Calderdale Council

Digital & ICT STRATEGY

2018-2021

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Contents

FOREWORD & PREFACE

In 2015, Calderdale Council published the first combined Digital and ICT Strategy by any local authority in England. It recognised that effective service delivery is dependent on the Council's ability to be flexible and adaptable in responding to customer needs.

This updated strategy addresses the need to have a secure and robust infrastructure, cheaper and better digital services, and to improve digital skills.

It describes how information technology and online services can support economic growth, help to reduce inequalities and build a sustainable future for our residents, businesses and visitors alike.

Foreword by Cllr Tim Swift

Leader of Calderdale Council

Preface by Zohrah Zancudi

Acting Director of Communities and Service Support

This Digital and ICT strategy lays out our vision and plans to help our Council deliver services in a fashion that citizens have come to expect from leading online companies.

We are proud of our track record in the use of digital technologies. For example, we were the first local authority to introduce online chat - allowing us to deliver 24 hour customer service.

Our beautiful Borough's unique topography has encouraged us to find innovative solutions – such as 'LoRaWAN' sensor technology – which allows us to cheaply and efficiently monitor water levels as a flood warning system.

Introduction

'Digital transformation' has been a major catalyst in how local authorities have changed their attitude to service provision. Digital now plays the crucial role in the Council's journey from being a service-driven organisation, to one that is citizen-centric in its approach.

Digitally-enabled participation has changed forever people's expectations about their relationship with government. Calderdale supports this shift, from anticipating citizen and business needs, to citizens and businesses addressing their own needs, and delivering them in partnership with local government. In doing this, we can use the opportunities afforded by the integration of new technologies to better shape desired outcomes – whether health, economic or other, and not simply to support government processes. Making the best use of technology in a digital context requires coherent, strategic planning in all service areas and at all levels of administration.

Both the national government, through its Government Digital Strategy, and our citizens, expect the Council to deliver services in the same fashion that we have come to expect from leading private sector digital service providers. Citizens are now digital-savvy and expect the Council to have the same approach. The Council also has an interest in addressing the needs and concerns of those, who, for whatever reason, haven't (yet) embraced the opportunities offered by digital progress. Enabling affordable connectivity is important for the Council in its approach to supporting digital inclusion.

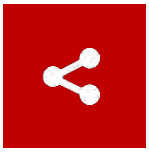
Digital is also a state of mind, an attitude about how to do things – differently, and better. This digital mind-set is enhanced by:

Providing transparency, openness and inclusiveness in our processes and operations, in order to improve accessibility, trust and accountability

Promoting greater participation in policy making and service design, by developing a framework to accommodate businesses, citizens and other organisations in the development of a digital eco-system

Creating a data driven culture allowing access to data and improving data sharing – with effective and appropriate security measures in place – creating greater trust amongst our residents and leading to better policy making and service design

Recognising Digital leadership – developing skills and capacity on the wider digital agenda, and ensuring our staff become digital evangelists



Sharing and embedding our digital processes with other public sector organisations – including Health and Police, providing coordination across regional and national government, with relevant stakeholders, to drive the alignment of strategic objectives

"Every individual and every business should have the skills and confidence to seize the opportunities of digital technology and have easy access to high-quality internet wherever they live, work, travel or learn."

Karen Bradley MP, Secretary of State for Digital, Culture, Media and Sport
From the ministerial foreword to the Government Digital Strategy

Supporting the Council's Priorities

This strategy aims to exploit advances in technology and digital thinking, and it is developed with reference to the Council's own priorities. As Council priorities develop and mature, so will the approach of this strategy to help support and underpin this work.

The Council's **Mission** is to be the **Best Borough in the North**, by focussing on three key priorities:

- **Grow the Economy**
- **Reduce Inequalities**
- **Build a Sustainable Future**

This strategy is designed to underpin these priorities, as shown below:

Council Priority	Topics and Tools
Grow the Economy •Jobs •Skills	**My Calderdale, Chat 24/7, Taxi Licensing, Benefits Account, Landlord Account, ID Verification**
	Super/Ultrafast Broadband, Digital take-up, Tourism, Public Wi-Fi, BID, Leeds Beckett University, Victoria Theatre
	Council Wi-Fi / Govroam, YHPSN, Infrastructure, Cyber Security, DR, Business Continuity, Staff Digital Competency
	Open Data, Business Intelligence, Pathfinders, Data – Standardise, Simplify and Share
	Home Care Jobs, Effective Service Provision
	University Business Centre
Reduce Inequalities •Equality/Social Cohesion •Financial Inclusion •Attainment Levels •Health Outcomes	**Digital Inclusion and Engagement, Assisted Digital, Digital Uptake, Digital Democracy, Browsealoud website software**
	Super/Ultrafast Broadband, Affordable Digital Connectivity
	Digital Literacy Framework, Organisational Development, Digital Leadership
	Data Analytics, Effective Use of Resources
	Telecare, STPs, Access to Care, Systems Integration, Data Standards, Integrated Care Record
	Digital library facilities, Flood and Air Quality Monitoring
Build a Sustainable Future •Environment •Sustainability	**Channel Shift and Self-Service, Website and CMS, CRM, My Calderdale**
	Super/Ultrafast Broadband, LoRaWAN
	Transformation, Information Sharing, Data Location, Cyber Security, Disaster Recovery, Business Continuity, Staff Digital Development
	Information Governance, Information Security, GDPR
	Personalisation of Social Care, NHS Integration
	Emerging Tech, Automation, AI, Smart Lamps, Parking, IoT Sensors, Air Quality, Flood alerts

Calderdale Council

GROW THE ECONOMY

Supporting Economic Development

Calderdale has a resilient economy, versatile and broad-based. It has a thriving financial services industry, hosting the Lloyds Bank Head office and data centre, which employs 6,000 staff locally. A major international insurance company, Covéa Insurance, has concentrated its UK operations in Dean Clough, in Halifax. Calderdale also has a strong manufacturing base, now focussed on engineering and specialist parts, such as Lucy Zodion Ltd, which won the Highway Electrical Association (HEA) Manufacturer of the Year 2016 for street-lighting.

Calderdale has a thriving creative and digital industries sector, which is supported by ease of access to Leeds and Greater Manchester, including the Media Centre in Salford, and a visitor economy worth in excess of £200m per annum. Another major area of economic activity is the Healthcare sector, where we anticipate a growth of 1,000 jobs in home care. However, the floods of 2015 severely affected 1,000 of our 9,000 businesses, and their recovery underlines our resilience.

Our **Business and Economy Strategy 2014-20** emphasises the significance of Digital and creative industries to the local economy, and stresses the importance for this sector of the availability of **high speed internet links** and high quality telephony. It recognises importance of **service delivery through the web**, and highlights the need for digital interaction with local residents, and with local business and labour in winning work.

Our **Business and Skills Strategy 2016-20's** digital action areas include support for:

	Employability, access to jobs and realising potential: "Introduce community led local development projects to widen digital inclusion and improve digital skills for unemployed adults"
	Increase competitive advantage by having high level digital skills across the SME workforce, encouraging STEM skills in schools and post-16 education to generate interest in key skill shortage areas. Increase the understanding of using Apprenticeship levy, and encouraging SMEs to link to Universities.
	Increase and develop financial resilience: "Encourage CMBC services to be accessed through web support and educate local residents on how to get the most from digital services" and to inspire staff to embrace change and become advocates for new innovative service delivery.
	Market Calderdale a destination of choice for business and tourism: "Work with businesses to make Calderdale a digital leader within Leeds City Region by the promotion of Superfast broadband and uptake of new digital technologies."

Superfast Broadband refers to the Government's £1.7bn Broadband Delivery UK project, which has been "making available" superfast broadband (24Mbps+) to 95% of UK premises by 2017/18 and then 97% by 2020.

We are delivering on this agenda – its success has led to 'clawback' of some of the original investment, allowing for further re-investment in the project – a 'virtuous' circle that means that the more successful the project, the more money will become available to invest in further improving access to superfast broadband. It is our aim to generate as much clawback as possible for the programme; if any remains unspent, our share will be returned to Calderdale (in 2023), when it will become available for other projects. Whilst the superfast broadband project has been broadly successful, several challenges remain:

- For some, the problem remains not connectivity, but **affordability**. This has been identified by Leeds ODI associate Tom Forth, who after moderating a digital conference at Calderdale, reported:

"Slow broadband is almost never a reason why people don't use the Council's online services. Most people own a device that can access the internet. What stops many people from accessing services online is the high cost of internet access."
ODI Leeds Associate Tom Forth

- To help address this, the Council has implemented Wi-Fi in its public buildings; it is also available in our libraries. The Council is looking at ways of expanding affordable Wi-Fi and is open to the idea of provision of Wi-Fi via our lampposts.
- Due to the Calder Valley's hilly topography, certain **hard-to-reach areas** remain a problem, especially in sparsely populated rural areas, where there is very little commercial incentive for providers to subsidise broadband provision. The Council is supporting initiatives to develop alternative ways of providing digital connectivity, for example, working with EE on a mast pilot at Luddenden Dean offering an innovative 4G solution for residents who cannot access superfast broadband.
- In Calderdale, we have challenges regarding **business park connectivity**, urban as well as rural, and developing a co-ordinated approach remains a challenge that we are keen to work with commercial investors to address.

Meeting the digital business challenge – locally

Digital Enterprise – This is a three year digital programme helping SMEs (Small and Medium Enterprises employing less than 250 people) in the Leeds City Region, to grow businesses through investment in digital technologies. It offers Digital Growth vouchers along with Digital Knowledge Exchange workshops, master-classes and mentoring support, aimed at increasing digital capabilities.

The Council supports our newly formed Business Improvement District (BID) in Halifax Town Centre, which will "Develop the use of digital and social media channels, traditional marketing and PR which informs and increases awareness of Halifax as a town, its business sectors, its events and all it has to offer, in a way which is consistent with its identity, to visitors and businesses alike".

National initiatives

The proposed Telecommunications Infrastructure Bill is paving the way for a gold standard of full-fibre broadband and future 5G communications. By enabling 100% business rates relief for operators who install new fibre on their networks, the Bill will provide incentives to operators to invest in the broadband network.

The Better Broadband Subsidy Scheme subsidises broadband installation for businesses that can't access an affordable broadband service with a speed of at least 2MB per second.

BT provides a basic broadband service for those on benefits and job-seekers allowance.

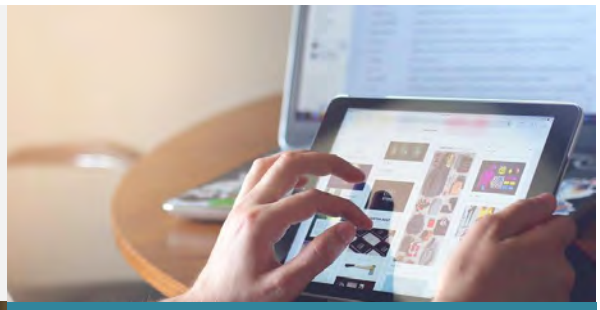
The new Digital Infrastructure Investment Fund will unlock over £1 billion for full fibre broadband across the country.

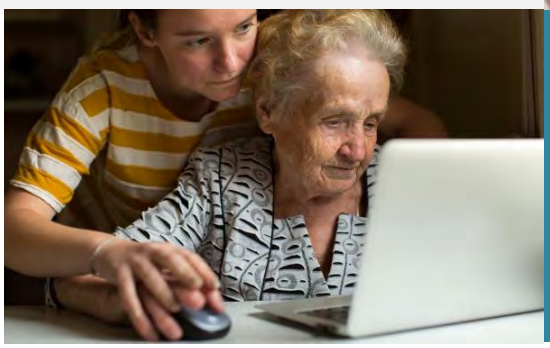
A biddable fund of £200m for Local Full Fibre Network.

People – our greatest asset

Using digital to help develop the economy is more than providing connectivity and developing businesses. Ultimately our economy is dependent on the people who live and work here. As a Council we will support their digital development in a number of ways by:

Working with Barclays to provide City & Guilds endorsed online digital training for staff working at Calderdale Council, courtesy of the Digital Wings initiative





Supporting local initiatives aimed at promoting digital inclusion. Once such example is Stoodley Training, which is a social enterprise that aims to bridge the 'digital divide'. It does so by offering and promoting courses delivering *"a gentle and patient introduction to computers for those with little or no knowledge"*.

What does Digital Inclusion mean for the public?

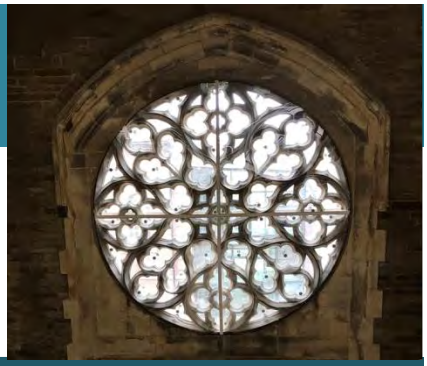
All members of the public understand the advantages of using digital services → **All members of the public have affordable access to high-speed internet** → **The public can take advantage of educational, economic and social opportunities by using these technologies**

Why use Libraries?

Libraries are more than just books; they are a trusted network with the capability to play a fundamental role in achieving digital inclusion throughout our communities and potentially closing the digital gap. In order to keep up with the demands of the public and involve digitally excluded individuals, they will continue to deliver more and more digital services.

Libraries will help to tackle four key barriers, including accessibility, skills, confidence and motivation. They deal with these barriers by providing accessible locations with free public Wi-Fi, computers and a range of other digital content. In addition to this, they will offer digital literacy services to help people understand the numerous benefits of using the internet and accessing services online, and help bolster levels of confidence in the digital world by offering the public guidance and support.

The Digital Hub



When we build we build with digital in mind - the Council has delivered on major infrastructure projects, including that of our revamped Piece Hall cultural quarter, which includes, alongside the re-developed Grade One listed Piece Hall:

Our new state-of-the-art Central Library and Archive – including digital components such as a Digital library and a 3D Printer

The refurbished Square Chapel centre for the Arts, with studio place and updated media facilities

The Orange Box art centre for young people, with facilities including a recording studio, and offering courses such as Digital Arts workshops

The Calderdale Industrial Museum linking together our past heritage and putting it into a modern context

The University Business Centre – providing businesses with access to a Halifax town centre-registered business address, and private newly-renovated office space with high speed broadband as well as a virtual office, co-working and hot-desk facilities

These facilities offer a modern, digitally enhanced, cultural centre for the benefit of residents, businesses, and visitors alike.

Inward Investment activity is stimulating Halifax as the place to cluster creative and digital businesses. We are using our heritage assets to inspire relocation, and the development of new businesses benefitting from the unique spaces and connectivity, at Dean Clough, 'Croft Myl' and the Elsie Whiteley Innovation Centre. The introduction of a University Annex will fuel the growth of high level digital skills in the Borough.

We are also keen to use Digital to help further boost our **tourism**, and to promote our flourishing film industry, especially as a tourist attraction.

Using Data to Support Decision-making

Government is one of the biggest data businesses in the UK. Calderdale Council holds vast amounts of data within its key systems. Data is infrastructure that is fundamental to the operation of a modern society and its economy, with vast quantities of data being collected, analysed and used every day.

Advances in digital technology, cloud-based computing and data science have opened up huge opportunities to improve the use of data. Furthermore, improving the way we collect, manage, and share data has the potential to deliver significant efficiency gains right across the economy, underpinning transparency, accountability, public services, business innovation and civil society.

Data helps us to gain insight, build services, make sound decisions and improve our performance; it is how we use data that creates value. Its publication can help to stimulate economic growth, support partners in evidencing need and gaining funding, and highlight inequalities. Within our financial capability, we will invest in tools and resources, identify savings and efficiencies, and make a positive difference to the people of Calderdale.

The Council supports both the Government's data strategy, and the SocITM (Society of I.T. Managers) approach, known as 'Simplify, Standardise & Share', and its work through the LCIOC (Local Chief Information Officer Council).

The Government's strategy aims to:

- Ensure data is used to its maximum potential to provide more efficient and responsive public services
- Encourage innovative uses of data by making it easier where possible to access and use data held by both government and businesses

Our strategic aims for Data are:

Data Integrity

Aim: *To use data effectively, we need to make sure it is fit- for- purpose.*
We will do this by:

- Ensuring we work with **clean, structured data** – getting rid of duplication and using open formats.
- Developing single **sources of truth** (master datasets) with the aim of collecting data once and using it many times, reducing the respondent burden for citizens and businesses (e.g. Local Land and Property Gazetteer for addresses).
- Ensuring the integrity, security and **availability** of our data, whether on our premises, or in the cloud.
- Achieving and maintaining **compliance**, such as the Public Sector Network and GDPR, which guarantees data confidentiality, integrity and availability, along with the 'right to be forgotten'.
- Protecting the **privacy** of personal data, gaining **consent** for the sharing of personal data where the citizen approves, and **anonymising** data that we do use, so that individuals can never be identified.

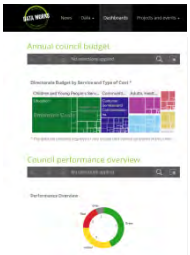
Unlock the Data

Aim: *Make sure we have the right tools to analyse and share data with citizens and partners.* We will do this by:

- Shifting our emphasis to data analytics – moving **from information to intelligence.**
- Investing in better **business intelligence tools** covering the whole information supply chain so that services and partnerships can be better informed about how individual service investments are collectively improving the Borough.
- **Rationalising tool sets** – to share resources organisationally / regionally.
- Developing an **integrated approach for sharing** and joining data with partners.
- **Sharing anonymised data** for research purposes for the benefit of Calderdale.
- Integrating and embedding data through **embedded analytics.**
- Using data for **predictive modelling.**
- Developing the use of **mash-ups** to present information in more engaging formats - by creating fully interactive webpages, rather than a dashboard within a web page.
- Developing **Automation**, using ETL technology (Calderdale uses FME) and applying this to automate data processes.

Predictive modelling is being used to identify citizens likely to fall into arrears with their council tax, helping us to offer early support.

Open Data



Aim: *Becoming Open by Default – creating an open and transparent data culture.*
We will do this by:

- Embracing the principles of openness and transparency, driven nationally by Government and the Open Data Institute (ODI) who define the benefits of Open Data as:
    - helping government to make public services more efficient
    - driving innovation and economic growth by revealing opportunities for businesses and start-ups to build new services
    - offering citizens insights into how central and local government works, improving public trust and boosting political engagement
    - helping government and communities to keep track of local spending and performance

- Developing our successful Open Data platform – Calderdale DataWorks - with around 200 datasets published already, we are committed to opening up more of our data to citizens, businesses and organisations unless there is a good reason not to.

- Collaborating regionally on innovative projects as sponsors of ODI Leeds (of which Calderdale Council is a founding member) in priority areas such as flooding, air quality, physical activity, highways, travel and transport.

Understanding our customer

Aim: *Better understand our customers so that we can use data for their benefit.*
We will do this by:

- Using data to build up a **holistic view** of our citizens.
- Developing the use of **customer profiling** to understand key aspects of Calderdale households to:
    - better understand our population;
    - help inform how we interact with our customers;
    - target services that will have the greatest uptake/impact;
    - provide support to those citizens most likely to need help;
    - avoid the pitfalls of digital exclusion

Customer profiling using Experian Mosaic analysis, has been used to identify the types of people who are inactive and likely to benefit from our **Active Calderdale** transformation programme

- Harnessing data from non-traditional sources such as **social media** to enable the Council to reach out into established digital communities and involve residents and businesses in shaping policy and providing feedback about how services are delivered.
- Increasing levels of transparency by providing more online **citizen-facing dashboards**, which will enable the public to explore and interact with Council information in a much deeper and richer way than would be possible in a spreadsheet or document.
- Improving the Council's **accountability** by making Council information and data easily and freely available, so that we can be held to account for our performance and how we spend our money. Use insight and intelligence to make people's lives better.
- Providing information to social and open data entrepreneurs who are developing public information services to help citizens make informed choices.
- Meeting the statutory and legal requirements for the provision of data to Central Government. Support and collaborate with key partners such as NHS, Police and Schools. Service our internal departments to support their operations.

GIS was used to map the extent of the 2015 Boxing Day floods to help services understand the impact. This included being able to submit an estimation of properties affected to DCLG. Hard copy maps were printed and distributed to all the Community Hubs, to help with the localised effort of gathering further information and intelligence as to what was happening 'where'. We identified vulnerable people by using data from not only Social Care but also people who receive assisted waste collections. We created a buffer around the known flood area to include addresses near affected areas as well as those directly affected. This filtered dataset was then distributed to community support officers to help complete a door-knocking exercise to help ensure the support was provided where it was needed the most.

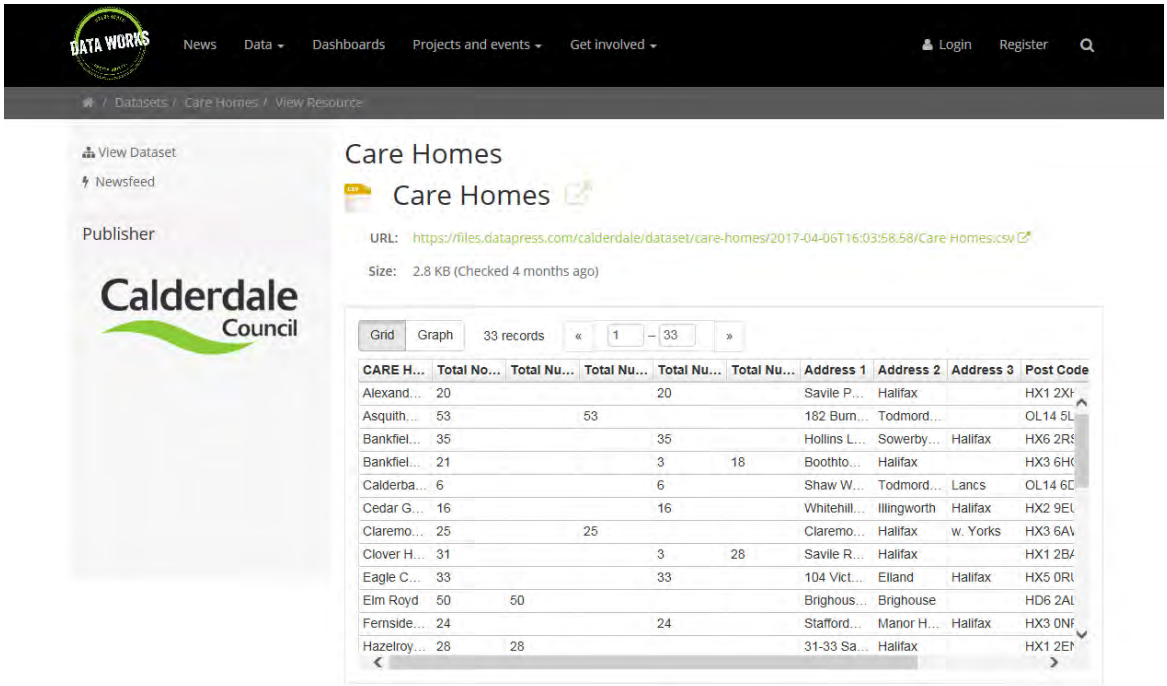
Spatial analysis can give additional insight. To support a public consultation about Calderdale's library provision, an interactive **map,** which can be configured to give key views of library provision and associated details such as bus routes, was created. A dashboard showing key facts was also produced giving a more accessible and interactive information experience for users, and reduced the need for costly printed material.

Developing our Workforce

Aim: *To ensure our staff are confident using data.*
We will do this by:

- Creating a highly skilled **data-literate workforce** comfortable and confident in their ability to use analytical tools and techniques including mapping, profiling and data visualisation, so that all colleagues can read, work with and use data.
- Using data to empower and enable **front line staff** to direct their time and energy more effectively.
- Continuing to embed self-service, for example **dashboards within services** (using Qlik), which make it easier for the Council to quality check its data, analyse its performance, and drive operational improvement.
- Becoming a **data driven/evidence led authority** – with all key decisions at all levels being based on good quality, robust data, delivered through the everyday use of **self-service** tools, visualisations and dashboards.
- Using **joined-up data** to co-ordinate actions rather than operating in isolation, helping us spot complex needs sooner.

Dashboards have allowed services to access data they need, in a format they like, when they need it, on a self-service basis. This has brought a much greater focus on performance within the Council. For example, a change to the downward trend of placing adults into care home placements was identified much sooner than it would have been under the previous reporting methods. The performance issue was quickly and effectively rectified. Calderdale is now one of the country's best performing councils when it comes to reducing the numbers of adults placed permanently into care homes.



What difference this will make to:

Residents	• Training to improve digital skills • Benefit from increased prosperity • Higher take-up of superfast broadband • Digital connectivity for rural areas are improved
Businesses	• Improve Connectivity – improving business prospects locally • Faster Connectivity – will improve business competitiveness • Affordable Connectivity – will lower business costs • Improve digital skill sets – help business make better use of Digital • Create an environment that will attract further businesses to the Borough
The Council	• Increased Business rates • Increased prosperity means more is spent on leisure – benefitting North Bridge Leisure Centre and Victoria Theatre • Data analytics can improve understanding of citizens and can target help
Bobbie 	***Bobbie is our fictional character who represents how the Council could help a Calderdale Citizen*** • Improved connectivity at her business park • Increased economy activity creates more building work • Learning new skills via University Business Centre and the new Digital Library

Calderdale Council

REDUCING INEQUALITIES

At the forefront of our efforts to reduce inequalities is our determination to ensure equality of access to our services. This section draws from and complements, from a digital perspective, our **Customer Services Strategy 2016-20.**

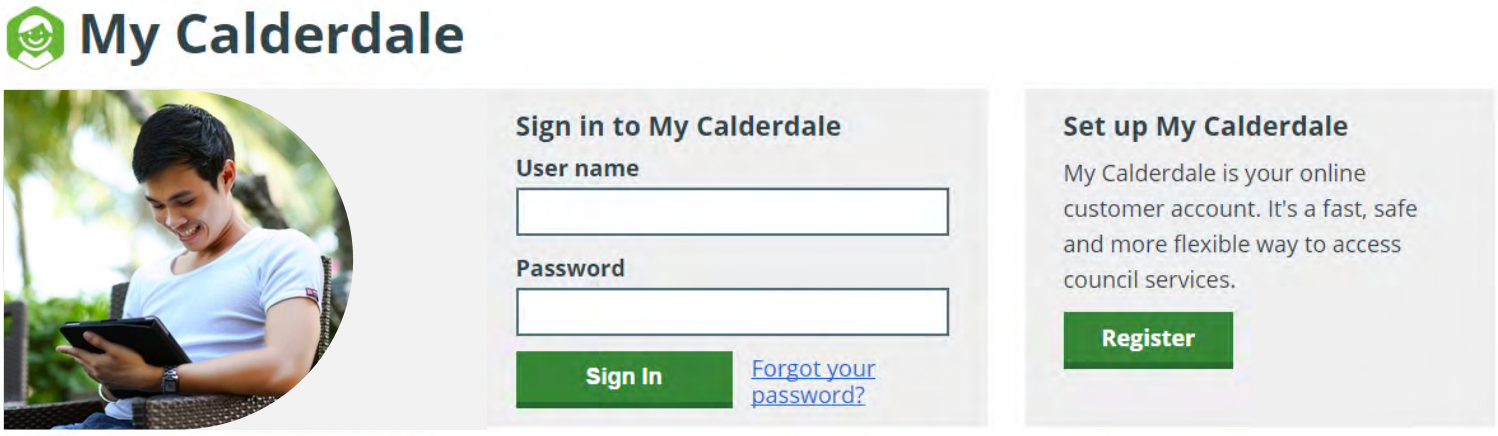
The Customer Services Strategy has three key actions:

Delivering My Calderdale

- Developing a **'My Calderdale'** Citizen Account as a one-stop shop.
- Harnessing the potential of the Council's **website** and online chat functionality.
- Ensuring **Face to Face support** is delivered at key community locations where people need it. The continued success of **channel shift** allows for the provision of alternative channels for those customers with more complex and demanding needs.

Recent successful digital outcomes from the Customer Services Strategy include:

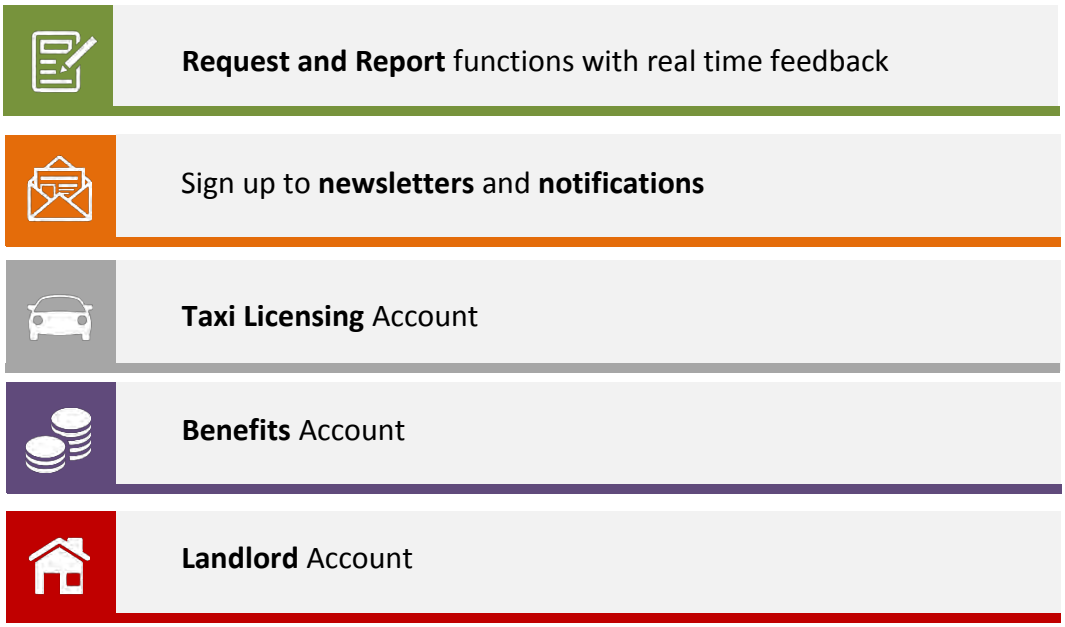
The provision of **24/7 chat** on the website – approximately 1300 chats per month and growing	✓
The deployment of **Browsealoud software** to support people with disabilities and those who require translation from English	✓
The growth of **self-service**	✓
A redesigned simple, **mobile-responsive website**	✓
The provision of '**My Calderdale'** Customer Account, delivering personalised digital services	✓



Next steps:

The development and expansion of '**My Calderdale**' as a key channel for the delivery of digital services. In addition to Council Tax, services that will be delivered via the Customer account will include Benefits, Taxi Licensing, Sports, Libraries and Theatre services, and the reporting aspects of Waste, Highways, and Street Care.

Added functionality will include:



- '**My Calderdale**' will be the basis of the single customer account that will enable the Council to efficiently and effectively manage customer information. It will include **Tell Us Once** principles in relation to changes a customer is reporting to us.
- **ID verification software** will be implemented, enabling customers to securely access their own records. This innovative approach to personalised customer accounts will once again put Calderdale at the forefront of digital public services.
- '**My Calderdale**' will present an opportunity to better manage customer preferences and meet our requirements under the General Data Protection Regulations.
- We will be testing automated responses on our **Live Chat** function with a 'chatbot' facility for simple enquiries.

We will use our **library network** to develop our Customer First approach – adding Customer Services as another element of library provision. Our libraries are vital community assets and while the demand for printed books may be declining, this has been more than made up elsewhere, for instance by making available Internet facilities and other digital resources. The use of libraries to deliver customer services will further strengthen them.

Through the library network and in our Halifax Customer First office we will continue to provide assisted digital services, including Universal Support on behalf of the Department for Work and Pensions (DWP). This assisted digital support will enable more customers to self-serve in future.

The new **Central Library and Archive**, opened at the beginning of September 2017, includes:

The Lab

A suite of PCs featuring themed classes at different times of day/week, including Job Club and Code Club

Media Store

Ability to borrow from familiar services (such as DVDs and CDs) and try new ones - with a bank of tablets, an iMac and a 3D printer to sample

I.T. Suite / I.T. Area

Located here is the majority of PCs available to the public, along with a working environment suitable for quiet online study or group-work. PCs provide a Microsoft Windows 10 environment, with Microsoft Office 2016 as standard

Our **Customer Relationship Management** (CRM) system will provide stability and a platform on which to develop future applications. To support this, we will:

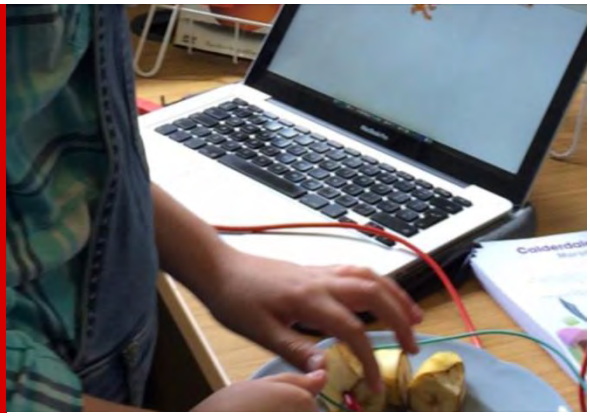
- Continue to pursue customer-focussed and digital-friendly **Process Redesign** methods so that future developments sit well on our platform;
- Further develop our **Demand Management** techniques to help shape demand through shifting channels. This will help improve our services, focus our resources to where they are most required, reduce red tape, and save money;
- **Automating workflow** 'behind the scenes', making links between the various corporate business systems that will allow the sharing of data, working towards enabling customer tracking of service requests to be implemented.

Calderdale Council uses its strong **Social Media** presence (LinkedIn, Twitter, Facebook, and YouTube) to make sure its reach is as wide and inclusive as possible. The Council also uses online consultation to consult on its Local Plan, and other aspects of its work through the Calderdale Engage Consultation Portal.

Code Club is a national initiative founded in 2012. There are about 20 Code Clubs located in Calderdale.

They are aimed at 9-13 year olds, who learn 'Scratch', HTML & CSS, and a programming language Python. The children learn how to make games, animations and websites.

Code clubs will also be run from the Central Library in our Digital Hub.



Designing the Future of Social Care Delivery

With increasing budgetary and human resources being spent on social care, taking advantage of digital disruption is an opportunity that will help transform the lives of our most vulnerable citizens, in the most cost-effective way possible.

Social Care for adults faces well-documented and substantial challenges now and into the foreseeable future:

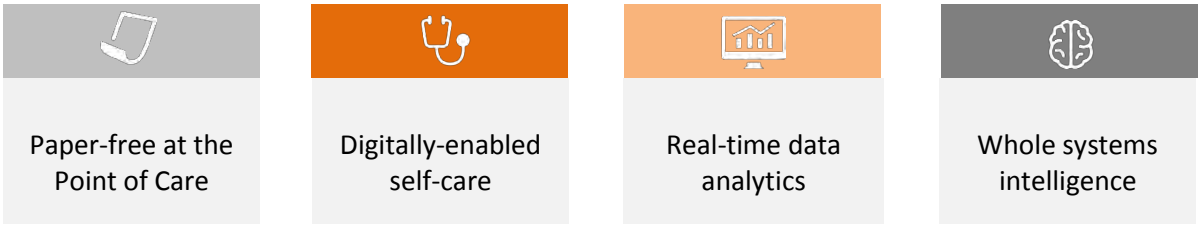
- An ageing population living longer with multiple, chronic conditions
- Greater expectations of independence and wellbeing
- Individuals with learning disabilities whose life expectancy is approaching that of the general population
- A decreasing number of family members who are able to assume the role of long-term carer for their loved ones
- A growing gap between public funded provision and demographic forecasts
- Empirical evidence of substantial unmet social care needs in the community
- The need to use social care to keep people out of hospital
- Today 34% of the Council's total budget is consumed by 1% of the population assessed with social care needs: a figure that is projected to rise sharply.

Our challenges are to support the personalisation of care by:

Using digital to help keep people in their homes for as long as possible, as this leads to higher levels of happiness and better outcomes

Treating people in a holistic joined up fashion, rather than as a bag of symptoms, by further integrating our care systems throughout Adult and Children Social Care and with the NHS

This strategy aligns itself with the intentions of the NHS Calderdale Clinical Commissioning Group **Digital Roadmap**, which adopts these approaches:



The Skills for Care Organisation established **five strategic principles regarding digital leadership:**

- Everyone involved in delivering care and support has the confidence and competence to work digitally and the opportunity to **develop their digital skills.**
- Digital learning is recognised as a crucial part of **workforce development**, and part of a blended approach to learning and development including the achievement of standards and qualifications.
- The potential of digital technology to enhance the lives of people with care and support needs, and that some **people need help to engage with the digital technology** is understood.
- **Digital technologies are used** in the best interests of people needing care and support and at all times **to support** their **choice and independence**.
- **Digital information is shared securely** and transparently and workers, people with care and support needs and carers have confidence in the systems used to store information electronically.

The principle of most interest here relates to using **Digital technologies to support choice and independence**. Care homes as a solution are becoming prohibitively expensive, both for the individual concerned and/or the state to finance them, and is likely to increasingly suffer from staff shortages, as less monies are available to care for an increasingly ageing population.

Our **Social Care approach** is to keep people living at home, **empowering** them to look after themselves and being cared for in their own community by family, friends and neighbours, promoting **independence** and offering i**nformation** and **choice**, allowing people to control their own destiny.

The digital solution for addressing our Social Care needs in Calderdale is focussed on providing and promoting the **self-serve** facility, as part of a move away from 'provisioning' and towards 'signposting'.

This is centred on developing how people access care services, the aim being to provide a one-stop shop for all social care needs, in an online solution. This will enable residents to manage their own support, control their budget, manage their account, and talk to others. It will include help and advice to assist people in identifying suitable care equipment and where to obtain it for themselves. The site will also be promoted to **'self-funders'**, who want information, but do not see themselves as requiring the fullest levels of provided care. The site will also use **'chatbots'**, when they are advanced enough to deliver a level of service that is consistent with more traditional methods.

We are also exploring the use of sensors in the house, as part of an **Internet of Things** approach to delivering care. This is part of the strategy to keep people living, and active, in their houses for as long as possible. These **sensors** could include bed sensors to detect night-time movement, or those that monitor fridge, kettle and door use, such as those developed by MyAmego and other providers.

Two fundamental components of the Roadmap approach are **integration** and **information sharing**. Our Council has developed its major Social Care systems in-house. These are CASS (Children's Assessment and Safeguarding System), and, for Adults, the CIS (Client Information System) – the latter now being developed jointly with Leeds City Council. This gives us an opportunity to address both integration and information sharing into our software plans.

We will do this by:

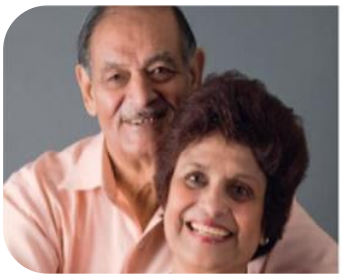
Continuing to strengthen the **Client Information System partnership** with Leeds City Council to ensure that we continue to provide value for money by concentrating on the highest value developments and maximising development resources through agile working

Maximising the **functional benefits of the Client Information System**, ensuring that there is a robust business case for developments and effective prioritisation of work

Providing a **Shared Record** – a centralised resource where authorised people (the individual, social workers, clinicians, GPs, community nurses, hospital staff, paramedics, physiotherapists, care workers, etc.) can view all or parts of a person's case notes and medical history, personal wishes, next-of-kin, professional contacts, etc.

Continuing the **integration of Council systems with NHS Systems** where opportunities are identified to strengthen joint working with our colleagues in Health

Ensuring that our **technology stack** is up to date for continued compliance with information security standards within the Council and our partners in NHS Digital




What difference this will make to:

Residents

- My Calderdale Customer Account
  - Personalised, easy to use account
- Social care – helping find solutions that more people who need care can afford
- Website:
  - Mobile responsive – easier to use for those whose only web access is through a smartphone
- New library:
  - Increases access to and familiarity with digital resources
  - Digital resources more widely available
  - Internet available for those unable to access or afford it at home
  - Self-service gives users more control

Businesses

- Improved employment prospects
- Improved access to Council Services on website
- Library can be used as a digital resource centre

The Council

- Easier service delivery through citizen account
- Digital facilities breathing in additional purpose for our new library
- Use our social media to deliver our messages to a wider audience
- Continue to integrate council system with NHS systems to strengthen joint working

Bobbie

Bobbie is our fictional character who represents how the Council could help a Calderdale Citizen

- Skills training helps Bobbie take advantage of digital opportunities
- Online Social Care facilities makes looking after aged parents easier for Bobbie
- Bobbie's parents can take advantage of the Browsealoud website software
- Bobbie's youngest child is looking forward to attending his first code club at the new library

Calderdale Council

BUILDING A SUSTAINABLE FUTURE

The ability to deliver services in an efficient and timely fashion depends on the ability of the Council to organise diminishing resources with greater precision. To this end we need an organisation that is primed and focussed on delivering its outcomes. For our technology stack to reflect this aim, it needs to be both resilient and adaptable. We also want our workforce to feel competent using and exploiting digital technology in their work environment.

Building the Right ICT Infrastructure

Guiding principles

Systems accessible anywhere

Built around the user and simple to use

Data shared between applications – tell us once/single source of truth

The ability to work on any device or browser – Platform-agnostic

Supports partnership working

Recent Progress

- Our Smarter Working programme has delivered VDIs (Virtual Desktop Interface) and collaboration tools within modern town centre office accommodation for our staff. This offers flexibility and innovation in our working practices, allowing us to make better use of resources
- We have provided Wi-Fi in Council-owned buildings and libraries

Infrastructure – The Calderdale Platform

It remains our ambition at Calderdale to develop an innovative, lean and efficient **ICT infrastructure** capable of delivering Council and customer requirements, using technologies that will enhance service delivery, simplify access, and improve the customer experience – by making internal and external services simple, easy and pleasurable to use.

Infrastructure Network

Our membership of the Yorkshire and Humber Public Services Network **(YHPSN)** will give us a platform for re-procurement of the Council Wide Area Network **(WAN)** and will help establish better digital connections and links to our public sector partners. It is essential that any solution allows staff to work anywhere and more effectively with partners, and for partners to have the same experience when working with us. This initiative is part of promoting shared infrastructures and networks and to allow sharing information and accessing systems securely.

The YHPSN will create an environment whereby anyone from any member organisation can work in any of the govroam connected buildings. This will become critical in order to provide joined up service delivery and will pave the way to shared devices beyond the initial shared network. This will bring those delivering services closer to the service user and facilitate closer partner working, providing secure, easy and appropriate access for all officers. This collaboration will lead to economies of scale reducing costs whilst simultaneously bringing more ability to the network, supporting improved service and better outcomes for our citizens.

Hosting arrangements: 'Cloud First'

Calderdale has a **'Cloud first'** approach. The means that any new systems purchased by the Council are cloud-based by default, if it is cost effective to use and 'value for money' is demonstrated. This approach is in line with the Government's Cloud First Policy, and is designed to provide business continuity, flexibility and resilience.

Software

We are committed to continuing our strategic review of how we best deliver our business requirements:

Productivity Suite
Review the main productivity software used by the Council, including the Internet and Intranet, Messaging, Office software, Video Conferencing – and where possible combine into a suite of integrated or compatible products that will improve productivity

Software Architecture (The Calderdale Platform)
As systems are reviewed and renewed as part of the usual best value and end of contract cycles, they will be specified with the intention to be part of a wider whole Council platform – achieving integration and shared data wherever possible – fuelling the potential transformational change, eliminating duplication of data and function

Internal and External **Information sharing**

- Develop a 'single source of knowledge' that can be updated by every colleague
- Work towards simplifying where information is; at the moment it is held in line of business systems, unstructured file stores, SharePoint sites, shared networks, Intranet, and the Internet
- Develop audio/video conferencing facilities

Line of Business Systems Review

As part of the normal best value and contractual obligations of the software cycle, we will review the suitability of our line of business systems regarding business requirements and the ability to support our transition towards The Calderdale Platform.

Calderdale has a long and proud history of developing its own software, and we have highly functional financial, social care and benefits systems, amongst others. The ability to develop our own systems has recently been recognised as a driver for service improvement by OFSTED in our social care provision.

We will continue to evaluate how best we can provide such bespoke software when resources are reducing and demand is rising. We will find the best balance between buying in external software – reducing the need for development of our own systems – and being able to maintain our ability to respond to user requirements. We will examine how best we can make use of and adopt national initiatives such as GDS (Government Digital Service) Pay, Notify and Verify.

The process will identify whether our existing approach demonstrates best value, compared to the wider use of third party systems.

Strategic aims:

The tools and technology we procure will be **easily usable** by any Council colleague – they should be able to build their own functionality, such as updating the Internet and Intranet areas, in products at least as easy to use as Microsoft Word

The **gap** between the ordinary Council colleague and the technology is currently bridged by technology experts – who are a finite resource and a bottleneck to progress. System reviews and procurements will address this dependency

Middleware

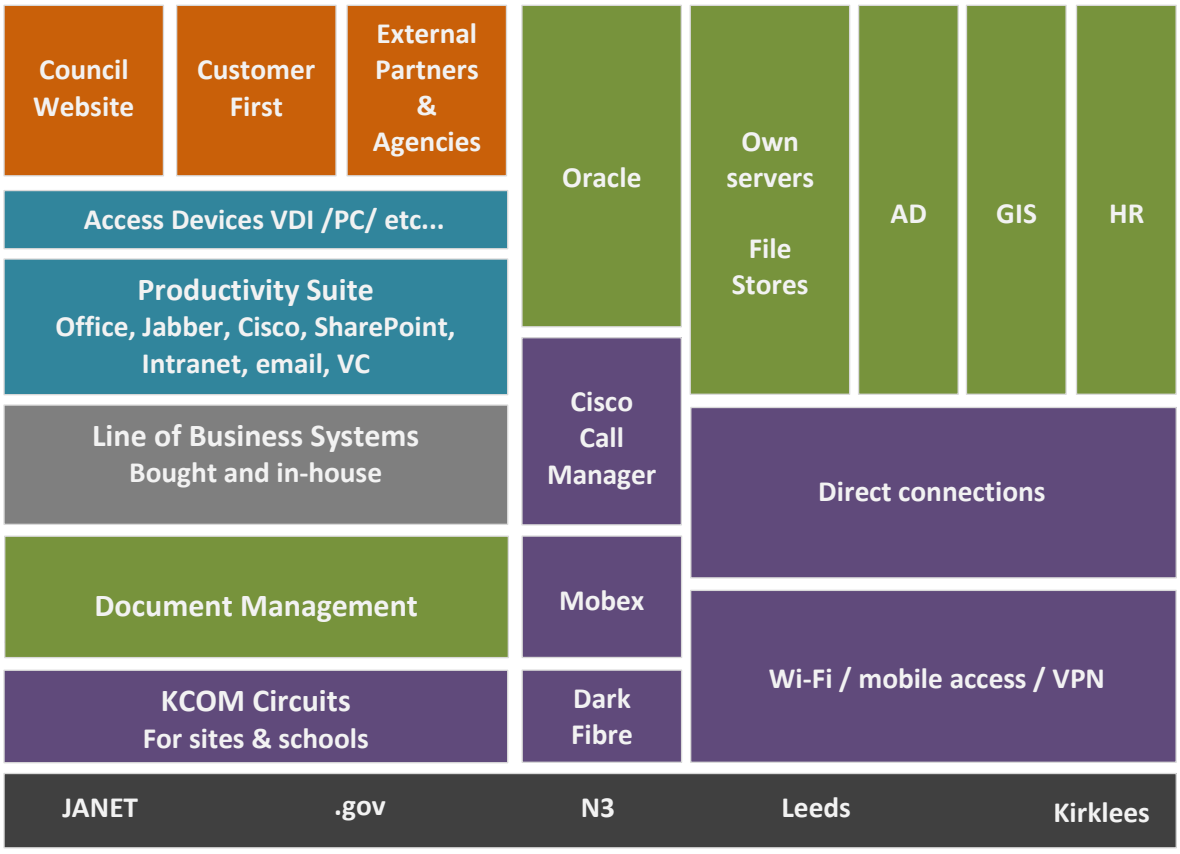
The technology stack used in most large enterprises grows organically in response to business needs over the life of the organisation. Calderdale Council have made some strong strategic decisions in the past relating to core technology products:

- Oracle db – A unified database structure
- VMware – For our server estate allowing us to reduce energy use, lower cost, reduce complexity and reduce management overhead
- Microsoft Server – a solid, scalable and resilient platform for most third party applications
- Citrix VDI – the backbone of Smarter Working

We have a functional and integrated software stack connecting some of our systems, removing the need for manual intervention, and improving customer service and overall efficiency. For example, the CRM links directly to external waste management systems and Highways systems. No manual intervention is required regarding a request for a broken light or missed bin collection.

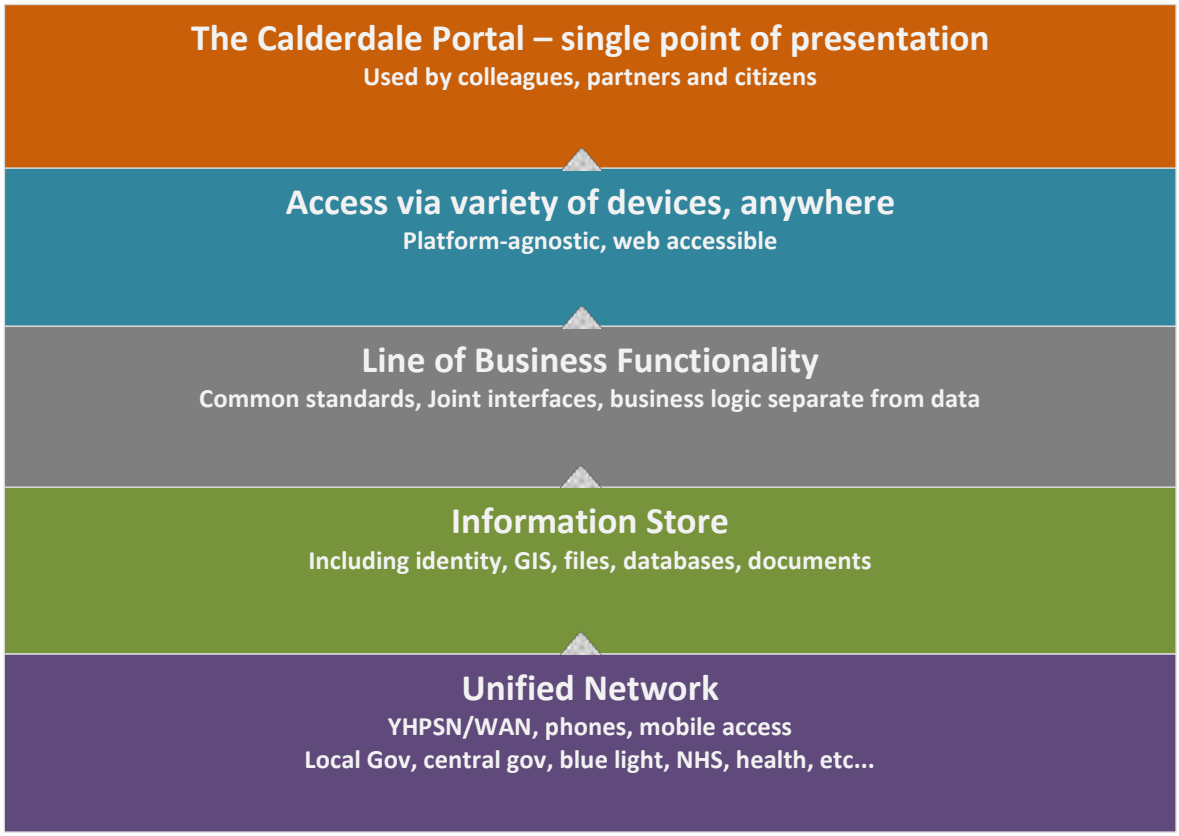
The current Calderdale technology stack (see below) means that disparate systems are linked regardless of the technology used, and that complex functionality has been built in response to a business requirement. However, the bespoke nature of these links makes them relatively fragile and difficult to maintain – and changing a system from one vendor to another can become a major task as integrations are identified, understood and rebuilt. This adds cost to changing systems, and inhibits our ability to respond to and take advantage of market developments.

Calderdale: Current Technology Stack



A single simple technology stack is the ideal and logical way to best deliver the needs of our Council and citizens. But to get there will require a transition – we cannot just stop the business of the Council whilst re-engineering the back end systems. We will, where possible, go forward with GaaP (Government as a Platform) principles.

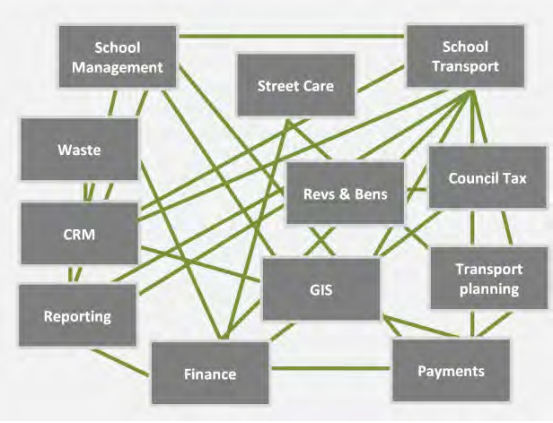
Calderdale: Desired Technology Stack



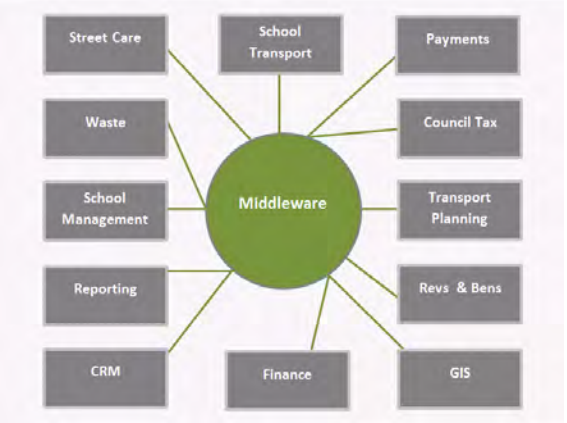
Middleware provides a single platform to unify systems and to manage messaging – allowing interactions between systems to be clearly defined and interfaces understood. This will greatly support system integrations and enable the Council to replace systems, as the integrations will be much simpler. In order to achieve best value and be more agile, middleware will widen the pool of people who can manage and build integrations between our systems. This will reduce manual intervention need and costs, whilst improving responsiveness and service to the citizen.

A visual representation of the benefits of Middleware adoption is shown below:

Before



After



Resilience

Business Continuity and Disaster Recovery

Keeping 'the lights on' – i.e. maintaining business continuity, is the first job for an ICT service. The vast majority of Council work is either directly or indirectly dependent on systems being available. Our main point of contact with our citizens is our website and the services provided through it. Failure to maintain these services will have a detrimental effect on the Council, both in terms of finance and reputation, in addition to negatively affecting our citizens.

We have robust and proven contingencies and plans for the loss of the ICT provision and other key ICT assets. These focus on restoring access to priority systems and services along with maintaining a secure control environment. We are taking steps to improve resilience and minimise risk, by working with neighbouring councils to ensure that we have reciprocal disaster recovery arrangements. Reasonable steps will be taken to reduce any potential downtime, and this is reflected in our Disaster Recovery plans. Calderdale Council Cabinet (10th July 2017) has cemented this approach by agreeing to share its resilience with neighbouring Bradford Council, promising:

> ***"…the adoption of a shared core data centre service solution with Bradford Council to increase the resilience of the Council's existing set up and enhance our ability to divert to another site in the event of a major systems outage. This includes networking and communications capabilities."***

Cyber Security

As often highlighted in the media, attacks on large organisations' infrastructure involving ransomware and other malicious threats show us the importance of maintaining a high degree of vigilance in protecting the Council against cyber-attacks. This covers all aspects of protecting our networks, computers, software and data against attack, damage or unauthorised access. It is now common practice to protect ourselves against email scams and viruses that attempt to breach the Council's defences (over 1,000 such virus attacks a day, 10,000 emails blocked daily).

We will continue to take all measures necessary to ensure that our systems are appropriately resilient and that there are robust arrangements and procedures in place to ensure service continuity in the event of a failure. This includes linking into the strategy produced by the National Cyber Security Centre (NCSC), which opened in February 2017. This key strand of work will place serious focus on a critical area of ICT and ensure that steps are taken to make certain that our digital infrastructure is not exposed to a cyber-attack.

A vital part of our approach to Cyber security is to inform our internal staff of the risks, and to persuade them to remain vigilant. Our Contracts and Compliance Team, who are responsible for Cyber Security, have launched an ongoing internal awareness campaign, through emails, intranet pages and the like, to increase awareness levels. We have appointed an in-house cyber-security champion, as referenced in the national press.

Data Storage and Access

Our data currently lives in many different systems, leading to repetition, potential inconsistencies and difficulties in building 'one version of the truth'. We are working towards removing this repetition and to have a single data layer. A single query-able data layer will allow us to bring order to our data storage repository. Initiatives such as 'tell us once' will be much simplified by this, as will the pressure to meet our obligations under information governance regulations such as GDPR. We want our data to be searchable by any relevant system, and to take advantage of the opportunity, where and when permissible, to share data with our partners as part of a drive to improve collaboration.

The work towards this simplification should make use of wider standards to facilitate this interchange of data, together with the adoption of wider government schemes such as GDS Verify. It will also help support colleagues in being able to develop functionality, write reports and make use of data by having simpler development tools. We will promote the adoption of common information exchange formats in order to link existing systems to each other.

The Procurement Cycle

In order to continually demonstrate **best value** and fitness for purpose, we undertake regular and routine reviews of third party contracts, assessing them for their suitability for **self-service**, accessibility, their focus on the customer journey and integration with existing software.
We place Digital at the heart of our **technology procurements,** including those for:

- Network Infrastructure
- Servers
- Electronic document records and management systems
- Third party systems
- Licensing
- Software refresh
- Managed print
- Telephony and Mobiles
- Application software

When commissioning, procuring or redesigning for online transactional services, we will ensure that new systems are sourced through Government Frameworks where appropriate; that we use **open formats for storage and retrieval** and comply with **Digital by Design** and **Open by Default** standards. When meeting our Waste Electrical and Electronic Equipment (WEEE) obligations, we will, where possible, recycle our redundant equipment locally to support community initiatives.

Digital Democracy

We are planning to broadcast (webcast streaming) initially full Council, and subsequently Cabinet and Planning Committee meetings, by the end of 2017. Further expansion is dependent on appetite and budget, with the potential to exploit commercially the technology within our Grade 2* listed Town Hall building for conferencing and maybe even weddings. We are conscious that for many, watching a stream, whether live or on 'catch-up', will be one of their few points of direct contact with the Council, and we may look into the possibility of two-way interaction with the public in the future. We already stream funeral services from our crematorium for those unable to attend in person.

The 2020 Task Force

In 2010, Calderdale Council bought the licences for many of the main software products (Microsoft suite) and core hardware (VDI, desktops, PCs etc.) that support the main business of the Council. This has enabled the Council to use these products with minimal further outlay, and save significant monies since 2010. However, these arrangements are either coming to an end, or the software is no longer supported, presenting a security and continuity risk.

Whilst Calderdale has benefitted from this period of 'free motoring', it has always been the case that by 2020 we will have to replace and purchase supported and acceptable versions of this software. It is now necessary to consider what options are available to the Council, in order for it to continue providing the appropriate infrastructure for its business.

The Smarter working buildings in Halifax, and the wider out of Town Centre Strategy have made efficient use of VDI (Virtual Desktop Interface). This provides a low cost and 'no-touch' support model and a consistent IT experience throughout our buildings for our staff.

Right tools for the job

- Desktop devices
- Telephony
  - Mobile and Fixed Devices
- Servers
- Licensing of Microsoft Products
- Productivity Suite- Office
- VDI
- Call Centre Systems
- Video Conferencing
- Instant Messaging

Whatever technology and products are chosen to replace the core Council ICT need, they will:

24	**Support** effective business operation
	Be demonstrably **cost effective**
	Provide **flexible** working and support potential external partners
	Be **easy** and **cheap** to maintain
	Work in an open way and comply with government standards **(GDS)**

	Fit into a **wider context**, such as interoperability with health
	Exploit **new technology** where it will provide a better service at a lower cost
	Fit the plans for an integrated **technology stack**

To co-ordinate and control these activities, a 2020 programme board will be formed to oversee the ICT activity and to co-ordinate the multiple projects. This will reduce unnecessary repetition and exploit synergies in technologies, in order to make best use of collaborative software.

Whilst we recognise the potential benefits of many new technologies, the judgement on whether to adopt them remains a primarily business, not technology decision. Where additional costs will be incurred, business cases will be proposed to Corporate Leadership Team (CLT) or Cabinet for decision whether or not to proceed.

Delivering the Future Council – Staff

For us to have a truly effective organisation, our people need to have the skills required to take advantage of the opportunities presented by digital innovation.

"…it is predicted that within 20 years 90% of all jobs will require some element of digital skills" *gov.uk Digital Strategy 2017*

We will build the digital skills of our workforce and Councillors to ensure that we continue to grow with our modern and changing environment. In this way we will remain open to considering how technology can improve service delivery and outcomes for the people of Calderdale. To help us achieve this we will facilitate flexible learning that can be adapted to suit our varied workforce and aim to maximise digital inclusion in the workforce. Our aim is to ensure that as we move forward, no one is left behind.

Our staff live in the same communities that we seek to support, and they interact with the world, with each other and other organisations by using an ever growing variety of methods – digital or otherwise. To enable our organisation to move in sync with the needs and expectations of the people of Calderdale, we need to recognise and role model the behaviours of effective digital leaders and enable our staff to adopt the skills, attributes and talents of 21st Century Public Servants.

Our leaders are encouraged to challenge and be challenged, to explore the possibilities that technology can offer and question "what is the right solution?", to collaborate widely and seek good practice from the private, public and third sector. Digital leaders have a vital part in breaking down the fear barrier by actively demonstrating their own practice and allowing for experimentation.

We have created a **Digital Literacy Framework** to develop a human digital infrastructure, designed so that staff can equip themselves with basic digital skills and so we can work to overcome the barriers to digital inclusion: skills, access, motivation and confidence. This includes a digital development programme of **bite-sized workshops**, lasting no more than 45 minutes each, which cover all aspects of basic digital skills, including:

- Online collaboration, including trialling products
- Community forums
- Digital marketing
- Social media use
- Online privacy and security
- Web writing
- Training in MS Office and Email
- Awareness of cyber security issues
- Making use of data – upskilling staff in the use of data to improve evidence based decision making.

Our **Pathfinders,** and **Face-to-Face with I.T.** programmes, provide online tools, drop-in sessions and referrals to help our staff to raise questions and find solutions on a one-to-one basis for themselves or their teams on a range of topics from help on understanding data better, to developing IT skills, improving processes, reducing duplication, how to save time and how to improve data quality and security.

We will collaborate with local and national partners and take advantage of quality resources to better support our workforce in gaining digital skills.

We have signed up to **Barclays' Digital Wings** to provide our people with the resource to work at their own pace, on any of the available topics – at work or at home. The same resource is also available to Calderdale citizens through an easily shared link.

We are working in partnership with **Calderdale College** to develop digital links that are of mutual benefit, including working with students to create videos for our internal communications. This digital partnership provides work experience for the students and refreshes staff knowledge with the latest in digital developments.

Smarter Working practice, encouraged across the organisation, seeks to enable our people to work in the way that best fits service delivery. We will support and promote the use of technology to allow for responsive, flexible and effective working. Our digital approach will continue as part of regular staff development, so that we can embed digital skills throughout the organisation. The Council also supports the "Best Companies" initiative, aimed at improving workforce engagement levels where we are ranked as **'One to Watch'**.

Building a Smarter Borough

Digital technologies are being created and deployed that support and crosscut all our Council's work. Our services are becoming delivered online through our website and My Calderdale account. Social care is being signposted online through our access to care services. Digital connectivity is underpinning our economic development. Our Council is becoming increasingly mobile, with more staff being able to work from any location, with systems available where and when needed. Data, previously siloed, is now being opened and made available for the analytic processes, enabling new connections and informed decisions about service provision. Now the Council is exploiting emerging technology to further develop our digital progress.

The Council is supporting projects using **LPWAN** (Low Power Wide Area Network) / **LoRaWan** (Long Range Wide Area Network) low powered sensor technology to measure and transmit small packets of data. The use of sensors is the essence of the Internet of Things (IoT). Taking advantage of IoT technology will help us to redesign smarter public services around citizens and businesses. In Calderdale our approach to sensor deployment is environmentally focussed - with our main concerns being to provide early warning of potential flooding, and to monitor air quality – one of the biggest threats to health in our valley. Both of these projects will help ensure the long term sustainability of the borough. The Council has engaged with a local company, AB Open to find sites to host such sensors locally to monitor water levels.

Automation

The use of **Robotic Process Automation** (RPA) is taking the routine out of computer processing. Essentially intelligently structured pieces of operational software code, they play a variety of roles that emulate some or all of the interactions that a human being might have with an application, computer service or wider network. It involves automating existing processes wherever it is possible to do so, potentially saving time and money for the authority.

Automate repeatable tasks

Algorithms are used to solve problems

Works with existing IT systems

Sits alongside existing infrastructure

The use of **Artificial Intelligence** (AI) combined with **machine learning**, will help automate simple decision making. AI can be used for high-volume, low-complexity transactions, and free up officer time for dealing with more complex queries. One example of this is the planned use of 'chatbots' to complement our website's 'Live Chat' functionality, effectively meaning an intelligent customer listening tool could answer simple questions and signpost an end user to information without necessarily leading to a human intervention. Within the context of wider customer contact optimisation it will play its part in striking the right balance between self-service, assisted service and contact centre activities.

Emerging technology - streetwise

We are currently renewing all our lampposts in Calderdale. This is a major project involving over 30,000 lighting columns. Given that these objects are **tall, static,** and **powered**, they lend themselves to a variety of possibilities, which we are investigating. These include the possibility of Wi-Fi deployment – Wi-Fi in street lamps can dovetail into transmitting packet data like LPWAN – and sensors to detect movement that will dim/light up according to need. We are even examining the possibility of using these columns for electric car charging and of using parking sensors to make available information relating to free parking spaces.

Digital Connectivity – filling in where Superfast Broadband does not reach. We are working with EE on a mast pilot at Luddenden Dean offering an innovative 4G solution.

What difference this will make to:

Residents

- Will benefit from faster service, a more responsive Council
- Services provided cheaper
- Services easier to access – Multi Channel
- Early warning for floods – air quality monitored
- Wider availability of Wi-Fi
- Code clubs helping young residents learn digital skills
- Use of sensor technology will enable people to live at home longer

Businesses

- Benefit from access to full fibre network
- Deployment of Internet of things will open up new business opportunities

The Council

- Deliver a technology stack that will:
  - Link all our services together
  - Automate and speed up data processing – giving faster and more accurate service delivery
  - Hold one, verified, set of details for each citizen
- Exploit Internet of Things technology to provide long term data monitoring water levels and air quality
- Make use of emerging technology to improve traffic management – street lighting, parking etc.
- Automate processes as much as possible, reducing costs and delivering services cheaper
- Ensure we use internal systems providing best value for money, integrated with other systems in a future-proof fashion
- Ensure our staff are fit-for-purpose for this digital age
- Share information and processes with partner organisations
- Through Disaster Recovery and Business Continuity plans – a more robust organisation that will keep delivering services in adverse situations

Bobbie

Bobbie is our fictional character who represents how the Council could help a Calderdale Citizen

- Bobbie and her family benefits from a joined up Council that is aware of her preferences regarding all aspects of their interactions – allowing the Council to collect and collate data pertaining to Bobbie's family, and to allow that information to be used in a mutually beneficial fashion.

Calderdale's Digital & ICT Strategy 2018-21 was designed, written and illustrated by the ICT Strategy & Commissioning Team (Lee Harkis, Jaye Cozens and Faye Hackney)

Digital and ICT Strategy 2018-21 Glossary

Automation	The process whereby repetitive or predictable tasks are done by a computer programme
AI	Artificial Intelligence
BID	Business Improvement District - we have one in Halifax town centre, after local business voted to create one
Broadband	A fast way to access the internet (compared to the old 'dial-up' method using modems). This comes in a range of frequencies: fast, superfast, and now ultrafast – depending on the speed of delivery. As internet use is becoming more ubiquitous, faster and faster speeds are required to keep up with demand – such as streaming High Quality (HD) films.
Business Continuity	Doing whatever it takes to ensure minimal (if any) interruption to staff using IT to do their day-to-day work
Chatbot	This is a computer programme that aims to simulate live-chat interaction with a customer. Works best with simple or repetitive questions.
Channel Shift	The process whereby we try and persuade customers to do business with us online, rather than face-to-face or by post or via the telephone, as it is by far the cheapest form of access.
Citizen Facing Dashboard	Interactive citizen facing dashboards allow you to interrogate data – for example to view current performance, election results, budgets, and complaints
Cloud Computing	A collection of interconnected IT services and infrastructures that is accessible via a network – most commonly the internet. This effectively means that your data is hosted by a third party that will securely hold it and make it available for business or private use. Its use is widespread and growing, and it allows for easy access to data irrespective of location. Such a service is usually provided at a cost, and increases dependency on a reliable internet connection, though the way it is held may make it safer from destruction, damage or loss. Because of the world wide nature of Cloud Computing, sometimes specific rules cover where sensitive data is allowed to be hosted.
Cloud First	Choosing to use the cloud to host services, rather than 'on-premise', as a default position
Connectivity	Access to the Internet
CMS	Content Management System – how we organise and maintain information on our website
CRM	Customer Relationship Management - the software through which we interact with our customers online
CSS	Cascading Style Sheets – describes how HTML elements are to be displayed on screen, paper, or in other media
Cyber Security	A generic term covering all aspects of protecting our data and systems from outside attack
Data Analytics	The science of analysing data with the intention of using its findings to support other projects' work
Data Centre	This is where computer systems are housed. PCs and devices throughout the Council connect to it via the Wide Area Network.
Data-Driven culture	This describes an environment where the analysis and use of Data drives business decisions. This is becoming of increasing importance as more and more sophisticated data is being recorded and shared.
Data Sharing	This is the practice of sharing data with partner organisations to improve the understanding of how it can be used to improve services
DCLG	Department for Communities and Local Government
Desktop	The 'traditional' Personal Computer. Now being supplemented by VDI

	desktops, Laptops, tablets and smartphones
Digital Inclusion	This a term covering efforts to make sure that all members of society are supported and encouraged to take up the opportunities presented by digital, and that those who are unable to helped so that they are not disadvantaged.
Disaster Recovery (DR)	A technical solution that can be invoked to restore computer systems after a catastrophic failure
ETL Technology	Extract, Transform and Load – The process of taking data from one database, doing something to it, and presenting to another database for further use
GDPR	General Data Protection Regulations operating from May 2018
GDS	Government Digital Service –the Government's Digital operations
GovRoam	National Roaming Wi-Fi Initiative – Secure Wi-Fi that the public sector can use to carry out its business
Hot-desking	Involves one workstation shared between several people who use the facility at different times.
HTML	Hypertext Markup Language – the standard language for creating web pages and web applications
ICT	Information and Communications Technology – also interchangeably known as I.T., the C was added to reflect the importance of Communications as being integral to I.T. delivery
Infrastructure	The framework of physical and virtual computing resources required to deliver IT requirements in an organisation
IoT	The Internet of Things (IoT) is a system of interrelated computing devices, mechanical and digital machines and objects that have the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction. Examples are sensors that can be deployed to monitor, record, and transmit river levels as early flood warnings; sensors that can monitor when bins need emptying; sensors that monitor vulnerable people who may require assistance. Soon IoT will be everywhere and a normal part of daily life.
LoRaWAN	Long Range Wide Area Network – used to transmit data as part of an Internet of Things network
LPWAN	Low Powered Wide Area Network - as above
Mobile-responsive	Designing web pages so that they are easily viewable and usable on smartphones, tablets etc. Originally web pages were designed for desktop computer use and were too unwieldy for reading on small devices. Now, the internet is more likely to be device accessed by a small device – so the way information is presented has had to change
ODI	Open Data Institute
Online Chat	In this context, the ability for customers to communicate with service advisors by typing messages to each other over the internet
Open Data	Data that anyone can access, use, republish and share without restrictions. Calderdale is committed to being open by default by publishing data on Calderdale DataWorks website wherever possible unless there is a good reason not to.
Packet Data	The process of transferring data in small chunks over the internet and mobile phones
Pathfinders	An internal group of Calderdale staff who bring together expertise from a range of services to help Calderdale staff understand data better, develop IT skills, improve processes, reduce duplication, save time and improve data quality and security.
Platform agnostic	in this context it is software written and presented in such a such a fashion that it will work correctly on any hardware onto which it is deployed
PSN	Public Service Network
Sensor technology	Used to deliver the Internet of Things

Smart Lamps	The concept of incorporating digital technology into street lighting columns
SME	Small and Medium Sized Enterprise, organisations employing less than 50 (small) and 250 (medium) staff, with less than a certain turnover
Software Cycle	All software gets procured, bought, and eventually decommissioned and replaced by other software. This is a cyclical process, repeated as necessary
STEM	Science, Technology, Engineering and Mathematics
STPs	Sustainability and Transformation Partnerships – NHS bodies involved in digital transformation work
Technology Stack	Literally the way our technology stacks up – how we organise our layers of infrastructure hardware, middleware and software applications to deliver services
Telecare	Delivering social care online
Virus attack	An attempt to infect a computer system with code specifically designed to attack and manipulate or destroy data held on computer systems
Wide Area Network (WAN)	This is the physical telecommunications network that allows delivery of ICT solutions across a large area. The Internet is the biggest Wide Area Network.
Virtual Desktop Infrastructure (VDI)	This allows users to access their desktop (i.e. all their PC services) from any location, as all their software are held centrally and accessed from wherever the user is located. Since the resources are centralized, users moving between work locations can still access the same desktop environment with their applications and data. It also allows for easier, centralised updates to software and other I.T. services.
Wi-Fi	Derived from the phrase 'Wireless Fidelity', this allows wireless connections to the internet using radio waves. A Wi-Fi-enabled device can connect to the Internet when within range of a wireless network which is configured to permit this. The coverage of one or more (interconnected) access points — called hotspots — can extend from an area as small as a few rooms to as large as many square miles.
YHPSN	Yorkshire and Humberside Public Service Network