Corporate Directors. All functions within the council need access to high-quality, reliable ICT to perform their work, and this includes both generic services such as email, telephony, print, internet, etc., specialist cross-organisational applications such as SAP for finance/HR, but also specialist line-of-business systems dedicated to their own function. These services have to be accessed through the appropriate end-user devices (laptop, smartphone etc), there has to be support for mobile working, services have to be available 24x7, and information has to be accessed and stored securely. The applications in use have to be fit for purpose, and this involves constant attention by ICT specialists to keep them properly patched so that they are secure, bugs are fixed, and they continue to inter-operate as necessary with other ICT systems. (This normally means that the council must be using nothing older than the current or most recent previous version of the software system, a policy of “n-1”).

It is important that each department’s ICT needs are interpreted in the context of the organisation as a whole, its existing and planned infrastructure, and the architectural principles it has adopted (which are described below). Understanding departmental strategies and priorities, and translating them into ICT solutions in this organisation-wide context, helps to minimise the proliferation of spot-solutions, helps avoid investment in technology that is incompatible with other council systems or in dead-end technologies, and helps leverage the use of solutions that already exist within the council. The current estate of 1200+ applications is extreme, even for a council, and best practice elsewhere suggests that an estate of 200 or so is a realistic goal to aim for. This may require some compromises, but will be overall far more efficient and cost-effective for the council as a whole, will allow applications to be properly supported, and will assist in the provision of training and the recruitment of local super-users. As is also described below, any future investments in technology

must be based on full business cases, approved through the governance structure, and incorporating planned benefits realisation and the recouping of planned financial savings.

In the context of the opportunities offered by digital technology, it is useful to understand the alignment to the corporate and departmental strategies:

1. **Growing the economy**
    a. Superfast broadband infrastructure will be delivered through the Wiltshire Online Programme to households and businesses, so they can access goods and services online, use social media, interact easily with the council, and achieve the many benefits of the Digital age;
    b. We will support development of Digital skills within the community, and among council staff;
    c. The creation of internet infrastructure will facilitate the Internet of Things (IoT) technologies, and the smart city/workplace/home that will flow from it.

2. **Strong Communities**
    a. We will create opportunities for better joint working with partners, parish and town councils, and with local community groups, through the use of digital technology. This will include providing advice on what is readily available, and where appropriate providing secure access to council information systems;
    b. Our 'open data' policy will ensure that everyone will be able to access appropriately anonymised data to help generate creative solutions to local problems;
    c. Customers and communities will be able to self-service their requests on demand;
    d. Within the council, and working with partners, we will use data, AI and smart technologies to create multi-agency intelligence hubs to ensure safer communities;
    e. We will promote the use of community digital champions;
    f. We will provide easier access to advice and information;
    g. We will promote digital inclusion and accessibility for all;
    h. Our activities will help build 'social capital', which is proven to improve health and strengthen resilience to health problems (Ref 3);
    i. A community is "made up of people who have a common interest, to protect, serve and contribute to the common good" (Ref 4), and involves the creation of "solidarity, commitment, mutuality and trust among people" (Ref 5), and while digital technology and good communications will not necessarily bring that about automatically, the influence of technology as evidenced by the rapid growth of social media in recent years shows its potential at the community level, and we will promote this technology at the local level accordingly.

3. **Protecting the Vulnerable**
    a. We will leverage our data to understand and manage future demands on services and future needs of our population;
    b. We will improve interoperability and collaboration with partners (police, health services, town and parish councils, charities, community groups etc.) to allow better information sharing, decision making and resource allocation – improving support for customers;

c. We will move from being reactive to preventative – for example using TECS (Technology-Enabled Care Services) to support vulnerable adults living at home;
d. We will use technology to identify concerns early and act quickly to ensure more complex problems or difficulties don't arise, by providing the right interventions at the right time and right place;
e. Where safely possible we will promote self-service and options for the citizens to use community resources;

4. Working with partners as an innovative and effective council

a. In improving digital access we will achieve channel shift, driving more self-service which customers prefer, and which is cheaper for the council to deliver;
b. We will seek to digitise services end-to-end, redesigning and automating where appropriate, to achieve greater efficiency, lower costs, the redeployment of staff to more appropriate tasks (cross-organisationally, as necessary), and the best possible customer service;
c. We will increasingly use collaboration platforms for efficient internal and external (partner/communities) working, thereby improving immediacy, reducing email and other forms of asynchronous working, and improving teamwork and shared understanding of issues and working styles;
d. Data will be used to inform decision making at all levels of the organisation, and by sharing data with partners we will contribute to better shared decision-making and improved outcomes for our customers;
e. We will increasingly use data-driven models for demand forecasting, capacity modelling, and to drive departmental commercialisation strategies;
f. Where possible we will remove manual re-keying, and data duplication;
g. Data quality will be improved as customers will be able to update certain personal information held about themselves;
h. The adoption of one citizen identity across all the council services will simplify digital interactions for our customers, and help in creating a 'single view of the customer'.

Figure Three below shows how common digital services across departments will help to deliver the council's digital ambition.

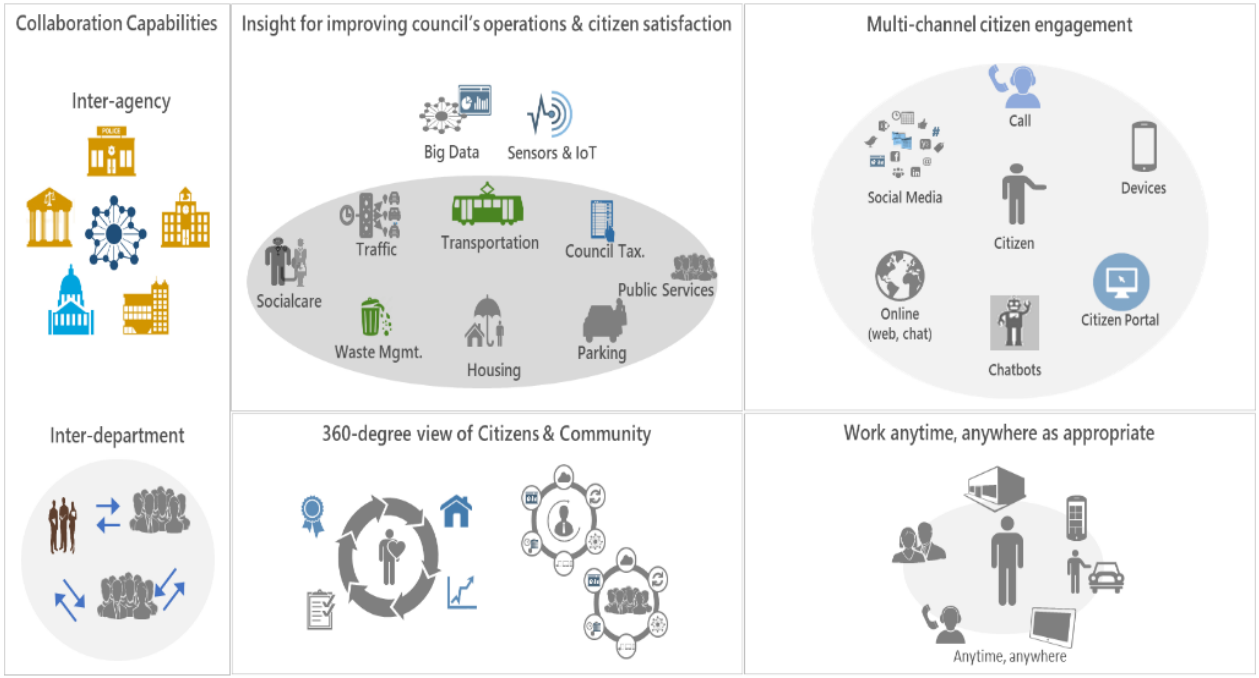

Figure Three: Common Digital Services Across Departments

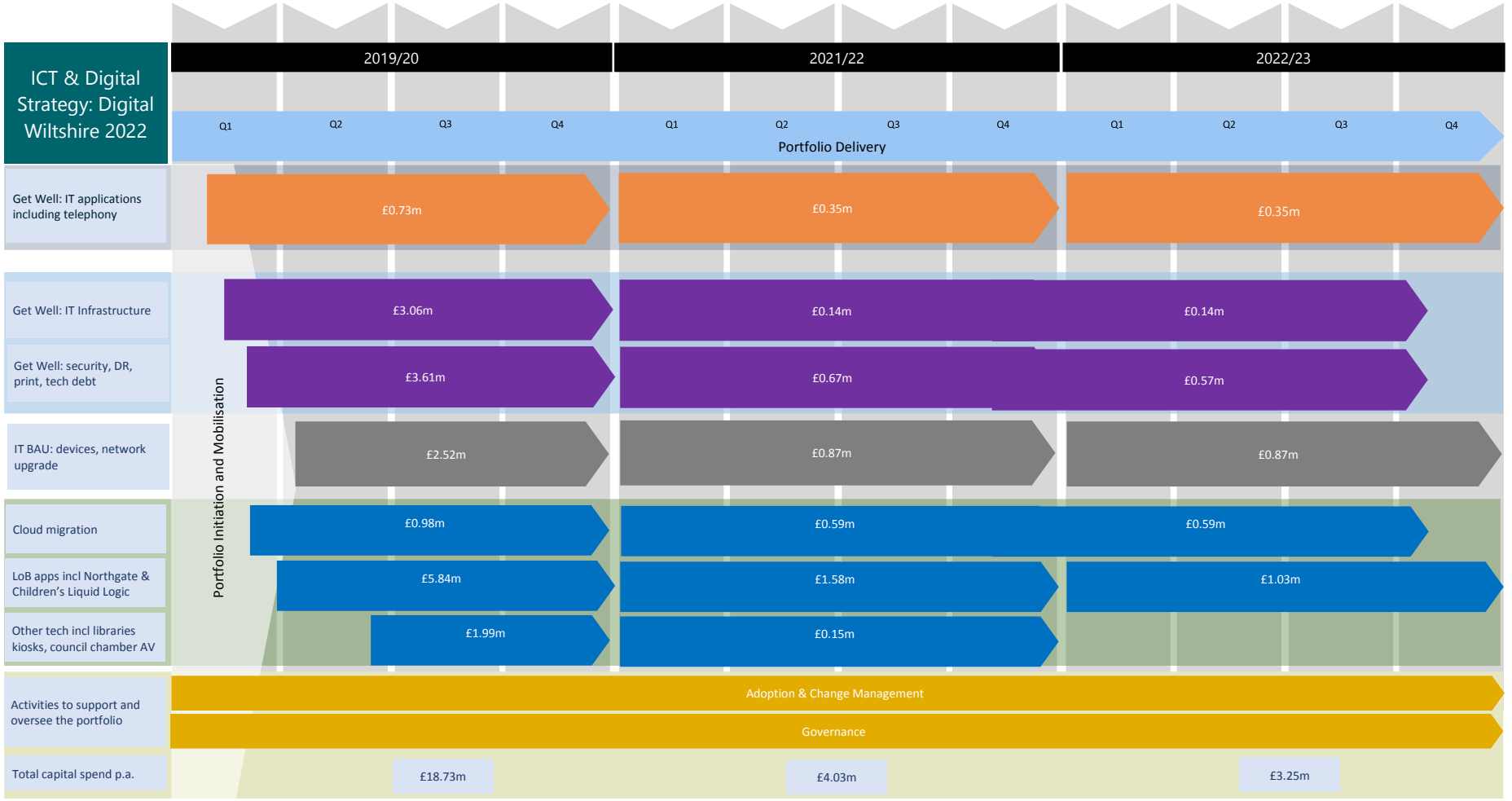

Figure Four: Roadmap Timescales and Costs

Figure Four above is a high-level representation of the major programmes of work proposed over the course of the following three financial years, within the envelope of the approved capital programme. A detailed Programme Business Case and Programme Plan will be prepared for this work. The existing Microsoft Digital Programme will finish during 2019 and is not shown here, as it is well documented elsewhere. There will be further work to be done to exploit what it has started, including further use of virtual assistants, further development of the citizen bot, greater use of BI technology, and more. It is anticipated that additional digital work will be undertaken in due course, to exploit continuing developments in AI such as robotic and cognitive automation, but the timing of this will depend on the availability of the technology, and of course be subject to normal approvals processes.

For further details of the ICT & Digital Strategy, please see the longer version of this document.

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