Llywodraeth Cymru
Welsh Government

Digital strategy for Wales

How we will use digital, data and technology to improve the lives of people in Wales.

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Ministerial foreword

The term "digital" has many meanings in today's society. It's not just about the computers, tools and technologies that are changing all parts of our lives; it's far bigger than that. It's about taking a new approach.

Digital change has accelerated in recent years and now offers us a range of new tools for solving old or novel problems. In essence, digital offers the potential to make our experience of the world better: enhancing people's lives, strengthening the delivery of public services and the work of government, as well as helping businesses to adapt to the future.

I previously chaired an expert panel for the Welsh Government to look at how we could harness the power of digital to improve public services. Our **System Reboot report** put it like this:

> " "digital change isn't just about technology, it's about a change of culture. It's about being open. It's about using data to solve problems. Instead of designing services from the viewpoint of what organisations think a citizen needs, a digital approach involves designing services that meet the needs of the end user" "

The purpose of this Digital Strategy for Wales is to take a look ahead and set out a national vision for jointly adopting a digital approach across Wales. I want to ensure people in Wales experience modern and efficient public services supported by good, ethical, use of data. I want to stimulate innovation in our economy and support businesses to develop the resilience they need to succeed. I want to provide the people of Wales with the confidence they need to engage in their communities and in modern society. I want learners of all ages to have the knowledge, experience and skills to benefit from an increasingly digital and changing economy.

The Covid pandemic has demonstrated the importance of digital in delivering modern services at pace. We have seen digital acting as a major catalyst in adapting to the challenges we have faced. We need to continue with this agile and responsive mind set as the norm and not the exception.

Over the past couple of years we've made huge strides in developing the ecosystem for this transformation to happen. We've launched and invested in the Centre for Digital Public Services. We've appointed new Chief Digital Officers for Local Government and Welsh Government, with one to follow for Health. My Ministerial colleagues and I have invested significantly in Digital Health (£75 million), our Hwb EdTech programme (£92 million over the last two financial years and £15 million this year), Digital Infrastructure (£26 million), digital support for business (£2 million), the Centre for Digital Public Services (£4.9 million) and Digital Inclusion (£2 million).

Let's keep this momentum going, improving our skills and safeguarding Welsh

jobs.

I am passionate about digital, about making life better for the people of Wales and supporting the resilience of Welsh business so that collectively we thrive as a nation. We have come a long way but there is certainly a lot more do be done. This strategy and its accompanying delivery plan is just the start.

Lee Waters MS, Deputy Minister for Economy and Transport

What this strategy is about

Who is this strategy for?

This strategy is for all of Wales. It is aimed at anyone creating, designing, providing or using digital tools and services. It identifies a series of priority areas under six missions which, when taken together, aim to accelerate the benefits of digital innovation for people, public services and across our business community.

It is designed to focus change across Wales and brings together the collective efforts of local authorities, academia, community councils, health boards and trusts, education providers, fire and rescue bodies, arms-length bodies, third sector and social partnerships. It sets out how together we will design and implement better public services, develop the economy and reduce inequalities.

This strategy will deliver the benefits of digital to the people, public services and businesses of Wales.

Accountability and leadership

We, the Welsh Government, have a clear leadership role in delivery of this strategy, but we will not deliver the step change needed across Wales on our own. The ambition described here can only be delivered through partnership working, collaboration and coordination; breaking down existing silos in order to support delivery.

From a public services perspective, the Chief Digital Officers in the Welsh Government, Local Government, Health and Care alongside the Centre for Digital Public Services will support delivery across Welsh public services. The Centre will also have a role in helping to monitor progress and reporting on this strategy.

Delivery and Action

We have identified six missions in this strategy and will continue to engage across sectors and stakeholder groups to make sure we get our priorities right and respond to changes during the strategy's lifetime.

To make this a reality we will take a delivery focused approach. That is why this strategy is accompanied by a delivery plan with the actions that will achieve the vision set out here. We know that much of our ambition requires a change in culture and many of our outcomes will only be achieved over the long-term. Our delivery plan will therefore be pragmatic in highlighting what we expect to deliver in the short-term to support our progress, alongside long-term ambitions.

Future Generations

This strategy will contribute to our progress towards the national well-being goals. We know that embracing digital innovation can lead to greater economic opportunities and a more prosperous and resilient society. Equipping people with the digital skills they need and designing services around the user will also improve social cohesion, create a more healthy and equal society with well-connected communities and contribute to a thriving Welsh language.

Through supporting remote working, designing public services effectively, using data smartly and modernising the technology we use we can support our ambition to reduce carbon usage (although we will need to continue to consider the net effect of driving up data usage).

Achieving real digital transformation of public services provides an opportunity to support the ways of working described in the Well-being of Future Generations

(Wales) Act. Joined-up digital public services will be delivered through collaboration and integration. Good engagement will support the design of user-facing services that prevent inefficiencies and inconsistent experience for the citizen. Designing services in an iterative, agile and user-focused way will ensure services are designed for the long-term.

Our approach

In developing this strategy, we have shared our thoughts and progress and listened to feedback. We published an **online blog** about each of the proposed missions over a two month period and invited feedback. We also engaged broadly with a range of stakeholder groups and forums, including representatives from public services in Wales, members of the Wales Race Forum, businesses and representative trade bodies, children and young people and people with learning disabilities.

We are grateful for the range of comments we received on the blogs, responses via the online form, feedback on social media and views given at engagement events. Taking this approach has allowed us to test our thinking and crowd-source ideas from a wide range of people in order to identify our priorities. People have engaged actively in the process and we have adapted our thinking before publishing this final version of the strategy.

Overall, the wide ranging dialogue has reinforced that our vision and ambitions are well supported from across the public, private and third sectors in Wales. The key themes which were raised repeatedly are digital skills, digital inclusion and digital connectivity. We recognise that skills, inclusion and connectivity are integral to every mission in the strategy and to achieving our ambitions. Our aim is to ensure that people have the connectivity they need, are confident and motivated to make best use of digital technologies in their lives and can develop their skills so that they can take full advantage of digital opportunities in the workplace.

Digital vision

The outcomes in this strategy and the actions in the delivery plan are driven by a clear vision of what we want to achieve in Wales. This vision is:

Digital in Wales: improving the lives of everyone through collaboration, innovation and better public services.

Six missions support our vision:

Mission 1: digital services

Deliver and modernise services so that they are designed around user needs and are simple, secure and convenient.

Mission 2: digital inclusion

Equip people with the motivation, access, skills and confidence to engage with an increasingly digital world, based on their needs.

Mission 3: digital skills

Create a workforce that has the digital skills, capability and confidence to excel in the workplace and in everyday life.

Mission 4: digital economy

Drive economic prosperity and resilience by embracing and exploiting digital innovation.

Mission 5: digital connectivity

Services are supported by fast and reliable infrastructure.

Mission 6: data and collaboration

Services are improved by working together, with data and knowledge being used and shared.

Mission 1: digital services

Deliver and modernise services so that they are designed around user needs and are simple, secure and convenient

To really improve public services we must design them around the needs of the people who use them.

Joined up, effective public services designed to meet user needs must become the norm. We will work to **a common set of standards** and service patterns - meaning that people will be able to easily access the services they need, when they need them, especially when they are at their most vulnerable.

We also recognise that user centred design is essential in providing more accessible and inclusive services, eliminating barriers that prevent people from being treated equally. Designing public services around user needs will deliver better outcomes for all. For example, our commitment to the social model of disability can be reinforced by designing services around the people receiving them.

We need public service leaders who understand what is possible and how to achieve it, a workforce with the right skills, and people who are confident in digital ways of working. This will lead to delivery of better, more responsive public services.

We will also build on our commitments in **Cymraeg 2050** and develop bilingual services from the outset, consciously taking decisions that make it easier for people to access better public services in either Welsh or English.

A key element of this strategy, and critical to the delivery of better services, is

the role of the **Centre for Digital Public Services** (CDPS), launched during 2020. The CDPS is fundamental to our plans to improve capability, embed consistent digital service standards and support public services. It is already sharing good practice in improving public service delivery, and, crucially, offering practical help and training to design services based on the needs of the user.

As part of this we will need to revisit our current systems, platforms and services, ensure they are developed to be built on modern and secure technology, are designed around user needs, and developed openly through modern ways of working.

As well as providing high quality public services they need to be safe. Therefore it is important we use the same principles of leadership, collaboration and shared learning across the public sector on cyber security, and taking forward our Cyber Action Plan.

Below is a description of our ambitions and the outcomes we want to achieve.

Together, we will:

- design services based on user need, insight and data
- create environments where public service leaders understand digital and support their organisations to adopt it
- deliver services that meet a common set of service and design standards
- embed accessibility standards across all services
- work with the users of public services to design services, continuously improving based on feedback so that digital is the preferred choice
- create a culture where providing a frictionless digital user experience is the norm
- ensure digital public services are safe, secure and trusted
- transform our approach to developing digital solutions in the public sector to more open and agile ways of working

Outcomes:

- services will be available online wherever possible

- people will choose to use digital services because they are easy and convenient and can be completed successfully, first time, unaided
- people will be able to access high quality services in Welsh and English because they are designed bilingually from the outset
- data will be used ethically to develop insight about public services, improve decision-making and identify opportunities to do things better
- websites and services will be built to be open and accessible by third parties to provide seamless services
- services will have a consistent 'look and feel'

Mission 2: digital inclusion

Equip people with the motivation, access, skills and confidence to engage with an increasingly digital world, based on their needs

Many people use the internet every day to manage household finances, shop online, access public services and keep in touch with loved ones.

There are some people however who do not, or cannot, use digital tools or online services. This can be for a number of reasons - they might have made a choice not to, they may lack motivation and / or confidence, they might not have the recognised basic digital skills, or they might not have access to (or be able to afford) devices or connectivity. This means that they are digitally excluded.

We want people to have the digital confidence to access the internet and enjoy the many benefits offered in a digital world, if they want to. Providing devices or connectivity alone is not the answer. We will engage with people and communities to understand the barriers to inclusion and learn how we can support them to develop basic digital skills and confidence.

Our **Digital Inclusion Forward Look: towards a digitally confident Wales** outlines how we will do this and the priority groups we will focus on. These groups are older people, disabled people, unemployed and economically inactive and social housing residents. The COVID-19 pandemic has also

highlighted newly digitally excluded groups due to changes in circumstances. We want to understand the reasons for this and explore the impacts on groups which have been particularly affected.

When people are confident and motivated to engage with digital, they can enjoy the wider benefits of health, well-being, reduced loneliness and being financially better off through potential savings made through purchasing things online. They may also choose to access digital public services and these must be designed around the needs of users so that they are accessible and provide assistance or support when needed.

For people who cannot, or decide not to, participate digitally, we will continue to apply the principles of user centred design so that there are alternative ways to access public services in Wales. The alternative access routes will be as good as those offered online.

Together, we will:

- learn from people who are digitally excluded so that we understand their needs and the barriers they face
- understand why some people do not want to go online
- provide support to people who want to go online and use digital services
- listen to the needs of people from all population groups or those with limited digital access, basic digital skills and confidence
- understand the reasons for and impact of data poverty and how this might be addressed
- understand the links between digital exclusion, data poverty and financial and social exclusion
- work across public, private and third sector organisations to make sure digital confidence (motivation, access and skills) is recognised as a barrier for people to engage digitally
- provide workforces across all sectors with the basic digital skills, knowledge and confidence to deliver and support people to benefit from digital
- ensure no one is left behind as we embrace a digital first approach, keeping digital inclusion at the heart of all we do

Outcomes:

- fewer people will be digitally excluded
- people will feel more supported and confident in developing basic digital skills and using them
- people will know where to get help to engage digitally
- organisations will design their services appropriately because they recognise a lack of digital confidence can be a barrier for people to engage digitally
- public services can be accessed and used by everyone, either digitally or through other channels
- people feel supported by organisations across sectors in Wales

Mission 3: digital skills

Create a workforce that has the digital skills, capability and confidence to excel in the workplace and in everyday life

Our ambition is for everyone, regardless of age, background, gender and ethnicity, to be digitally included. When people are confident in using basic digital skills, they may then be motivated to develop more advanced and employment focused digital skills. This can open a wide range of opportunities in everyday life and in the workplace.

We want everybody to develop digital skills at the earliest possible opportunity so that they are confident in exploiting the tools and technologies that surround them. Their skills and confidence will also need to evolve with the pace and scale of technology change.

Our **Digital Competence Framework** is helping develop young people into enterprising, creative and critical thinkers by emphasising the importance of digital from an early age. The framework sets out how digital competence is integrated across the curriculum, crucially giving digital the same emphasis as literacy and numeracy.

Similarly, the **Digital 2030 Framework** articulates a shared vision for the approach to digital in the post-16 learning in Wales. It sets out the digital support required for the whole learner journey, recognising that the combined elements of leadership, business processes, security, and infrastructure need to be in place for effective digital delivery.

In recent years we have seen automation and digital innovation accelerating changes in the job market. As the **Brown Review** concluded, these trends are likely to continue, providing further opportunities to free workers up from mundane tasks whilst redefining how, when, and even where we work. With over 80% of the 2030 workforce having left compulsory education, lifelong learning will continue to play an important role in adapting skills to the future needs of the economy and in strengthening the delivery of public services.

The outcomes for this Mission, Mission 2 on Digital Inclusion and Mission 4 on Digital Economy are heavily dependent on one another, emphasising the overall importance of digital skills in the delivery of this strategy.

Together, we will:

- give everyone the opportunity to develop digital confidence and skills from an early age
- make use of digital as a means for enhancing the delivery of learning in Wales
- provide learners in Wales with the opportunity to develop their digital skills to meet the changing nature of work and future jobs
- improve the digital skills of those delivering public services in Wales
- align our employability and skills provision in supporting digital inclusion and meeting the needs of the digital economy

Outcomes:

- people and businesses will be digitally confident and able to take full advantage of the opportunities that digital technologies can offer
- young people will be digitally competent with good prospects for rewarding

jobs
- public, private and third sector organisations have the skills to deliver services based on user need and digital and data skills are valued
- public sector workers in Wales have greater confidence and skills in using digital in the delivery of public services
- employers recognise the value that digital skills and technologies can bring and are investing in the needs of their workforce
- businesses in Wales have access to the skills they need to be able to innovate, improve and grow
- digital talent is developed and retained across public, private and third sectors in Wales

Mission 4: digital economy

Drive economic prosperity and resilience by embracing and exploiting digital innovation

Digital not only provides exciting opportunities for people to develop skills and access services, it plays an important part in the short-term rapid recovery and ongoing longer-term transformation of the Welsh economy. Digital innovation creates new prospects for businesses, attracts future investment and talent, improves job quality and supports the flexibility of work.

Our **Economic Resilience and Reconstruction Mission** sets out our values and priorities on which we will build the resilience of the economy. In support of the conclusions made by the **Brown Review**, we recognise the importance of digital to ensure that Wales' economy remains competitive in a global market while reducing inequality and spreading wealth and well-being across Wales. This includes meeting the dual challenges of the COVID-19 pandemic and EU exit while also helping businesses to identify and realise new opportunities in a constantly changing economy.

Digital innovation offers an opportunity to reshape the future of the Welsh workplace and provide people with more choice about where and how they work. Movement away from a traditional office or 'central' place of work is part of

current thinking about the future of the workplace.

We will support businesses in Wales to accelerate the adoption of digital to work smarter and drive innovation, making sure they are in the best position to take full advantage of the opportunities ahead. This includes working with the startup and scaleup communities who are paving the way in new digital innovations, nurturing their talent and developing the ecosystems they engage with. Areas such as artificial intelligence, machine learning and cyber security hold the key to significant benefits for Wales' digital economy, both domestically and as an export opportunity.

We want to see a coordinated push to drive forward investment in research, innovation and skills, working with industry clusters and academic collaborations to make this happen. This will also be achieved by continuing to provide a solid basis for investment in world-class connectivity and realisation of all the associated potential benefits, as outlined in Mission 5. It will also be critical to ensure we develop the skills foundations outlined in Mission 3 to supply businesses with the capability they need.

To achieve our ambitions around high quality digital public services we need a digital economy that can support our public sector, but also a public sector which understands how they should work with the market to deliver what they need in a responsive and flexible way.

Wales must look ahead in order to develop strengths in the digital trends of the future. The higher education sector in Wales is developing proposals for a Data Nation Accelerator, bringing together its capability with industry and the public sector to fuel innovation in the areas of artificial intelligence and data science. Proposals of this nature can be important to Wales' future ambitions but will require a commitment from UK funders for them to be realised.

Together, we will:

- create an environment in Wales that fosters and develops a healthy ecosystem for providers of digital technologies and infrastructure innovations
- maximise opportunities to exploit new technologies as a catalyst for

investment and to attract new talent to Wales
- support businesses to engage with industry clusters to take up current and future areas of digital innovation and adoption, opening up new opportunities for attracting quality jobs
- respond to future requirements of employers in supporting digital skills development and job transition, particularly from other parts of the economy as further industrial transformation takes place
- work with UK funding agencies and other partners to build new capabilities important to Wales' future, such as in the areas of cyber security, artificial intelligence and data science
- support welsh businesses to ensure they have the necessary digital capacity to support flexible and remote working, helping drive regeneration and economic activity across all sectors and our communities

Outcomes:

- the business community in Wales is thriving, resilient and digitally enabled, with a mixed ecosystem of small, medium and large companies
- businesses are cyber aware and use digital tools and technologies to best effect
- digital innovation in Wales stands out in global competition for new markets and industries and attracts new talent to Wales
- people have the skills and resilience in order to access the jobs of the future
- employers are able to access a diverse and talented workforce when recruiting for digital, data and technology opportunities
- procurement practices and policies support innovation and economic prosperity, allowing businesses in Wales to thrive and we support public sector in working with a responsive market of companies
- people have access to flexible working options, improving their well-being and supporting regeneration and economic activity in communities

Mission 5: digital connectivity

Services are supported by fast and reliable infrastructure

Critical to the delivery of this whole strategy is the underlying infrastructure. This infrastructure is the foundation on which we build good quality digital connectivity to support everything we do digitally.

Digital connectivity and telecommunications policy is the responsibility of the UK Government. These are still reserved matters for which the Welsh Government is not responsible and receives no devolved funding.

This does not change our mission to underpin good quality infrastructure across Wales to support our ambitions. We will invest to support service delivery where there is a case for it, however, we must also focus on ensuring that the UK Government fulfils its responsibilities in Wales.

While the vast majority of homes and businesses across Wales have access to good quality digital connectivity, there are those that continue to struggle with even the most basic of connections. Addressing these issues can take time and be expensive, particularly in rural areas where the terrain is more challenging and the population more sparsely distributed. We also recognise that the affordability of connection can be a barrier to digital inclusion and we need to explore how this issue can be addressed, as outlined in Mission 2 on Digital Inclusion.

Some parts of Wales cannot access superfast broadband while elsewhere the commercial roll out of gigabit broadband is already gathering pace. We will use the levers at our disposal to support the public sector, businesses and homes in Wales receive the connectivity they need to engage in digital activities.

Together, we will:

- work with the UK Government to invest in Wales as a priority
- re-invest funding returned through our superfast roll-out to improve digital

connectivity targeted infrastructure interventions
- build on our Access Cymru Broadband and Local Broadband Fund approaches to step in to a non-devolved area and provide fast broadband connectivity to properties with low internet speeds
- create the right conditions for investment and innovation in broadband and mobile infrastructure
- explore opportunities to drive innovation through a focus on internet of things technologies including through wireless network technologies and 5G
- support the connectivity needs of the public sector and public service delivery in Wales through a collaboration and aggregation of demand to drive best value

Outcomes:

- residents in Wales will be able to access fast and reliable digital connectivity that enables them to work from home, use public services, learn online, stay in touch with friends and family and enjoy entertainment
- businesses in Wales will be able to benefit from fast and reliable digital connectivity to gain new customers, sell their products, drive efficiency and innovate
- the public sector in Wales will be able to use fast and reliable digital connectivity to deliver effective digital public services, enable remote working, drive efficiency and innovation

Mission 6: data and collaboration

Services are improved by working together, with data and knowledge being used and shared

Data underpins everything we do digitally. A key part of our ambition to provide better digital public services has to include the better use of data. It enables responsive and continuous improvement in public services, supports seamless services, enables digital innovation and automation, and informs good decision making.

We want to improve the services provided by working together and make sure that all data is used and shared effectively, has consistent standards, is protected and gets to where it needs to go.

This can include the innovative use of data and data analytics to radically transform the way we deliver public services by delivering new insight. The **ADR Wales Partnership** has already shown what can be achieved by working together in using data for research. We will champion greater use of data linking and enhance data science capability in the public sector to transform how our information is used for public benefit.

It also means the use of data driven innovation to support the adoption of greater automation and artificial intelligence solutions. We need to ensure this is done ethically and with integrity, but if done well can also help deliver savings, take away the burden of repetitive tasks and help people focus on where they can add most value. The emergence of the internet of things raises huge potential for smart use of data to drive forward improvements in public services, economic innovation and decarbonisation. The scale of the data revolution has raised important questions about access to data and how data are used. We must ensure data ethics, transparency and trust are threaded into the actions we take.

But more fundamentally it means managing our data better, so we are developing and using common data standards as far as possible and using technical standards which allow data to be seamlessly shared from one system to another. This will support seamless services and reduce the burden on the citizen.

Together, we will:

- create a shared ambition for the ethical use of data and collaboration across public services
- identify opportunities to work together on digital initiatives and get the most out of our data
- remove some of the barriers currently stopping or delaying the flow of data, to reduce the burden on the citizen, and to ease the exchange of information

between digital systems
- develop consistency by agreeing and adopting common data and architecture standards and using platforms that will support the re-use of data and collaboration more generally
- identify new data sources that can help create a rich and inclusive picture of society
- work alongside industry, academia and the public sector to champion the use of data-driven innovation, data science and new data sources

Outcomes:

- people and organisations have full confidence that their data is being treated responsibly, handled securely and used ethically
- people will receive better, seamless, services and outcomes will be improved because data is being used effectively and innovatively
- services are joined up and the number of times the same information is provided to different public sector organisations is limited because data is reused and flows securely
- public sector data is made available and published openly, where it is appropriate (i.e not personal data), in formats that support transparency, re-use and accountability
- the right digital channels and culture are in place to allow all sectors to work together and share information appropriately and securely to deliver better outcomes
- higher and further education organisations collaborate with the public and private sectors on building capability and developing innovative use of technology and data

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