

Technology Strategy 2017-2020

Enabling innovation and excellence in service delivery

1. Summary

This strategy sets out how Horsham District Council will ensure that it takes advantage of the most up to date cloud technology in a well-managed and secure manner up to 2020.

It includes the following main points:

- a) How IT should move from what is currently viewed as a purely support function, perceived as separate from the remainder of council activity, to one where it is seen to play a more integrated part.
- b) How the council communicates with its customers in a manner appropriate to an era where communication online via smart phones and tablets is increasingly the chosen medium.
- c) It will make clear who makes decisions about technology and which areas of activity will add the best value for the Council and its customers.

2. Introduction

Local authorities across the country are under considerable pressure to look hard at their technology. This pressure comes primarily in two forms:

- a) reduced funding from central government means that councils must look to technology to radically improve the efficiency of their service delivery;
- b) in a world of always-on digital services, that are able to deliver goods and services instantly, the public has increasingly high expectations of the quality of service they receive.

It is clear that well deployed technology can help with both of these challenges. For us to make the most of the opportunity, we need to ensure we have the right technology in place, and ensure that the people we employ to develop and maintain that technology have the right structures, culture and working practices in place.

3. The Vision

Enabling innovation and excellence in service delivery.

Key to the success of the council's agenda for change and increased efficiency is putting technology at its heart. This is not to say that technology should lead our actions but it needs to be a fully supportive part of them.

It has been common in large organisations for a culture to arise where IT is seen purely as a 'support service' - one that is somehow disconnected from the rest of the organisation and the decisions it makes. This often results in decisions are made that only get to look at involving IT late in the day. This approach does not enable the department to share the possibilities that technology has to offer, which often can dramatically change the perception of what is possible.

The answer to this is to involve the technologists in an early stage of service design and policy setting. Those well versed in technology can then help their colleagues to understand what part IT can play. This can't be achieved either by the technologists leading the conversation or by the IT team sitting back, waiting to be told what to do. It should instead be a process of co-design between the service area and Technology Services.

This will bring a cultural challenge to Technology Services and stop it thinking about being just IT providers, but instead being involved and engaged with supplying the services that the Council needs to deliver.

4. Objectives

The objectives of the strategy are as follows:

- To develop the Technology Services division to become a key enabler of innovative service delivery at the Council
- To clearly explain and promote the principles of technology
- To govern the purchase and development of technology
- To grow the culture and operations of the Technology Services division to meet the technology needs of the Council and the public
- To ensure that members and staff have access to the right tools for them to be able to do their work

These objectives will be achieved by the end of the municipal year 2020.

5. Principles

The use of technology within Horsham District Council will be based upon a set of guidelines regarding the procurement of new systems, the renewal of existing ones and in-house development.

The principles aim to ensure that all technology decisions contribute to the objectives of this strategy, namely to enable innovation and excellence in service delivery.

The principles will be enforced through the governance process, as set out in point 6 below.

Principle 1 – cloud native

To ensure all the systems we use are designed for the internet age.

This principle is that any software or system used by the Council should be what is termed “cloud native”. This refers to a type of computing that utilises services and infrastructure via external cloud computing providers storing data on multiple virtual servers with no need for local in-house data storage. An everyday example of this is Google Mail where emails are stored externally but a user can effectively read and respond to them on any device anywhere in the world that can access the internet.

Any software which is not cloud native is costly and time consuming to maintain. It involves installing and updating client software on individual PCs, maintaining databases and the servers they run on, and using complicated and often expensive middleware to get the systems to talk to the front end that the customers access or that colleagues use whilst out in the field

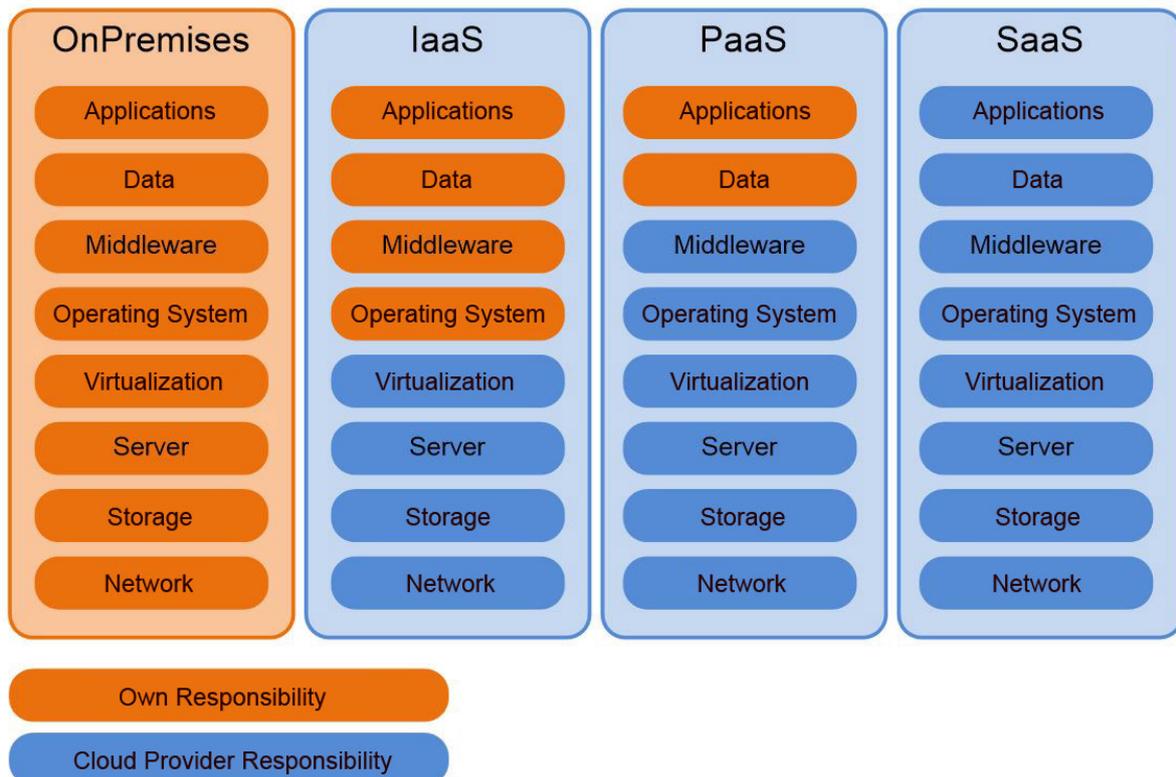
The strategy here is that all future software used by the council should be originally designed for internet use, rather than as often the case now having some form of internet enablement bolted onto an existing piece of software. As we move our technology operations to make the most of the advantages that the internet has to offer, we need to ensure the systems we use and the vendors who supply them share in this aim.

By insisting on cloud native software by default, we can move Technology Services out of maintenance mode, where little value is added beyond ‘keeping the lights on’, and into a more creative space, where innovation and improvement can take place.

There are three main areas of cloud computing, namely:

- **Software as a Service (SaaS)** – this will be the Council’s preferred method of delivering a software system. This sees the application delivered via a web browser without the need for the Council to be involved in maintaining any infrastructure or performing upgrades.
- **Infrastructure as a Service (IaaS)** – through the Census ICT Partnership, the Census Cloud project will see all servers move from local data centres to the cloud.
- **Platform as a Service (PaaS)** – the Council currently does not have the ability to do bespoke development work using the cloud. A project to identify a suitable platform will be undertaken shortly after the adoption of this strategy.

The following diagram demonstrates the value of each type of the 3 cloud approaches to the Council compared with now. It shows that as applications move from being hosted “On premises” the responsibility the Council has to maintain infrastructure reduces significantly, freeing us up to focus on areas where we can add more value through innovation and improvement.



The Council’s approach is that where a SaaS solution is available, we go with that, unless there are extremely good reasons not to. Otherwise, we host traditional applications through the shared Census Cloud, a form of IaaS. Where a requirement is for some bespoke workflow, then the PaaS is the right home for that work.

Principle 2 – mobile ready

To ensure all the systems we use can be accessed anywhere, from any device.

Key to the future of service delivery at the Council is that colleagues can work from locations other than just the council offices. This enables staff to work from home, frees up space in the office and potential costs there, whilst giving access to systems and data on the move making them much more efficient and cutting down on needless travel.

Since the launch of the iPhone 10 years ago, the opportunities for mobile enabled working have developed at a great pace. Innovations such as touch screens and increased access to higher speed mobile data networks have made the concept of truly mobile workers a reality. A legacy of our traditional software systems that are not cloud native is to limit the ability of staff to access those applications data from mobile devices such as smartphones and tablets.

Any software we purchase, renew or develop must be enabled for mobile working out of the box, without the requirement for middleware, extra investment in specialist hardware or specialist intervention by our IT staff.

Principle 3 – interoperable

To ensure the data our systems use is easily shared between people and applications.

In the past, one of the factors holding back organisations was getting all the different IT systems to talk to one another.

There would often be complications because the systems accessed at the front end by customers wouldn't talk to the back office line of business systems. Sometimes suppliers would help out by providing often expensive bespoke links between systems, and more often than not services would have to fill in the gaps with manual processes, re-keying, and other workarounds.

The world and technology has moved on, and cloud native systems and software now offer freely accessible and publicly document application programming interfaces (APIs) and web services, which can be used to link systems together very simply.

This new technology frees up the Council to be able to make the best decisions possible on what systems and what technology capabilities to deploy. By insisting that all systems and software we purchase offer publicly documented, freely accessible APIs, we can ensure that we can slot them into our existing structure without the need for expensive or inefficient workarounds, and can begin to offer our customers a genuinely end to end digital experience.

Principle 4 – flexible

To ensure we make good use of shared platforms and capabilities across our services.

Traditionally, software in local government has been purchased to meet the needs of a particular service: planning has its own planning system, housing has its own housing system, and so on. Whilst this would appear to make sense at first, on reflection and in practice, this approach often creates duplication, emphasises silos and lacks flexibility.

In fact, most systems in use in a Council do broadly similar things such as booking, reporting, paying, managing a case, managing documents and making assessments. Most of the systems we use do these things but because those capabilities are embedded inside existing

systems only used by a particular service, each one does them in slightly different ways and we are paying for them each time.

A more flexible way of delivering these systems would be to identify those common capabilities (the booking, the reporting, etc.) and deploy those in a consistent way across different service areas, tying them together and avoiding duplication.

The purpose of this principle is to encourage the Council to look for common capabilities that can be shared across different services, rather than investing in siloed software that will only be of use within a certain service.

Principle 5 – enabling customers

To ensure all the technology we deploy helps our customers enjoy a consistent journey across our services.

A key part of Council strategy is to deliver a consistent customer journey for all those who interact with our services, and the online journey is an incredibly important part of this.

Many organisations, in previous attempts at ‘e-government’ or ‘digital transformation’ have sought to implement online access to services. More often than not, this has seen a simple transfer of an offline process to a web based one – the paper form becomes the web form, and little else changes. The opportunity presented by both the recent developments in technology and the greater expectation that customers have of organisations and their ability to interact with them online, is that services can be redesigned around the internet and this is increasingly the preferred medium for many in society given its ease of use and 24 hour access.

It follows therefore that any solution that is purchased or developed by the Council must have the needs of the customer at its heart. This manifests itself in two main ways. Firstly, any software or systems must operate with customers being able to access the service themselves online, by default. It should not be an add-on or an afterthought. All new systems should be able to be slotted into the consistent online customer journey which will be articulated in the Council’s Web Strategy, due to be drafted later this year. Secondly, the manner of the design of processes and services should be customer friendly ie easily understood and used.

We will develop a corporate website strategy that outlines the consistent customer experience we want our users to enjoy online, and how will we achieve it.

Principle 6 – proportionately secure

To ensure that the Council’s and our customer’s data is as secure as it needs to be to enable us to deliver our best work.

We should never stop being vigilant about safely storing our customers’ data, as well as our own. However, we must ensure that we take a proportionate response to information

security requirements, and that we treat data appropriately, and do not apply blanket policies indiscriminately, potentially damaging our ability to innovate and deliver great services.

To do this, we will work with our partner Councils in the Census ICT partnership to develop new, cloud native security policies and approaches. We will combine this policy work with practical action to classify our data in terms of its sensitivity. This will give us the knowledge we need about how to manage our data safely and proportionately.

The key to this will be to free colleagues up to work effectively with information and data in flexible ways, enabling them to innovate and improve the processes they work with, without putting the Council at risk.

Any software or systems that we buy or develop must have proportionate information security in place, providing flexibility wherever possible.

6. Doing the right things

In order for the five principles to be enforced, a system of technology governance is required within the Council. This is to ensure the best possible decisions are made around buying and developing new technology.

6.1 Technology Strategy Group (TSG)

The Technology Strategy Group meets monthly to discuss and make decisions on key strategic areas of investment and development by the Council.

Membership of the TSG will be the same as for the current Future Horsham Technology Strategy Programme Board. Additionally, guests will be invited to attend the TSG as appropriate: for example, the relevant Director or Head of Service will be invited should an investment decision be required about one of their services.

A proforma will be designed to pull together all the necessary information the TSG may need before making a decision. The Group will consider all the information provided, and make decision in line with the principles outlined above in this document, also taking into account corporate priorities.

Full terms of reference for the TSG will be written and published on the intranet.

6.2 Technology Operations Group (TOG)

The Technology Operations Group meets on a weekly basis to discuss and make decisions on operational technology matters. All decisions made by the TOG will be communicated at the next meeting of the TSG for ratification.

The membership of TOG will be the Head of Technology Services, the Systems Development Manager and the Site Service Delivery Manager. Membership will be reviewed following the restructure of Technology Services.

Full terms of reference for the TOG will be written and published on the intranet.

7. Culture and operations

A core objective of this strategy is to develop the Technology Services division to become a key enabler of innovation and excellence in service delivery at the Council, and not just as a support service.

Ways of achieving this have been mentioned at various points in this document, focusing on shifting the balance of work from maintenance to more proactive, creative work that delivers value for the Council and its customers, and doesn't merely 'keep the lights on'.

Our culture and operations will be focused on the following areas, which are described in greater detail below:

- User centred design
- Agile ways of working

Our success in implementing this shift will be measured using the Local Government Digital Service Standard.

7.1 User centred design

Key to producing high quality digital products and services is ensuring that everything we deploy meets the needs of the users who will be using it. This perhaps sounds like an obvious point, but the history of IT delivery is littered with products and systems that don't get used because they don't solve a problem that anybody actually has.

Even when the introduction of a new system might have benefits for the Council as a corporate body – for instance, by delivering efficiency savings – the design of that system must be based around user needs to ensure it is used properly. The best way to ensure the take up of a new system or service is to ensure people actually want to use it in the first place. The way we do this is through user centred design.

Much has been written about user centred design, and the Government Digital Service provides a lot of online material¹ to help us increase our capability in this area. The biggest challenge in this space is the cultural one – traditionally Councils do not look at their services, particularly the technology elements of them, from the perspective of service users.

¹ <https://www.gov.uk/service-manual/user-research>

There are generally two sets of users of a system within the local government context. The first group of user can be seen as the customer – the member of the public. We need to involve our customers in the design of services, to find out what their motivations are, and how forms and online content can be designed to allow them to achieve their goals with as little fuss and stress as possible.

The other main user group we have is council staff. Again, traditionally software is purchased by managers and implemented by IT teams, and doesn't much take into account the views of the people who actually have to use the system. This often leads to systems not being fully implemented, or difficulties in engaging users with them. These issue can be easily alleviated if we just involve end users in the process of purchasing or developing internal systems.

All the systems that the Council develops and deploys must clearly research the needs of users and account for how they will be met.

7.2 Agile ways of working

We will adopt agile working methods to de-risk our projects and to ensure they have a higher chance of succeeding.

Traditional 'waterfall' style methods of project management see long lists of requirements created that are then taken away to be built over often long periods of time. In between, there is little interaction between those developing the system and those that will be using it, and few opportunities for feedback. What is often the result is a system that meets the developers' understanding of the requirements, but not something that will deliver the desired outcome.

In an agile project, the requirements are broken down into smaller groups, known as 'sprints', each of which delivers a fully working pieces of functionality. As each sprint is completed, those features are released to the users, enabling them to start using it as quickly as possible, and providing feedback to the developers.

7.3 The Local Government Digital Service Standard

The Local Government Digital Service Standard² (LGDSS) is a standard for high quality digital work, which has been based on the central government version³ developed by the Government Digital Service. It has been put together and agreed by LocalGovDigital⁴, an informal volunteer network of digital practitioners in the sector.

Our strategy at HDC is to ensure that all the new systems that we procure and develop meet the standard as a means of ensuring quality, and benchmarking what we are doing with the

² <http://localgovdigital.info/localgov-digital-makers/outputs/local-government-digital-service-standard/standard/>

³ <https://www.gov.uk/service-manual/service-standard>

⁴ <http://localgovdigital.info/>

rest of the sector. Where possible, we will ask other local authorities who also have expertise in the standard to peer review our work to ensure we continue to meet the standard effectively.

The 15 main points of the service standard are as follows:

1. Understand user needs. Research to develop deep knowledge of who the service users are and what that means for the design of the service.
2. Ensure a suitably skilled, sustainable multidisciplinary team, led by a senior service manager with decision making responsibility, can design, build and improve the service.
3. Create a service using the agile, iterative and user-centred methods set out in the Government Service Design Manual.
4. Build a service that can be iterated and improved in response to user need and make sure we have the capacity, resources and technical flexibility to do so.
5. Evaluate what tools and systems will be used to build, host, operate and measure the service, and how to procure them, looking to reuse existing technologies where possible.
6. Evaluate what user data and information the digital service will be providing or storing and address the security level, legal responsibilities, privacy issues and risks associated with the service.
7. Use open standards, existing authoritative data and registers, and where possible make source code and service data open and reusable under appropriate licenses.
8. Be able to test the end-to-end service in an environment similar to that of the live version, including all common browsers and devices.
9. Make a plan for the event of the digital service being taken temporarily offline, and regularly test.
10. Make sure that the service is simple enough that users succeed first time unaided
11. Build a service consistent with the user experience of government digital services, including using common government platforms and the Government Service Manual design patterns.
12. Encourage maximum usage of the digital service (with assisted digital support if required).
13. Identify performance indicators for the service, incorporating existing indicators and publishing to a performance platform, if appropriate.
14. Put a process in place for ongoing user research, usability testing to continuously seek feedback from users, and collection of performance data to inform future improvement to the service.
15. Test the service from beginning to end with appropriate council member or senior manager responsible for it.

We will create a process and templates to aid with the assessment of our products with the service standard.

8. Ensuring members and staff have the tools they need to do their work

In the last decade, particularly since the emergence of the iPhone, a change has taken place in the world of technology which has seen innovations in the consumer space start to impact on the workplace. This is a significant shift, as until relatively recently, consumers were unable to afford the kind of technology that large organisations could invest in.

As people have got used to using cutting edge technology at home, this has resulted in increased levels of dissatisfaction with the systems and devices used in the workplace. In a world in which sophisticated yet easy to use applications such as Facebook, Google and Amazon are available to everyone with a web browser and an internet connection, staff are increasingly frustrated by some of the clunky systems and irritating work arounds they have to deal with in the office. We want to remove this frustration and, where possible, put people in control of the tools they use to do their work.

We will do this in the following ways:

8.1 Ensure the corporate tool kit is as good as it can be

The range of devices that we can use to perform our jobs has increased significantly in recent times, with the growth in availability and usefulness of smartphones, tablets and other computing devices.

We need to ensure that all our people, members as well as staff, have access to the right tools to do their jobs. This points towards more flexibility of choice – the right device for one individual might not suit another doing a similar role – and we must be able to work towards these personal preferences, where it makes sense for the organisation.

We will start this work with the 2017 desktop refresh project, which will replace desktops and laptops for all staff, and introduce new hybrid tablet devices. These act as normal laptops, but have detachable screens, turning them into more mobile tablet devices.

Once this work is complete, we will review other technology provision, including the smartphone policy and deployment and the technology we supply to members.

8.2 Developing digital skills for everyone

Having access to the latest kit and software is one thing, but we must ensure our people have the skills and confidence to use them effectively.

This is as much about understanding the new ways in which technology is designed and delivered, and the operating models of digital businesses and organisations as it is exactly how certain software systems or hardware devices work. The cultural shift towards user-centred design and agile delivery matter just as much, if not more, than

Working with our colleagues in HR and Organisational Development, we will put together a technology capability programme, with the aim of increasing the knowledge of and ability to use cutting edge technology throughout the Council, both for staff and for members.

8.3 Introduce proportionate information security

In line with the sixth principle outlined above, we will ensure that all colleagues are comfortable handling data, and are aware of their responsibilities towards it.

As we encourage our people to take more responsibility for their own use of technology, we must provide them with the knowledge, skills and confidence to do so. A key part of the technology capability programme will be based around information security, once the new policies and procedures are in place.

This will help colleague understand the nature of the information they are handling, and what the appropriate tools they should be using with that data are. Given than the majority of the data we have is not what would be classed as personal or sensitive, this will actually free people up rather than restrict what they can do.

8.4 Free colleagues up to choose their own tools, where it makes sense

As a follow on from the new approach towards information security, we will encourage our people to make greater use of open internet tools where it is appropriate for them to do so.

The growth of delivery of software as a service, tools that are accessible through a web browser and require no traditional installation on a computer, dramatically increases the number of applications available to people to use in the workplace.

Where the information being stored is not personal or sensitive, we want to encourage colleagues to experiment with the different tools available to them online to do their work. This could range of document collaboration tools, to online video conferencing, to event management, to managing projects and tasks. Many systems to perform these tasks are extremely well designed and developed, but also free to use.

Rather than forcing individuals and teams to use corporately imposed solution that might not meet the needs of their service, we will free them up to choose their own tools and design their own workflows, where there is no need for corporate alignment, or concerns around information security.

The Cabinet Office has released guidance⁵ for civil servants encouraging them to do the same, and we will design supporting documentation along similar lines to support our people in making this transition.

⁵ <https://www.gov.uk/government/publications/digital-skills-in-the-civil-service/internet-tools-for-civil-servants-an-introduction>

9. Strategic action plan

A strategic action plan will be drawn up to measure progress in implementing this strategy. It will be a separate document, published on the Council intranet, to enable staff and members to monitor activity.