

SYSTEM REBOOT

Transforming public services through better use of digital:
An expert panel report for the Welsh Government



System Reboot

Transforming public services through
better use of digital:

An expert panel report for
the Welsh Government

Introduction



Digital solutions to problems have become commonplace, but there is a gap emerging between the digital expectations of citizens and the reality of Welsh public services.

When my son was receiving regular care from a consultant I asked if I could avoid the car journey and a morning's lost school for him by Skyping into the clinic instead. The answer was no.

When I saw a local nurse about a minor skin condition I was asked to make a fresh appointment with a GP to have a photo taken to send away for examination. "It's ok, I can take a photo and WhatsApp it to you", I said, "I'm not concerned about privacy, I've read that the Security Services can't even hack it". The answer was no. I've since heard of some GPs who are developing their own digital workarounds but, as ever, this approach is patchy.

After accessing a private GP service via an app on my smartphone within 8 minutes of checking availability, it's a frustration to then spend 30 minutes repeatedly calling on the phone to get an appointment with my local NHS GP surgery.

These are just anecdotes based on a few of my own personal experiences, but they demonstrate that the digital expectations that have been set by our everyday experiences of Google, Amazon and Facebook clash with the reality of the way public services work.

Of course there are complicated reasons why in each of these cases the system is the way it is, but the theme is that our services are often not designed with the needs of the end user in mind.

We agreed that our initial report would focus on being a catalyst for initial actions. Much of what is in this report we already know. We now need to act.

The terms of reference for work of this panel on digital transformation of public services were "to provide external advice and challenge on transforming public services through better use of digital, and to come up with recommendations to help shape the next steps".

This is our initial report, and it is being presented to the Leader of the House and Chief Whip, Julie James, along with Cabinet Secretary for Health and Social Services Vaughan Gething and Cabinet Secretary for Local Government and Public Services, Alun Davies.

I've been fortunate to have the help of Paul Mathews, the Chief Executive of Monmouthshire Council; Anne Marie Cunningham, GP and Associate Medical Director NHS Wales Informatics Service; Mark Wardle, Consultant Neurologist and Chair of the NHS Wales Technical Standards Board; Victoria Ford, Director at Perago-Wales, a former Head of Communications for the DVLA and who was part of the team at the Government Digital Service (GDS); Dominic Campbell, interim Chief Digital Officer at Homes England and CEO of FutureGov, and Sally Meecham who has a range of experience carrying out digital change, most recently as Chief Operating Officer of the GDS. My thanks to my Senior Advisor, Matt Williams. We have been supported in this work by the Welsh Government's Chief Digital Officer, Caren Fullerton and her team: Anna Bartlett-Avery and Red Strivens.

We agreed that our initial report would focus on being a catalyst for initial actions. Much of what is in this report we already know. We now need to act.

Lee Waters, AM for Llanelli
December 2018

Executive Summary

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 a health board or a local authority thinks a citizen needs, a digital approach involves designing services that meet the needs of the end user.

A series of reports over the last three years have set out a consistent picture of Welsh public services failing to capture the potential of digital approaches to improve outcomes for the people who use public services, and deliver cost savings for the public sector.

We know enough to know that we need to change, we now need to take action.

Wales needs a new Digital Strategy, a clear Ministerial lead and a Chief Digital Officer with a mandate for change, working across the public services.

The Welsh Government already has an internal Chief Digital Officer, and cases are being developed for a CDO for Welsh Local Government and a CDO for Health. We support those developments, but feel strongly that to avoid silos there needs to be Chief Digital Officer for Wales to coordinate the efforts and lead the case for change. Critically these leadership roles need to be underpinned by the creation of a team of digital experts who can be deployed right across service boundaries to solve problems and share experiences.

Our recommendations are focused on identifying these initial challenges and providing the skills and capability to make change happen. We have made six recommendations:

1. Design public services around the needs of the user.
2. Establish clear digital leadership in Wales.
3. Develop and introduce digital service standards.
4. Identify skills and capability gaps and develop a plan to close them.
5. Create an approach to incentivisation and spend controls.
6. Agree a clear and ambitious timetable for change demonstrating pace and scale.

From our recommendations we have three immediate actions for the Welsh Government to set in train:

- Appoint a Minister with lead responsibility for Digital.
- Agree a digital declaration committing to new ways of working across Welsh public services.
- Create a CDO for Wales within six months.

The Case for Change

There are many examples of good practice across Wales, but often this work is fragmented and successful work is not scaled out more widely. In some cases, work is duplicated when it should have been shared, and innovation may be stifled rather than embraced.

Examples of good practice

- The new tax authority for Wales, the ***Welsh Revenue Authority***, has created a new cloud-based online tax system, which allows legal professionals to file and submit returns online, using an agile iterative approach. Rather than continuing to use HMRC's 'legacy' systems they took time to assess the data and understand user needs and on that basis made the bold move to shift over to a new system and start again. They continue to iterate the system by drawing on user feedback. They embraced digital as a culture rather than just a technology, admitting mistakes and openly learning from them.
- Pembrokeshire Council have recently started a text messaging service to remind people when their bins are being collected and are just about to launch a reverse text messaging service to allow people to ask questions about refuse collection before Christmas.
- The South West Wales Renal Service have created a ***digital transformation of the service delivered to kidney patients***, including e-prescribing, text reminders and patient access to their test results and treatment plans. This allows patients to manage their own conditions. It has saved time and money, as well as improving patient outcomes and the patient experience. The team changed a system of paper notes to a comprehensive electronic record which easily allowed generation of standardised letters and electronic prescriptions without having to manually do so.
- The Welsh Government Hwb platform provides online access to teaching resources to all pupils and teachers in Wales and is now fully run in-house. Single sign-on allows pupils and teachers to access an increasing number of online digital tools and resources, such as Microsoft Office 365 and Google for Education. However, little thought has been given to how the work can have wider application across other parts of the Welsh public sector. Similar work had already happened in the NHS. Early identification of the opportunities to work across public sector services has the potential to transform the way our services are delivered.

- Abertawe Bro Morgannwg University Health Board was the first in Wales to pilot a patient-controlled record with integration into the national data architecture. The ***Patients Know Best*** scheme allows patients to have message their clinical team for advice as well as access their secondary care information. This is a patient controlled record which contains NHS held information (eg blood test results and letters from hospitals to their GPs) and which patients can add to. They can then securely share their record with other clinicians, as well as family and carers.
- NHS Wales have commissioned user research to overhaul websites in use across the NHS. The research used a wide range of approaches and found that the current websites were hard for users to navigate and find the information they needed. The data generated has been used to develop content and design standards for a national programme which will redevelop websites across NHS Wales.
- Neath Port Talbot Council have been able to redirect resources to the frontline by reducing the number of telephone queries it deals with by 55% since 2009 by shifting services online.

What are the problems and what work has already been done?

There are impressive things going on, but they are the exception - much to the frustration of many public servants who want to use modern technology to provide better and more efficient services.

One of the most frustrating aspects of writing this report has been reading the other reports that have been submitted to the Welsh Government in the last three years which have painted a consistent picture: ***David Jones' review of local government in Wales*** in 2015, the ***report by SOCITM***, the society of IT Managers in local government, on the capacity and capabilities of local authorities in April 2017; the ***Parliamentary Review of Health and Social Care in Wales***, and the Wales Audit Office report ***Informatics systems in NHS Wales*** both published in January 2018, and the recent report by the Assembly's Public Accounts Committee report on ***Informatics Systems in NHS Wales***, all set out a starkly consistent view on the issues facing public services in Wales.

We have summarised each report in the appendix of this report and would encourage you to look at them (Annex 1).

They set out a very similar picture of services falling well short of their potential to deliver easy ways for the public to use everyday services. The widespread use of faxes across the NHS, and the fact that even the smallest local authorities in Wales are using over 100 separate systems to deliver services, is a manifestation of a deeper problem.

What will happen if we don't do this work?

Public services in Wales look after us when we are at our most vulnerable. Without digital transformation these services risk becoming inequitable, ineffective and unsustainable. If services do not keep up with citizens' growing expectations then people will simply migrate to private services. Those who are able to spend £10 a month to subscribe to a GP service on their smartphone will increasingly do so. And unless our services keeps pace with digital expectations we risk undermining support for the public service values that underpin them.

As the examples we've quoted show, the means to change exists. What we must summon is the will to change at scale. "The practical steps to creating a digital organisation are not complicated. They are just hard", as the authors *of the book on how the UK Government went about creating the GDS* - the Government Digital Service that streamlined all central Government websites and created the .Gov project, put it.

The need for digital leadership to focus on user needs

We found two themes emerging from the evidence which we feel need confronting first: leadership, and the need to focus on the needs of the end user of a service.

Digital change isn't just about technology. It is about culture and the way we go about solving problems. Those who are successfully adapting services use what they call an agile way of working. Their starting point is to properly understand what the problem is from the point of view of the person who is using the service. They assemble small teams with a mix of skills to jointly tackle the problem through every step of its journey: from end to end. These are teams of digital experts, often drawn from the commercial tech industry and combined with in-house government talent. Peru, Argentina, United States, Mexico, Canada, Italy and Australia are just a few of the countries with such units, joining the ranks of long-evolving government technology programs in pioneers like *Estonia*, Israel and *Singapore*. They trial as they go - they iterate. This has the advantage of identifying issues early and correcting them, reducing the opportunity for costly mistakes. They build a small solution, test it, fix it and try it again - at each stage referring it back to what the need of the end user is. They are open about their challenges and their failures. And when they get something that looks like it works they scale it up - or 'build out'. And they keep iterating and improving.

This is different to the way most organisations - in the private and public sector - have come to address digital problems. Most think digital is about technology, it's not: IT is one of the component parts of delivering the change. But leaders often use the terms digital and IT interchangeably, and tend to approach a problem as a technology issue that can be addressed through procuring an IT solution alone - often via a private sector vendor.

In their study of how Governments across the world are adapting *David Eaves & Ben McGuire from Harvard's Kennedy School* point out the approach of using digital service units can now be said to be mature, and are showing “incremental wins on a project by project basis — not enterprise transformation”. They point out that building internal capacity is the key to step change whilst working towards a core government platform (e.g. single sign-on, payments, identity etc).

Eaves and McGuire go on to say “Building consensus can be great, but it can also take time, and without enforcement mechanisms may ultimately prove too weak to prompt an enterprise-wide shift”.

The need for mechanisms for change

This points to a key element - and an unpopular one at that: “Enforcement mechanisms” or spend controls. The requirement that any spending on technology above a certain level (usually fairly modest) must be subject to sign-off by a team of senior leaders may appear at odds with the idea of local experimentation, but has proven critical to stop different parts of government going off on expensive flights of tech fancy. It can help to break down operational silos and work to share good practice. This was a critical part of the UK Government’s GDS approach. “You get a wealth of information about what is actually happening with technology - you very quickly start to build up a picture of what contracts exist, where the really bad IT is, and where the hidden gems are. This info helps you paint a picture of where the biggest challenges to solve are” Dafydd Vaughan, one of the original members of GDS told us.

This approach has been successfully adopted in part by the Welsh Government within its own boundaries (but not beyond). The Welsh Government’s CDO, Caren Fullerton, has quietly introduced it through a layer of governance called ‘a solutions design authority’ which acts as a quality assurance gateway. Critically it’s designed to be a mechanism that does not become a bottleneck, but delivers quick decisions. It allows a committee to test solutions against ICT strategy, accessibility, security and other standards and assess the quality of cost estimates and route to market. “It has worked, changed behaviours and seems sustainable (which is an important point), but it isn’t much liked despite being positioned as a help and support rather than a hurdle or blocker,” Caren Fullerton told us. Whilst giving her visibility over developments across WG it only looks at new projects, whereas much of the service delivery and spend is embedded in business as usual teams and systems. “We look at the quality of a solution and getting people to work in the right way rather than challenge whether or not it is the right thing to do or be prioritised over something else” she said.

The experience of the introduction spend controls at the UK Government's GDS created a safe and open environment for civil servants to discuss and challenge departmental approaches to digital spend on public services. "One of the interesting unexpected side-effects of spend controls at GDS was people within departments quietly coming to the team and asking if we could help them stop a bad thing from happening" Dafydd Vaughan told us.

For it to be effective the spend control process has to command the respect of the system. The mechanisms need to be understood as a means to improve the delivery of public services using digital technology. The scrutiny process will balance adherence to overall principles and standards with fostering innovation from the people delivering frontline services. This process will in itself be a means of embedding change.

The need for cultural change; seeing digital as a whole system issue

Taken together, these approaches - user-led service design; multi-disciplinary teams; spend controls; iterative development designed to be built out - can all contribute to changing the culture.

The big change this report advocates is about seeing digital as a whole system issue, one that every leader at every level must be expected to understand. It's a different way of working and thinking. And if we get it right (which we won't every time) the prize is huge - and it's not just about efficiencies (though there will be some) - it's about improving the experience and the outcome of public services. We will not be able to deliver effective, equitable and sustainable public services without digital transformation.

So what do we need to do?

To help stimulate this Wales needs a new Digital Strategy, a clear Ministerial lead and a Chief Digital Officer with a mandate for change.

The Mayor of London's digital strategy, ***Smarter London Together***, shows the importance of setting out how current developments fit within a compelling narrative. We are not selling the good things that we are doing, but nor are we setting out how we can scale up our achievements.

Likewise, an identifiable Minister for Digital is essential for creating the drive and momentum that's going to be needed to create a digital culture. The current Minister with responsibility, Julie James, holds the policy lead within her broader portfolio as

Leader of the House and Chief Whip - the term digital does not appear in her title, and digital change is not currently prominent in the programme for government. Moreover she does not have responsibility for digital in health or in broader public services, and funding is distributed among a myriad of ministers.

The panel believes that high-level political commitment must be reflected in the machinery of government.

Alongside strong political direction it's also important to have a Chief Digital Officer to embed the change. London's model shows us the value of recruiting a very senior, non-political digital leader with the task of selling the work of digital transformation and co-ordinating the efforts. It needs to be someone with credibility borne from having experience of building good digital services, culture and vision. If the Welsh public sector are to be persuaded to work together it is going to need someone whose credentials can't be questioned to do the job.

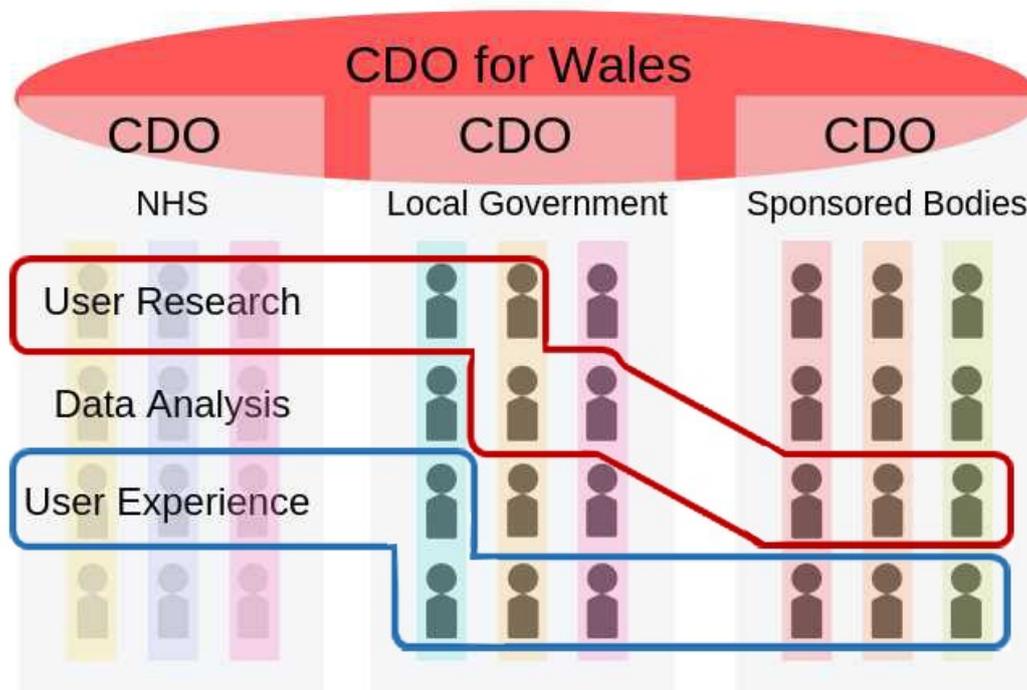
An effective CDO should focus on external and internal audiences. Externally they need to generate excitement about the work that's happening - which is an important recruitment and confidence building tool in itself. And internally they have a critical role selling digital transformation to ministers, senior civil servants and chief executives across all the disparate organisations and departments that exist. A strong CDO can play the role of 'bureaucratic hacker', clearing the way, and building the support to allow the real work to happen. This work needs to last beyond re-shuffles and political cycles and therefore can't be left to a Minister alone.

This goes beyond a small group of individuals working independently to try and deliver a new way of working. To make real, sustainable change we need to gain buy in and ownership from leaders across the Welsh public service. There are examples of this approach in other areas for example the Local Government Association in England has worked collaboratively with local authorities to produce a **Local Government Digital Declaration** (Annex 3). This sets out the principles and ways of working across the sector.

The question that vexed the panel is whether this work is best done within the current boundaries of health, local government and central government, or should we pool our capacity to work across all Welsh public services?

One of the main constraints (and there are a few) for real digital change is capacity - there simply aren't the bodies around with the mix of skills required to bring about change. **The British Gas Data Science Centre in Cardiff** have emulated the digital music service **Spotify** in assembling 'Squads' (or teams) of digital specialists who can be deployed across the organisation to work on solutions to problems that have been identified. These are multi-disciplinary and each has someone with similar skill sets - for example there's a User Researcher in each.

Each of these Squads cross-pollinates - the specialists don't just work in their own team but they also work across teams with their own expert peers working on other projects. This way silos can be broken down, and experienced shared - and the squads should have access to a wealth of public sector data.



It's beginning to work in British Gas, which still bears many of the characteristics of the large public sector organisation it once was.

The panel recommends that NHS Wales, local government and central government each host a number of multi-disciplinary Squads that would work on iterating solutions to user-identified problems.

The work in each sector would be overseen by a Chief Digital Officer of their own - a CDO for NHS Wales, a CDO for Local Government, and a CDO for WG (and Sponsored Bodies). These would double up as Deputy CDOs for Wales and, together with a Chief Digital Officer for Wales, would provide collective leadership across the Welsh public sector. Together they would provide expert scrutiny and support to teams, inculcate learning by setting digital standards and spend controls, and help upskill the workforce through scaling up good practice. And they'd be accountable to a clear Ministerial lead at Cabinet level.

This approach would place each part of the Welsh public service on an equal footing. There would be no question of the Welsh Government telling councils what to do, but

instead working with them as partners to understand user need and provide capacity to solve problems.

Each of the multi-disciplinary Squads would share experiences horizontally across their peers working in different parts of the public services, so a user researcher working on a problem in Conwy Council would share experiences with user researchers working on separate problems in National Resources Wales or in Cardiff & Vale University Health Board for example.

This could help break down the silos within and across public bodies, and make best use of scarce resources. Open and transparent sharing would lead to the realisation of the 'Once for Wales' principles.

This all requires leadership, resources and a willingness to change. If we continue to fail to act on the expert recommendations that have been made we will waste more money and continue to deliver sub-optimum services. And as our digital expectations in everyday life continue to grow our public services will fall further behind.

We must not let that happen. We have a responsibility to act.

Key recommendations and actions

The compelling case for change exists. It is time for action. This report sets out six recommendations, including actions and a timetable for change.

1. **Design public services around the needs of the user**

The needs of the users of public services should come first, and our policies and systems should be citizen centric and designed around those needs.

2. **Establish clear digital leadership in Wales**

Wales needs a new Digital Strategy, a clear Ministerial lead and a Chief Digital Officer with a mandate for change.

3. **Develop and introduce digital service standards**

Commit to user centred design through the adoption of a set of service standards. These principles must be adopted, promoted and sustained.

4. **Identify skills and capability gaps and develop a plan to close them**

Assess the skills, capabilities and ambition of our public sector workers and provide the training and support they need. To support this Welsh Government should create a shared pool of experts to help spread and inspire digital excellence across the Welsh public sector.

5. **Create an approach to incentivisation and spend controls**

Welsh Government should provide additional, central investment to new digital services. In return, the services must align with digital principles & standards, and with the digital governance proposed in this document. Spend should be authorised against meeting the standards, aiming to reduce duplication and maximise economies of scale while championing user led design.

6. **Agree a clear and ambitious timetable for change demonstrating pace and scale**

Set out a timetable for change focusing on the short (18 months) and medium (up to 5 year) term.

Recommendation 1

Design public services around the needs of the user

There is a chasm opening up between the experience people have using public services and the private services that have now become ubiquitous. If you do an online shop, or watch a film, listen to music and buy some clothes the online experience is seamless. It has been designed to be digital from end to end - with the needs of the user central to the whole process.

In contrast public services either offer no online route in (a hospital appointment for example is still a paper based exercise) or in the case of local government only part of the process is online, for example when reporting a missed bin collection you may do that via a website but the rest of the process remains paper based. No local authority provides an end to end, seamless digital transaction for all service requests.

In April 2017 *Socitm advisory published the findings of their research on digital maturity in Welsh local authorities*. They found that that the absence of 'Citizen oriented design' means that services are often not being designed from the point of view of what citizens want, but from the viewpoint of what the local authority thinks they need.

This is true across public services. There often isn't a clear idea of who the 'user' is for many of our services. Reading the Welsh Government's key document on the future of the NHS *A Healthier Wales: our plan for health and social care*, you could be forgiven for thinking that the users that the system is being designed for are the clinicians not the patient.

We must create systems that are designed around the needs of the users. To do that we need to distinguish between the needs of the users of systems used to deliver public services, and the needs of the end-users of public services themselves. However, there is no established profession in NHS Wales, Welsh Local Government or Welsh Government itself, dedicated to understanding, designing or testing services from the end user point of view.

The UK Government's GDS (Government Digital Service) has a *Digital Service Standard* which puts understanding user needs at the first of 18 criteria to help government create and run good digital services. The *US Government's Digital Services Playbook* ranks 'Understand What People Need' as its top 'plays'. Likewise, the Scottish Government have adopted a new *Digital First Service Standard* which has the need to understand user need as its first principle and their new systems place a strong emphasis on User-Centred Design.

It is significant that the Welsh Government has adopted a very slightly amended version of the GDS standard for its digital services - but as with much of its guidance, this was only published internally. This is not in the spirit of the digital culture of openness.

Digital First Service Standard



01. User centred

Understand user needs. Research to develop a deep knowledge of who the service users are and what that means for the design of the service.

02. Usable and accessible

Create a service that is usable, accessible and intuitive enough that users succeed first time.

03. Channel shift

Identify and, wherever possible, remove impediments that prevent users from using the digital service, clearly establishing it as the primary channel. Plan to provide appropriate assisted digital support if necessary.

04. Consistent user experience

Build a service consistent with the user experience of the rest of mygov.scot including using the design patterns and style guide.

05. Continuous feedback

Put a plan in place for ongoing user research and usability testing to continuously seek feedback and input from users to improve the service.

06. Data driven

Use tools for analysis that collect performance data. Use this data to analyse the success of the service and to translate this into features and tasks for the next phase of development.

07. Cross-functional team

Put in place a sustainable multidisciplinary team that can design, build and operate the service, led by a suitably skilled senior manager with decision-making responsibility.

08. Sustainability

Build a service that can be iterated and improved on a frequent basis and make sure that you have the capability, resources and technical flexibility to do so.

09. Continuous improvement

Build the service incrementally, releasing early and often, using the iterative and user-centred methods set out in the GDS service manual.

10. Business continuity

Define, document and regularly test a plan to handle disasters and other incidents that may cause the digital service to be taken temporarily offline.

11. Technology appraisal

Evaluate what technology, tools and systems will be used to build, host, operate and measure the service, and how to procure them.

12. Information governance

Evaluate what user data and information the digital service will be providing or storing, and address the security level, legal responsibilities, privacy issues and risks associated with the service (consulting with experts where appropriate).

13. Open data

Make all non-personal, non-commercially sensitive data from the service available for re-use by others under an appropriate licence.

14. Ecosystem

Identify how your service aligns with Scotland's digital ecosystem.

15. Open source

Make all new source code open and reusable, and publish it under appropriate licences (or provide a convincing explanation as to why this cannot be done for specific subsets of the source code).

16. Open standards

Use open standards and common government platforms where available.

17. Green ICT

Deliver a digital service whose impact on the environment, over its whole lifecycle, is understood. Plan to reduce the environmental impact of the service over time.

18. Data hosting and data centres

Adopt cloud computing or virtualisation as the preferred approaches to the delivery of data hosting for the service.

19. Performance management

Identify performance indicators for the service, including the 4 mandatory key performance indicators (KPIs) defined in the GDS service manual. Establish a benchmark for each metric and make a plan to enable improvements.

20. Transparent

Publish performance data on the Digital First Performance Platform.

21. Operational acceptance

Regularly test the end-to-end service in an environment identical to that of the live version, including on all common browsers and devices, and using dummy accounts and a representative sample of users.

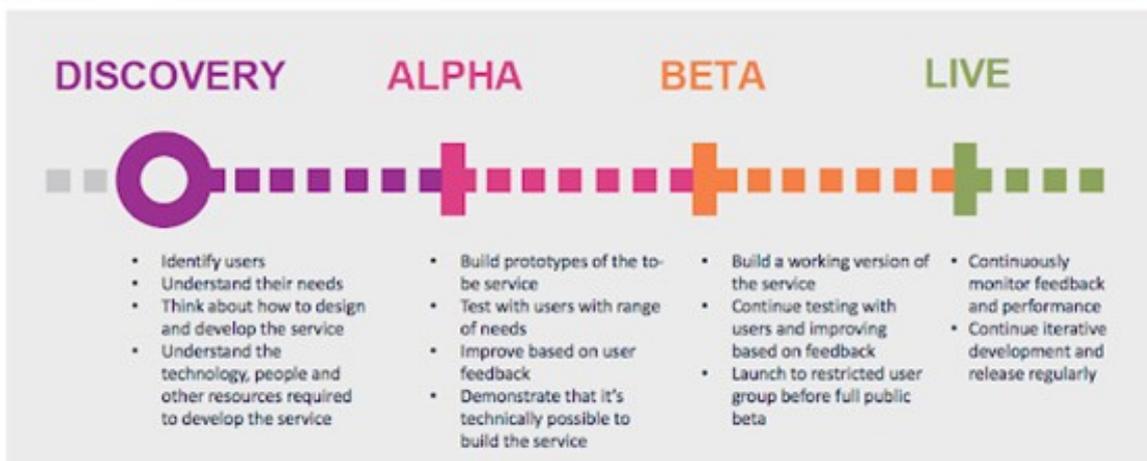
22. Sponsor acceptance

Test the service from beginning to end with the minister responsible for it.

Designing services to user need is clearly easier to achieve on new projects (or 'Greenfield') than it is on legacy projects (or 'Brownfield'). For example the new Welsh Revenue Authority has succeeded in doing this from scratch with an online Cloud-based system for the collection of Welsh taxes, designed and tested on the people it was going to be used by. Good practice does occur, but it is not widespread and seems to occur because of the vision and enthusiasm of individual leaders and their teams, and is not systematised.

By contrast, in Scotland User Centred Design is now embedded in new projects. The new Social Security system for Scotland has a user engagement strategy within its design architecture and there are User Centred Design professionals in service teams. By consciously building design capacity, and fashioning multi-disciplinary teams, they are working to change the culture of how public services are thought about. Of course there are trade-offs needed to deliver this very complex project to a hard deadline, but the user perspective is being considered at each stage.

Our Approach to Digital Transformation



For this to work in public services we need a leadership that understands digital change - and understands that the problems of today aren't likely to be solved by centralised command-and-control structures.

Socitm reported that whilst broadly comparable with councils in other parts of the world they said Welsh local authorities' direction of travel over the last five years is more volatile than the UK as a whole, and lags significantly behind the customer experience citizens now commonly have with the private sector.

Socitm found that instead of actively involving citizens in re-designing and changing processes from the start to the end, Councils are primarily focused on achieving short-term savings by moving some transactions online (often procured from private sector vendors). Furthermore, in contrast to other parts of the UK, Councils in Wales are making little use of the GDS service standard because of a lack of awareness or capability to use this approach.

Bob Gann's report on Digital Inclusion in Health and care in Wales reminded us that levels of digital exclusion remain stubborn, with 15% of people still not using the internet. Service design based on genuine user need will take into account the needs of people who are not online and create services that take their needs into account. For example, user engagement in the Betsi Cadwaladr Health Board area led to the creation of a telemedicine scheme for patients over 85 where, instead of travelling to hospital to attend clinics, patients saw their doctors at their local community hospital via telemedicine, reducing travelling for many patients from 30 miles to 2-5 miles. They may not be online at home but a user-focused approach can design services that harness digital to meet everyone's needs.

Actions:

- a. Ministerial agreement that the Welsh public sector should adopt a user first approach to the design of public services.
- b. Communicate the approach across the Welsh public sector providing support and guidance on what this means for digital service design and implementation.

Recommendation 2

Establish clear digital leadership in Wales

Digital transformation doesn't succeed by chance. It takes decisive leadership that is prepared to challenge and be challenged, be resilient and flexible, make difficult decisions and focus on delivery. It is this leadership which leads to cultural change.

Currently, there is a gap at the top - very few of the leaders of our health boards, local authorities and senior civil service can be said to be confident digital leaders. In fact, most don't feel embarrassed to admit they don't really understand it.

Furthermore, there is no Chief Digital Officer (CDO) for Wales. While the Welsh Government has a CDO (*who has done lots of good things from close to a standing start*) her mandate doesn't run much beyond Cathays Park - and does not extend to the NHS or Local Government. She's the CDO for WG, not for Wales. The panel believes that there's a need for a 'guiding mind' for digital developments across all public services to spread best practice, to set digital service standards, and to veto duplication and waste across the public sector. They would review progress in line with the new standards and ensure value for money through controls and incentivisation such as a clear role authorising spending against meeting the standards, aiming to reduce duplication and maximising economies of scale, while championing user-led design.

Public services in Wales need and expect clear, central leadership of digital change. The current landscape is not encouraging.

The Wales Audit Office report on *Informatics systems in NHS Wales*, the Parliamentary review of Health and Social Care in Wales, and the recent Public Accounts Committee report *all identified leadership and skills as a significant issue*.

The WAO report pointed out the problem of not having digital represented at Board level in the Health Service. And *PAC went further in recommending a review of the senior leadership capacity* in terms of skill-set and governance within both NWIS and wider NHS digital teams in health boards "We were not convinced that the senior Welsh Government officials and top NHS executives have the detailed technical understanding needed to give NWIS a clear direction and challenge its performance and decisions" the committee said.

These reports identified multiple issues and these are summarised in the appendix. Unless there is accountability for failings, and resolution to address the issues, there is a real danger that enthusiasm within the system will dissipate.

When Socitm assessed the digital leadership of authorities they found that most Councils do not have a Chief Digital Officer, with many still seeing digital as an offshoot of ICT. They found that digital strategies, where they exist (nearly a quarter of Council did not have one), “do not completely embrace the full potential of the digital agenda”. Socitm found that there is too little benchmarking with organisations outside Wales, and that Local Authorities are not making the most of citizen data to design services.

The December 2018 Wales Audit Office Report on *The maturity of local government in use of data* found that local authorities are not taking advantage of the massive amounts of data they collect to operate as efficiently and as effectively as possible. “Too often services and teams hold information in silos and use it for a single purpose. Because authorities lack corporate data standards, duplication of information is common and integration of data often poor. Consequently, the potential for reusing data can be overlooked” the report said.

This isn't a council of despair, it's a call to action. And Socitm did find some good practice, but they argued that digital excellence will only be sustained where there is a culture change, development of digital skills at every level, and a strategy that is embedded across every level of a local authority.

We have also found examples of great leadership driving forward patient-facing projects in the NHS. For example, the Welsh Renal Clinical Network has created a *digital transformation of the service delivered to kidney patients*, including e-prescribing, text reminders and patient access to their test results and treatment plans. Whilst the mantra within the NHS is for a ‘Once for Wales’ approach, this was developed locally, outside national systems, driven not by technology but by clinical need. The challenge is how to scale innovation where there is no capacity to do so. The success of the Welsh Renal Clinical Network is chiefly because of the enthusiasm and commitment of the team at Morriston hospital. Transferring this outside the reach of the original team into other health boards will be difficult. This is not an uncommon experience.

Health boards report that they do not have the capacity to scale up ideas as their focus is on keeping existing systems running (“keeping the wheels on”, as one health board CEO told us). This is reflected in Integrated Medium Term Plans which the Welsh Government use to measure performance. Health boards are judged on meeting existing targets, and they allocate resources and talent accordingly.

It is critical that we create an environment where leaders can set the agenda and where calculated risk-taking and innovation is supported. As with any change on this scale, this will not be easy. Without central leadership and the right permissions and direction (from Ministers and Senior Civil Servants), change will fail, money will be wasted and most importantly the opportunity to improve the lives and experiences of citizens will be lost.

Wales has an existing digital strategy, indeed it also has a *seperate digital health and social care strategy*, but the world has moved on and we need a new one. Crucially it needs to be underpinned by a clear Ministerial lead and a strategy designed to bring people together with a focus and drive.

The panel applauds the *Local Digital Declaration* that was initiated by the UK Ministry for Housing, Communities and Local Government (MHCLG), the Government Digital Service (GDS), and a collection of local authorities and sector bodies from across the UK (Appendix 2). At the time of publication of this report 45 organisations were signed up to the declaration with a commitment to working on a new scale to:

- design services that best meet the needs of citizens
- challenge the technology market to offer the flexible tools and services we need
- protect citizens' privacy and security
- deliver better value for money

The panel recommends that we agree a digital declaration across Welsh public services which commits to new ways of working.

Actions:

- a. Create a Chief Digital Officer for Wales
- b. Appoint a digital leader within each sector or public service body that can be held responsible for delivery, a role that goes beyond simply being a digital champion, but instead is empowered with clear permissions and responsibilities to effect change.
- c. Recalibrate and relaunch the Welsh Government-led Digital Leaders Forum, chaired by the Minister with digital responsibilities, attended by digital leaders.
- d. Create an advisory group, reporting to the minister or CDO, that can be called on to support and assure delivery across the public sector. This group should be made up of those with experience and expertise across a range of specialisms required to make digital a success.
- e. Embed digital standards and controls into existing governance within all public service bodies.
- f. Allow this group to support assurance against a newly created service standard. (See recommendation 3).

- g. Establish requirements to support delivery and provide visible reporting and transparency of progress.
- h. The new CDO for Wales should draft a new Digital strategy for Wales and publish, seeking feedback in an open and transparent way including through user research.
- i. Design and deliver against a communications and engagement strategy for Digital in Wales.
- j. The newly formed central leadership function should work in the open and start talking about the action plan and progress around it. Don't wait until a service is ready, actively promote the work of the digital leader for Wales, as well as promoting them as an individual both virtually through social media etc, as well as through events and speaking opportunities.

Recommendation 3

Develop and introduce digital service standards

The real difference in the adoption of digital across public services in Wales has to be an uncompromising focus on the needs of service users. The commitment to user centred design and the adoption of a set of service standards is essential. These principles must be adopted, promoted and sustained.

The service standard should be agreed by the digital leaders, with services assured against it independently by their peers through the advisory group as they progress through the development lifecycle.

If we are to transform the way we use data we need greater interoperability, accessibility, openness and innovation combined with improved data science skills. Using data to improve our services will require more than just the raw data, it requires a cultural change.

The traditional shape of services offered to citizens is not efficient and increasingly less effective. Public services need to be re-imagined and Wales is small enough to lead the way and big enough to matter when it comes to finding ways to evolve. Digital leadership and ways of working need to support collaboration across boundaries and across sectors to realise benefit for citizens and users. Try a small service, experiment and test how it could work across sectors and scale based on lessons that are learnt along the way.

The approach must be supported by open working, both physically and digitally. Discussing what we are trying to achieve and why, builds trust and visibility and brings momentum beyond individual initiatives. This means communicating when things don't go to plan and being open about why and what has been learnt. Regular progress updates, ownership of decisions and being prepared to iterate are key.

The implementation of spend controls should be linked to adoption of the standards would be a good thing.

Actions:

- a. Develop a set of service standards for Wales, referencing the Government Service Standard and Scottish Digital First Service Standard, in collaboration with the digital change leaders of the Welsh Public Sector.
- b. Adopt these service standards and establish the level at which these become a requirement of all public sector change through all stages of the lifecycle.

- c. Services being delivered should undergo an assessment to ensure they are meeting these standards. Ministers can drive quality through compliance with the standard. Assessments should be carried out by trained assessors built from a peer network across Welsh public services, but managed and led by the Advisory Group.
- d. Identify services where the opportunity for collaboration is compelling.
- e. Develop a digital declaration for Welsh public services.

Recommendation 4

Identify skills and capability gaps and develop a plan

Digital maturity, skills and capability must be a core focus. As covered in the 'Case for Change' section of this report there are some really exciting initiatives developing in Wales around many of the capabilities needed for a digital Wales, but there are also fundamental areas missing and an overall need to create a wider skilled workforce. These include a focus on user centred design and supplier management. This is particularly important where there is an over reliance on suppliers who are not native digital companies and hold vested interests in preserving the status quo e.g. data centres over cloud, change control over continuous improvement.

Work is required to develop the long term capabilities needed, from user research, customer insight and data analytics all the way through to software development, continuous deployment and service lifecycle management. This requires a new approach, from encouraging the use of a mixed economy with a blend of SMEs and large suppliers to developing inhouse skills.

Scotland's Local Government Digital Office has a programme to equip current and future leaders with the skills they need to deliver digital transformation. Likewise their impressive collaboration with the University sector, **DataLab, has a stream of work** focused on developing skills and talent, including helping senior leaders understand data and digital and their own role in harnessing it.

The Socitm report on the digital maturity of Welsh local government could find little evidence that councils were embedding digital skills into their workforce strategies or thinking about the future need for digital skills and capabilities. Digitised workflow was present though not mature, and the approach was often driven by property asset strategies to minimise the number of buildings they had to manage. Too few were using cloud technologies and there was little evidence of the automation of staff processes such as submitting expenses. Similarly, there was little use of common digital platforms such as Slack or Yammer for collaborating. Socitm said there are likely to be good opportunities for further digitisation of internal processes but 8 of the 22 councils said they did not have sufficient capacity to deliver their digital requirements.

The Wales Audit Office report on the digital maturity of local government found that there is limited predictive analysis, encompassing a variety of statistical techniques to model current and historical facts to make predictions about future scenarios. Likewise, few authorities noted the use of data mining or segmentation analysis.

Critical to addressing this will be delivering digital capability to senior leadership across the Welsh public service. This isn't simply about pushing everyone through a generic training programme. There needs a blended approach based on a clear understanding of the digital skills gaps of both individuals and organisations.

As well as up-skilling senior leaders, we need to do the same for the whole workforce. Digital literacy is a problem for public sector workers in their place of work and limits their opportunities to progress and in their own lives. Both ***NHS England*** and ***NHS Scotland*** have set out strategies to address it. NHS Wales does not have a similarly ambitious plan aimed at the whole workforce.

We need to create a People Strategy that can assess the skills, capabilities and ambition of our public sector workers, and provide the training and support that they need to deliver in the Digital Age. Through the digital declaration we will address the opportunity to create a diverse and inclusive public sector workforce.

Some of the areas requiring focus are:

Digital leadership: as covered in recommendation 2 Wales requires strong leadership based on a core understanding of user centred service delivery across all parts of public services. Without the right leadership change of this scale will not succeed.

Supplier Management: vested interests and lengthy contracts with traditional suppliers need to be reviewed and challenged to ensure they provide a basis for the changes needed.

Procurement: the way we buy IT and capabilities needs to allow for a different kind of relationship with suppliers. Outcome based procurement that drives focus towards continuous improvement not future upgrades.

Technology debt and legacy IT: transformation can only go as fast as the legacy IT that supports it, plans are needed to help departments create and maintain momentum towards supporting IT systems and infrastructure. Public sector IT is blighted by incidents where the lack of investment in support and maintenance has eroded public confidence.

Organisational Design: the way that some services are delivered end to end crosses self imposed boundaries, usually created by departmental governance.

Digital delivery: a different approach to public service change delivery will require different skills sets including user centred service design, user research, agile delivery, digital engagement and stakeholder management.

During our deliberations and conversations it became increasingly clear to us that instead of approaching digital as we have traditionally thought about IT projects - where once we've procured a new system we've regarded the problem 'fixed' and safely left alone until the system becomes outdated (at which point another big private sector IT system will be procured) - the ideas of continuous improvement and deployment should be applied. Without a culture and capability focused on continuous improvement the problems associated with legacy technical debt will survive.

We heard this from a number of organisations who have delivered a large scale digital transformation, including Admiral and the British Gas Data Science Centre in Cardiff. The utility company have a Data Science team based in central Cardiff working on projects for the company right across the world. Whilst the utilities are private companies they still resemble the large siloed organisations they were when they were in the public sector, and we can learn from the way they are evolving in the digital age. Peter Sueref, their Data Science Director, explained how they have drawn inspiration from digital music service *Spotify*.

Spotify have deployed “squads” to take ownership of particular parts of their product, each squad works autonomously, but within a framework set by the company objectives - all code is open and interoperable, and releases are frequent to encourage experimentation. Crucially, squads contain a mix of complementary skills - so knowledge of particular subjects isn't concentrated and teams don't have to borrow from others to reach their objectives. Spotify say they have sought to build a community of squads working to a common goal, rather than a hierarchical organisational structure where all responsibility is concentrated in the hands of a few managers.

Whilst Spotify's specific approach may not be entirely suited to our needs - Spotify are keen to impress they continuously develop and refine the system to suit their evolving needs. The idea of creating autonomy and responsibility within small, multidisciplinary teams who are able to deploy new products rapidly is something that the panel seems to be a key component wherever digital transformation has been successful.

Actions:

- a. Create a shared pool of experts to support digital excellence across the Welsh public sector, with teams allocated to local government, health and central government, each headed by a sectoral CDO, working to the led CDO for Wales as part of a Digital Delivery Hub.
- b. Create communities of practice to help support consistency in scaling digital capability across the Welsh public sector, sharing good practice and battle scars.

- c. Review IT contract landscape across the public sector in Wales and identify opportunities to leverage new capabilities and ways of working.
- d. Review procurement frameworks for opportunities to develop digital skills and capabilities, potentially setting targets for growth in digital and SMEs.
- e. Create a 'playbook' for ways of working including user research, agile working in the open etc. based on compliance with the service standard.
- f. Create a people strategy to assess the skills, capabilities and ambition of our public sector workers, and provide the training and support that they need to deliver in the Digital Age.
- g. Review accountability and governance for end to end digital services as part of the process of developing and deploying new services.

Recommendation 5

Introduce spend controls

Consistent application of digital standards is difficult without clear incentives, especially within a devolved administration. The progress made by GDS was underpinned by controlling departmental spend to ensure digital standards and ways of working were at the forefront of service delivery. Engaging the public sector in Wales is the best route to achieving citizen centered outcomes.

Alongside spend controls there is an opportunity to incentivise the adoption of standards and principles by identifying services that are critical to:

- An 'all Wales' digital transformation plan e.g. a service that would be re-usable across sectors in Wales.
- Proving how digital technologies can be used to improve services e.g. use of cloud
- End-to-end service collaboration across boundaries e.g. health, social care & housing.

Welsh Government should provide additional, central investment to new digital services in these areas, such as the Squads and support from the Digital Delivery Hub referred to in recommendation 4. In return, the services must align with digital principles & standards and with the digital governance proposed in this document.

This will provide an opportunity to demonstrate the value of the new ways of working and gain the trust of those responsible for building services. In addition it would provide a pathway and demonstrate commitment for those investing in digital skills through education and skills development.

Actions:

- a. Develop investment strategy for digital including spend controls to support delivery to agreed service standards.
- b. Identify and agree the end to end service inventory of public services in Wales and identify those that cross existing boundaries of responsibility.
- c. Identify possible candidates for service transformation and timescales for initial delivery.

Recommendation Six

*Agree a clear and ambitious timetable for change that
Demonstrate space and scale*

Create a timetable for change - focus on what we will do over the next 12 months, but be aspirational up to 5 years. Be collaborative in developing it and be transparent in reporting it. Create a roadmap with clear signposts and opportunities for re-evaluating progress at key milestones.

The initial actions below should be instigated immediately with reporting on progress within 6 weeks of agreement. This is about demonstrating pace and progress to build momentum and trust.

| | Actions | Complete by June 2019 | Start before June 2019 |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------|
| 1a | Ministerial agreement that the Welsh public sector should adopt a user first approach to the design of public services. | X | |
| 1b | Communicate the approach across the Welsh public sector providing support and guidance on what this means for digital service design and implementation. | X | |
| 2a | Create a Chief Digital Officer for Wales | X | |
| 2b | Appoint a digital leader within each sector or public service body that can be held responsible for delivery, a role that goes beyond simply being a digital champion, but instead is empowered with clear permissions and responsibilities to effect change. | X | |
| 2c | Recalibrate and relaunch the Welsh Government led Digital Leaders Forum, chaired by the Minister with digital responsibilities, attended by digital leaders. | X | |
| 2d | Create an advisory group, reporting to the minister or CDO, that can be called on to support and assure delivery across public sector. This group should be made up of those with experience and expertise across a range of specialisms required to make digital a success. | X | |
| 2e | Embed digital standards and controls into existing governance within all public service bodies. | X | |

| | | | |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|
| 2f | Allow this group to support assurance against a newly | X | |
| 2g | Establish requirements to support delivery and provide | X | |
| 2h | The new CDO for Wales should draft a new Digital strategy for Wales and publish, seeking feedback in an open and transparent way including through user | X | |
| 2i | Design and deliver against a communications and | X | |
| 2j | The newly formed central leadership function should work in the open and start talking about the action plan and progress around it. Don't wait until a service is ready, actively promote the work of the digital leader for Wales, as well as promoting them as an individual both virtually through social media etc, as well as through events and speaking opportunities. | X | |
| 3a | Develop a set of service standards for Wales, referencing the Government Service Standard and Scottish Digital First Service Standard, in collaboration with the digital change leaders of the Welsh Public Sector. | X | |
| 3b | Adopt these service standards and establish the level at which these become a requirement of all public sector change | X | |
| 3c | Services being delivered should undergo an assessment to ensure they are meeting these standards. Ministers can drive quality through compliance with the standard. Assessments should be carried out by trained assessors built from a peer network across Welsh public services, but managed and led by the Advisory Group. | | X |
| 3d | Identify services where the opportunity for collaboration is | | X |
| 3e | Develop a digital declaration for Welsh public services. | | X |
| 4a | Create a shared pool of experts to support digital excellence across the Welsh public sector, with teams allocated to local government, health and central government, each headed by a sectoral CDO, working to the led CDO for Wales as part of a | | X |

| | | | |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|
| 4b | Create communities of practice to help support consistency in scaling digital capability across the Welsh public sector, sharing | | X |
| 4c | Review IT contract landscape across the public sector in Wales and identify opportunities to leverage new capabilities and ways of working. | | X |
| 4d | Review procurement frameworks for opportunities to develop digital skills and capabilities, potentially setting targets for growth in digital and SMEs. | X | |
| 4e | Create a 'playbook' for ways of working including user research, agile, working in the open etc. based on compliance with the service standard. | X | |
| 4f | Create a people strategy to assess the skills, capabilities and ambition of our public sector workers, and provide the training and support that they need to deliver in the Digital Age. | X | |
| 4g | Review accountability and governance for end to end digital services as part of the process of developing and deploying new services. | X | |
| 5a | Develop investment strategy for digital including spend controls to support delivery to agreed service standards. | | |
| 5b | Identify and agree the end to end service inventory of public services in Wales and identify those that cross existing boundaries of responsibility. | | |
| 5c | Identify possible candidates for service transformation and timescales for initial delivery. | | |
| 6a | Create a timetable for change - focus on what we will do over the next 12 months, but be aspirational up to 5 years. Be collaborative in developing it and be transparent in reporting it. | X | |
| 6b | Create a roadmap with clear signposts and opportunities for re-evaluating progress at key milestones. | X | |

Appendix 1

The Recent Journey

Much has already been written about the state of digital in the Welsh public sector. As a starting point this panel has decided to revisit the work done in recent years to reassess the findings of other reports and understand why little progress has been in made in implementing them.

David Jones Review

In 2015 technology entrepreneur David Jones reviewed digital activity across Welsh local government. The report, ***Why Local Government Must Go Digital***, found that the local government digital world is complex, sprawling and fragmented, with even the smallest local authorities in Wales having over 100 separate systems. It reported that many councils in Wales are ‘behind the curve’, “the default discussion point for most of councils was their website. Several felt that re-designing their site, or adding in new areas of functionality represented a significant shift in their digital presence” the report said.

David Jones concluded that Digital leadership at the highest level is very limited and patchy, and councils are too dependent on buying in private sector solutions and existing technologies, methodologies and working practice are 20 years out-of-date. It found a consensus amongst local government leaders that there has been too much focus on strategy and too little on delivery.

The report found an expectation amongst Local Government that Welsh Government should show digital leadership, but a weariness of past promises and weak delivery that this would happen. The Jones review concluded that Welsh local government has no significant capability for digital transformational change, and collaboration and shared leadership are critical to developing digital services at scale to unlock savings and improve services. It recommended that the Welsh Government should encourage and enable Councils rather than mandate based on an ‘action orientated’ Welsh Digital Framework.

| | |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Delivery | A radical approach putting the user need first, using agile (iterative) methods with a heavy emphasis on communications (twitter/blog). |
| Leadership | A shared digital leadership with the Welsh Government working alongside local government with collaborative teams and projects. |
| Skills | A recognition of the skills base and a need for balance of external candidates and current people with a ruthless drive for quality, not quantity |
| Investment | Resources will be linked to opportunity and return and used to drive efficiency. Buying, borrowing or building will be based on iterative design and flexible procurement. |

The report suggested actions under each of four suggested core principles:

Delivery

A Welsh Digital Local Government Services team comprising the following expertise would be required:

IT Disciplines

- User research
- Software development
- Testing UX

Service Management – which already exists across local government:

- Social services
- Refuse collection
- Transport
- Parking

Leadership

The required engagement needs to exist across all levels:

- Policy
- Political (members)
- Executive (CEO and down)
- Technical (existing IT management x 22)

The initial total time commitment of any team is likely to be biased towards engagement above technology.

Skills:

The skills necessary to achieve digital transformation do not exist across the public sector in Wales. A blend of existing knowledge and new skills will be critical. Given the past experience of GDS an emphasis on quality will be very important.

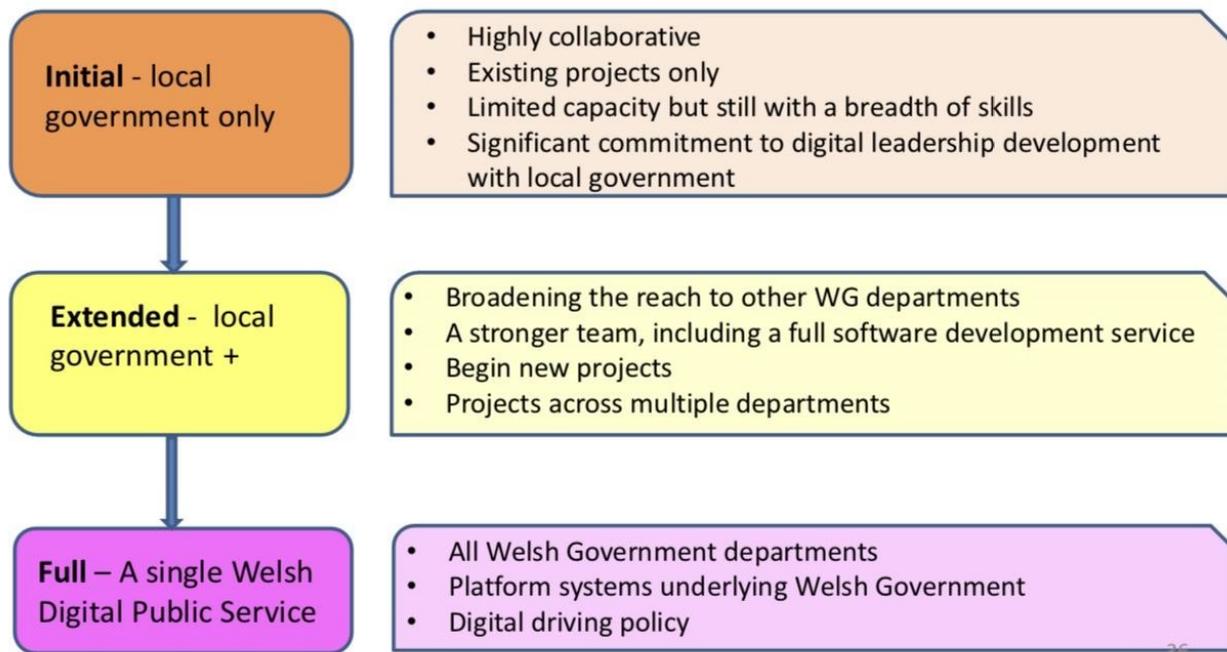
Investment

Investment will be needed to drive transformational change. However, this should be concentrated on investing in people and upskilling existing staff. There are no obvious requirements for capital spend (but these may appear on further examination...for instance, end-of-life vendor software).

The report set out a timetable for change:

| Stage | Description | Timescale |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1 | <ul style="list-style-type: none">• 100% digital usage within many communities & default use of social-media• Private sector adopting Welsh public sector technology• Wales joins the D5 – A world leading digital government (In 2015 there are 5 leading digital Governments worldwide. By 2020, there will be more – The D5 could be D20) | 2020 |
| 2 | <ul style="list-style-type: none">• Digital embedded in all aspects of public services• Wales as a digital exemplar• Competitive element within Welsh Government departments | 2019 |
| 3 | <ul style="list-style-type: none">• Digital increasingly dominates public sector policy, delivery and skills• Public Sector as employer-of-choice in Wales• Wide-spread use of blogging by civil service | 2018 |
| 4 | <ul style="list-style-type: none">• Vendors and waterfall no longer the default option• Mobile as the default for public sector digital• Build-up of broad digital skills (development / User-research etc.)• First signs of common technologies across Welsh public sector | 2017 |
| 5 | <ul style="list-style-type: none">• Patchy political and executive leadership across all public services• Vendor-dominated technology• Collaboration focused on process, not data-sharing | 2015 |

The Jones review found that stakeholders consistently raised the issue as to whether a focus on local government digital should be broadened to embrace and consider wider public services. It concluded that it should, especially since a significant part of the work, such as infrastructure, is common across all public services. The panel recommended an approach based on phased growth, focused around four core principles of delivery, leadership, skills and investment.



As a first step the panel recommended small team be established with a focus on a large scale IT project that many or all local authorities have an interest in. Crucially, the report recommended that the scaling up on the team be programmed in from the beginning.

Socitm Report

In April 2017 digital consultants *Socitm advisory published the findings of their research on digital maturity in Welsh local authorities*. They assessed how Councils were performing in six 'digital dimensions'.

When it came to *digital transactions* - the extent to which citizens can request services from the local authority website - Socitm found that Councils are not keeping up with the expectations of the public. No local authority provides an end to end, seamless transaction for all service requests. Whilst broadly comparable with councils in other parts of the world they said Welsh local authorities' direction of travel over the last five years is more volatile than the UK as a whole, and lags significantly behind the customer experience citizens now commonly have with the private sector. Whereas sites like Amazon digitise the whole shopping process, from picking a slot convenient to them, adjusting an order, making payment and providing feedback, councils tend to digitise part of the online transaction, like reporting a missed bin collection and the rest of the process remains paper based.

Socitm assessed the *digital leadership* of authorities. Most Councils do not have a Chief Digital Officer, with many still seeing digital as an offshoot of ICT. They found that digital strategies, where they exist (nearly a quarter did not have one), "do not completely embrace the full potential of the digital agenda". Councils are not making the most of citizen data to design services, not using digital engagement to co-produce services, and not using open data is not seen as a priority nor is it used as a key enabler. Socitm found that there is too little benchmarking with organisations outside Wales, and whilst there is some good practice, digital excellence will only be sustained where there is a culture change, development of digital skills at every level, and a strategy that is embedded across every level of a local authority.

The appetite for being *Smart with Data* exists in most organisations the report found, but data maturity is low. "Big picture, holistic, intelligence based decision making is not well evidenced across the 22 local authorities" Socitm said. Councils manage most data in silos and do not use it effectively to drive faster decision making and service design. The research found 'substantial appetite' for more work on data mining and interest in developing a single citizen account portals. However, no local authority volunteered to become part of the GDS (Government Digital Service) pilot for a single system for verifying identities online, preferring to wait for a more mature version of the product, Verify, to emerge.

Citizen oriented design, the fourth digital dimension examined by the report, is where digital services are being designed from the point of view of what citizens want (as opposed to what the local authority thinks they need). Instead of actively involving citizens in redesigning and changing processes from the start to the end, Councils are primarily focused on achieving short-term savings by moving some transactions online

(often procured from private sector vendors). Furthermore, in contrast to other parts of the UK, Councils in Wales are making little use of the GDS design framework because of a lack of awareness or capability to use this approach.

Levels of *digital exclusion* are higher in Wales than in England and need to be addressed through access (network infrastructure initiatives, as well as making equipment available), skills, motivation and trust to maximise levels of digital inclusion. Socitm found this is widely recognised in local authority strategies but despite efforts to provide access to Wifi and computers in public buildings, along with digital learning sessions, digital exclusion remains high across most areas of Wales. They conclude that addressing it is “an expensive ambition”.

The final digital dimension assessed by Socitm was *Digital Staff*. The report found a lack of evidence that councils were embedding digital skills into their workforce strategies and thinking ahead of the need for digital skills and capabilities in the future. Digitised workflow was present though not mature, and the approach was often driven by property asset strategies to minimise the number of buildings they had manage. Too few were using cloud computing, there was little evidence of the automation of staff processes, such as submitting expenses, nor of the use of digital tools such as Facebook or WhatsApp for collaborating. Socitm said there are likely to be good opportunities for further digitisation of internal processes but 8 of the 22 councils said they did not have sufficient capacity to deliver their digital requirements, The report found some enthusiasm for a central team of digital specialists that could be shared between local authorities to help them grow their own talent in this area.

Socitm report concluded that digital maturity will never be complete as new possibilities emerge in the marketplace any authority that rests on its laurels will drop down the digital maturity ladder. Its potential use in reducing on services is not being exploited and Councils need to think beyond websites and fragmented process digitisation to truly add value, Socitm said.

As part of the research project each Council was given their own results from the Digital Maturity self-assessment tool to review their own strengths and weaknesses, and encouraged to inform the Welsh Government on recommendations they were particularly enthusiastic about. It is not clear if this has happened.

The report made a series of recommendations:

Short term initiatives

Digital events - digital networking and learning events, addressing a CEO and Director audience, as well as Digital leaders and practitioners. These events should not be exclusively Wales focused; they should be used to inject wider thinking and challenge with speakers from other geographies and sectors as well.

Establishing a Virtual Digital Hub - (an on-line forum for discussion and document sharing as the foundation to bring together the local authorities around the digital agenda and establishing joint priorities) would support more digital networking events.

Facilitated collaboration - There is a need to enable greater collaboration across the local authorities in such areas as:

- Shaping the digital strategy for the nation, helping to inform the Digital First strategy.
- Digital toolkit development or adoption of GDS standards.
- Establishing priority projects; smart data solutions, online account, account verification.
- Digital skills development.

Longer term considerations

More shared systems - Each local authority is currently investing in their own digital initiatives. With budgets under pressure and a need for savings an investment strategy would accelerate the delivery of the nation's digital agenda, more common platforms, joined up procurement activities would help accelerate the digital agenda across the local authorities.

Tactical digital solutions - Areas of common platform in the medium term could be the investment in a single tool in the following areas:

- Web chat solutions
- Single email system
- HR, Finance and Payroll systems
- Social media listening and crowdsourcing tool

Infrastructure and digital inclusion - The rollout of super-fast broadband “Superfast Cymru” is a critical enabler to the digital agenda. Like other UK Broadband projects there remains an issue with the hard to reach locations and with “take-up”, where the infrastructure is deployed to the pavement hubs, but citizens choose not to procure it for themselves. Further consideration is needed in relation to those areas that will not have super-fast broadband; plans on addressing black spot areas is key.

Digital citizen insights - There is a substantial appetite to deliver collaborative solutions for managing citizen data and delivering citizen insights. As well as providing a better digital citizen experience, this also can drive better service design. There is an opportunity to explore this; to manage this with pooled data at a Welsh citizen level, rather than at an Individual local authority level. Such a project could drive down costs and deliver more citizen insights, as many citizens are citizens of more than one local authority. It could also form the basis of a truly valuable repository of open data. While protecting individual citizen anonymity, such open data could inform planning and regeneration both from a public sector and a commercial provider’s perspective. A collaborative approach to citizen insight, driving down cost and ensuring consistency, would be welcomed by most of the local authorities that participated in this research.

Wales Audit Office Report

In its January 2018 report *Informatics systems in NHS Wales* the Wales Audit Office examined the performance of NWIS, the NHS Wales Informatics Service, in delivering an electronic patient record over the previous four years. This vision was initially described in the 2003 Welsh Government strategy *Informing Healthcare* (albeit without a deadline being set), and revisited in 2015 strategy for digital health and social care which found NHS Wales ‘still working towards the goal of delivering a comprehensive electronic patient record’. “In that time, the global informatics market has changed significantly. In the USA, in particular, there has been rapid progress in rolling out electronic health records, albeit in a very different healthcare system. More generally, there has been a growth in open source technology, which is available to use and develop for free, and also greater joint working between different providers of applications to ensure they can communicate with each other” the report said.

The Auditor General for Wales looked in detail at the delivery of six projects by NWIS as indicators of the wider approach to informatics and found that while the vision was clear the delivery was marked by significant delays.

The Wales Audit Office found that NWIS allocated 10% of its resources for new ‘projects’ with the rest ring-fenced for pre-existing national systems or contracted services. Of the 30 projects that NWIS was rolling out, just seven were on target for timing milestones.

The Wales Audit Office concluded that ‘NWIS does not have a clear strategic approach to prioritising which new systems to include in its programme or for prioritising resources to those already in the programme’. Indeed, it found that attempt to prioritise “generally result in NWIS having more, not fewer, priorities”.

The Auditor General found considerable frustration within NHS Wales, with many of the barriers known to have previously impeded progress in the past still being reported as part of its review. Frustrations on the part of both the health boards and NWIS were having a significant negative impact on the relationships between them: “NHS bodies are deeply frustrated over the slow speed of delivery of national systems. NWIS staff also reported some frustration at what they saw as a lack of direction and engagement from health boards, particularly clinicians, in designing and rolling out new systems’ the WAO found.

They also found disagreement within the NHS on what the ‘Once for Wales’ principle means in practice. “The description of Once for Wales and interoperability in the 2015 strategy are ambiguous and there are competing interpretations across the NHS. On the one hand, there is a view that Once for Wales means that all organisations must accept national systems developed or procured by NWIS. However, there is also a view that the emphasis on interoperability means individual organisations can develop or procure

their own systems, provided they are compatible with national systems and those in other organisations” the WAO report said.

There was further disagreement on the point at which a system was considered delivered, for example, NWIS considers the Welsh Clinical portal to be ‘live’ however, health boards were reporting that Doctors found the functionality difficult and were instead continuing with paper referrals.

The report found significant weaknesses in NWIS’ governance arrangements including a lack of independent scrutiny and unclear lines of accountability. Reporting of progress and performance to the Welsh Government and the public tended to be ‘partial and overly positive’.

The report noted that the NHS had been under-investing in digital capacity for some time. In 2003 the independent review of the NHS by Sir Derek Wanless had recommended that the NHS across the UK should be spending 4% on ICT. However, by 2010-11 total spending on ICT across the NHS (including by NWIS) stood at around 2% of total expenditure, whereas NWIS’ 2016-17 budget is around 0.8% of health spending (excluding depreciation).

Parliamentary Review of Health and Social Care in Wales

At the same time as the Wales Audit Office was reporting so too was the Parliamentary Review of Health and Social Care in Wales which published its final report in January 2018.

Whilst noting that there is much to commend regarding the established of core digital and infrastructure and shared services arrangements in Wales, the expert panel noted the concerns and frustrations of users and providers of digital services in Wales. “Activity is just too dispersed and stretched, and lacks overall commitment around a unified vision and set of priorities. The principal concerns include integration challenges (centred around the need for common standards, and data and systems interoperability), information governance, cultural and behavioural issues, and the limited capacity and capability to deliver change and innovation at pace” the report said.

Led by the previous Chief Medical Officer for Wales, Dr Ruth Hussey, the Parliamentary Review Wales stated that Wales has “a real opportunity to better leverage its technology and infrastructure assets to deliver a transformed and seamless system”. It set out ten recommendations for change, one of which was to ‘Harness innovation, and accelerate technology and infrastructure developments’ (Recommendation 7), and it set out detailed proposals in an annex to the report.

Its core principle was that all technological innovations should be grounded in four mutually supportive goals – ‘the Quadruple Aim’ to: a. improve population health and wellbeing through a focus on prevention; b. improve the experience and quality of care for individuals and families; c. enrich the wellbeing, capability and engagement of the health and social care workforce; and d. increase the value achieved from funding of health and care through improvement, innovation, use of best practice, and eliminating waste.

It set out the following detailed proposals for change:

- ‘Progressing at pace’ the Digital Ecosystem project developed by NHS Wales Informatics Service (NWIS) and the Life Sciences Hub, providing NWIS and Health Technology Wales with platform access and analytics to accelerate innovation and support product adoption. The focus should be on initiatives which have the maximum impact and reach and generate the most beneficial outcomes, are scalable, support individual and community-based care, and are readily integrated and adhere to common standards.

- The Welsh Government, together with all digital and infrastructure service delivery organisations in both sectors, should reassess their strategic priorities and the opportunities for more collaborative and consolidated working in the light of its report. This should include enhancing and accelerating the Technology enabled Care Programme, as there may be a shift to primary, social and community care initiatives and associated technology enabled care.
- Clarifying the ‘Once for Wales’ policy, and agreeing prioritisation criteria to be applied to all existing and candidate initiatives. This should underpin a robust ‘stop, start, accelerate’ review to better focus efforts on a smaller number of key system user-centred initiatives, including regional and local exemplars with ‘national promise’. This requires an aggregated and rationalised view of the full portfolio of digitally-enabled initiatives. Core national ‘foundation’ initiatives, including the Electronic Patient Record (EPR), the gateway/portal for citizens and professionals to access multiple information sources and services, and initiatives delivering significant efficiency benefits, should take precedence.
- Common standards and platforms should be mandated whenever possible across both health and social care sectors to support interoperability and integration in the future. They should explore the opportunity to integrate and consolidate local authority, LHB, Trust and national infrastructure and systems (which will require a new funding model). Legacy systems should be replaced via an Infrastructure Refresh Plan aligned with a national infrastructure ‘route map’, although the immense challenge here should not be underestimated. Robust infrastructure, system and information security (which includes cyber security) must be of paramount concern, with clear and agreed protocols and principles in place to meet all legal, regulatory and advisory requirements, and with response plans regularly tested.
- Health Education and Improvement Wales (HEIW) should oversee the development of a cadre of trained clinical informaticians and leaders, who in turn can help strengthen efforts to develop a learning health and care system, and quality improvement expertise. Social Care Wales (SCW) should also ensure that training in digital skills is a priority. The Welsh Clinical Informatics Council (WCIC) representatives could potentially develop into a leadership group of Chief Clinical Information Officers. Programme and project teams should be multidisciplinary from the outset, with appropriate medical and social care involvement and system user input. Users should champion and lead the delivery of new systems, with a keen eye on the challenges of adaptive change (as highlighted in *the Wachter report*).
- Both NWIS and NWSSP (NHS Wales Shared Services Partnership) should have greater national presence and authority linked to a strengthened national executive and look to extend collaboration (e.g. e-learning). The hosting and accountability arrangements at the Velindre Trust may no longer be appropriate. The Welsh

Government should evaluate alternative models for consolidated national governance, including the HEIW arrangement, as well as the leadership seniority and governance board presence of both organisations. This should include considering leveraging the remit of NWSSP to deliver wider public services in Wales, but will require legislative change for NWSSP to provide services beyond the NHS.

- NWIS, in particular, should review and rebalance its resourcing profile such that design, development and support activities are 'rightsourced' with the optimal balance of internal digital, health and social care staff including clinicians and front-line staff, third sector, third party, system users, industry and academia. They should explore opportunities to better pool and share LHB, Trust and NWIS IT resources. Wales should look beyond its national boundaries and exploit co-operative alliances with other national health bodies with a similar agenda, including NHS Scotland where a close relationship already exists.
- We would support the recommendations from the Informatics Task Force and the resulting Statement of Intent from the Welsh Government to develop a national data resource, with workstreams focussed on information governance, national data resource, clinical information standards and workforce development. Health and care systems must take full advantage of the value that data and information offers to underpin new systems, drive decision making, improve health and care quality and exploit future business intelligence and data analytics initiatives. This will require health and social care professionals to be fully reassured regarding the integrity, security and sharing of data, and for citizens to be fully informed and to have provided appropriate consent.
- NWIS should finalise and share its design, development and service principles, including agile development opportunities, 'process before technology' considerations, evidence based redesign, inclusion, user involvement, and outcomes-based benefits assessment principles (for example, Government Digital Services (GDS) have a set of digital service standards).
- NWIS and NWSSP should adopt a common, staged and disciplined business case process to underpin prioritisation and investment decisions, in part to ensure that initiatives genuinely add value, and not workload, to professionals and service Innovation, Technology and Infrastructure users. Independent gateway assurance and post-implementation outcomes based benefits realisation and 'lessons learned' reviews should be mandated and shared, together with clear internal communications to manifest the value of initiatives to staff, citizens and system users. NWIS and NWSSP should have leading roles on the NWEHVIG (NHS Wales Efficiency and Healthcare Value Improvement Group) to help raise productivity, reduce unwarranted variations and waste, and promulgate best practice (including regarding the Carter report recommendations, where NWSSP is already fully engaged with the NWEHVIG).

- We understand that NWIS' 5-year 2016-21 Informed Health and Care strategy requires substantial funding on an all-Wales basis. If so, both prioritisation and technical and allocative savings are all the more crucial, and we would wish to see this clarified, and to understand the impact this may have on the funding envelope for other work. The Welsh Government, NWIS, and Finance Directors should evaluate alternative funding models, including assessing the opportunity to consolidate and integrate LHB, Trust and NWIS infrastructure, systems and resources, and the reinvestment of cashable benefits from change initiatives, and optimise the mix of capital and revenue funding sources. The Welsh Government should consider if core 'Once for Wales' funds should be pooled and ring-fenced rather than allocating a subset to LHBs. We assume there is a full current asset register for NHS Wales and professional procurement and contract management processes in place.
- The existing internal digital maturity assessment should be supplemented with external benchmarking assessments of both NWIS and NWSSP vs. peer organisations and 'best in class' to highlight areas of opportunity. This should include resource profiling and stakeholder feedback elements to improve co-production and alignment.

A Healthier Wales: our plan for health and social care

In its response to the Parliamentary Review, [A Healthier Wales: our plan for health and social care](#), published in June 2018, the Welsh Government recognised the role of technology in detecting illness sooner, supporting better clinical decisions and delivering personalised care which “instead of waiting for something to ‘go wrong’, our system will use all the tools available to ensure that things ‘stay right’”.

It did not, however, address each of the specific recommendations of the Parliamentary Review.

The Welsh Government reiterated its aspiration to bringing information from different providers together on an integrated platform through a single electronic patient record. “Having all the information needed about the individual, or about groups of similar people, will deliver better outcomes by helping clinicians at every level to make better decisions” the response stated.

It committed to ensuring “delivery at pace locally, across organisations and nationally”. It said its ambition is to provide an online digital platform for citizens, to give people greater control and enable them to become more active participants in their own health and well-being. “This will help people to make informed choices about their own treatment, care and support: finding the most appropriate service for their needs, contributing to and sharing information about their health and care, managing appointments and communications with professionals, and working with others to coordinate the care and treatment they need, so that it is delivered seamlessly” the response said.

It acknowledged that Digital technology develops at a very rapid pace, and it expected to see new opportunities and challenges throughout the life of this plan. “We cannot predict fully what those will be, but we will be more agile in how we respond to emerging technologies such as artificial intelligence, machine learning, precision medicine and genomics” the report said.

It concluded:

“We will invest to develop the skills we need within our own workforce, for example to make better use of clinical informatics, and to drive digital transformation projects. We will also ensure that our digital architecture, and the way we work digitally, is more open to the outside world, in ways that support economic development in Wales, and which offer exciting career opportunities, as well as improving health and social care services. To do this we must focus our efforts through a revitalised ‘Once for Wales’ approach which sets standards and expectations and where common platforms are mandated where there are clear benefits of doing so”.

And set out a series of measurable action points:

| Action | Date |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Accelerate progress towards a fully integrated national digital architecture, the roll out of the Wales Community Care Information System, and creating an online digital platform for citizens, alongside other nationally mandated services. | From 2018 |
| Invest in the future skills we need within the health and social care workforce, and in the wider economy, to accelerate digital change and maximise wider benefits for society and the Welsh economy. | From 2018 |
| Develop an 'open platform' approach to digital innovation, through publishing national standards for how software and technologies work together, and how external partners can work with the national digital platform and national data resource. | From 2018 |
| Significantly increase investment in digital infrastructure, technologies and workforce capacity, supported by stronger national digital leadership and delivery arrangements. | From 2019 |
| Establish a national data resource which allows large scale information to be shared securely and appropriately. | By 2020 |

Public Accounts Committee Report

The limitations of digital in NHS Wales have been features of a series of reports by the National Assembly's cross-party Public Accounts Committee (PAC) over the last two years. In its inquiries on hospital catering, as well as medicines managements, the committee uncovered delays of up to a decade in delivering IT projects. Following the Wales Audit Office report in January 2018 the committee held hearings before issuing a unanimous report, *Informatics Systems in NHS Wales*, in November 2018.

The report said NHS Wales was “still not fully ready to openly recognise the scale and depth of the problems”. The committee said it was deeply concerned about the slow pace of delivery of modern informatics systems across the NHS in Wales; support and oversight arrangements suffer from underlying weaknesses, and - echoing the concerns of the earlier WAO report - added there's a cultural problem which may be masking wider and deeper problems.

“Digital transformation requires an open culture, the Committee found that the culture at NWIS [the NHS Wales Informatics Service] was the antithesis of this. We are particularly concerned at the apparent lack of openness and transparency across the whole system... Troublingly this mind-set seems to be consistent with that of the health boards, and the Welsh Government teams working alongside NWIS, as the Committee found a collective reluctance to openly discuss the true state of progress” the committee said in the opening of its report.

Public Accounts Committee concluded that the way NWIS was seeking to achieve its primary project, a full electronic patient record, is outdated. “Though the 2003 vision for an electronic patient record is clear, “it is now quite old”. And by the time a full electronic patient record is achieved, key systems will be out of date”, the report said. It noted that the processes and tools for building software have significantly advanced over the past 10 years. For example the ability to access GPs via smartphones throughs apps stood in stark contrast with the NHS Wales GP application, My Health Online - “which is not delivering anything like the benefits it set out to achieve”.

Furthermore the electronic patient record development is based on acquiring separate systems from a number of suppliers. Whilst this was an understandable approach a decade ago (when the programme was begun) the Committee was very concerned about the NHS becoming increasingly dependent on the private sector. “Building our own systems can be a better solution than simply buying them in via large procurement exercises” the report said.

The PAC enquiry's criticisms centred on several themes:

Leadership & Governance

The Welsh Government and NHS bodies have not been intelligent clients of NWIS. Given the WAO finding that only 7 of NWIS' 30 projects were on target for timing milestones, the Welsh Government must consider whether it can have confidence in the competence and capability of NWIS as currently constituted.

Despite their "evident dissatisfaction about progress" the report said the committee saw no evidence that health board executives are scrutinising the work of NWIS (indeed there was confusion amongst them about how they would do this).

NWIS' lines of accountability for its performance are not clear. PAC noted that "there is considerable confusion around leadership of informatics in Wales with multiple individuals described in our evidence as having leadership roles and responsibilities".

The committee said NHS Wales lags behind the private sector in having informatics and ICT expertise represented at Board level and were disappointed with the reluctance of health boards to consider this. "We understand the point made by the Chief Executive of the NHS, that other areas can make a case for greater representation at board level and there is a risk that adding more people leads to an unwieldy board. However, informatics is so fundamental to the future of healthcare that we consider the case for stronger board representation to now be compelling" the PAC said.

It recommended a review of the senior leadership capacity in terms of skill-set and governance within both NWIS and the wider NHS Digital Team. "We were not convinced that the senior Welsh Government officials and top NHS executives have the detailed technical understanding needed to give NWIS a clear direction and challenge its performance and decisions" the committee said.

Resilience

The Committee heard that some of infrastructure in the NHS' data centres was over seven years old and needed replacement.

There were 21 outages of national systems between January and July 2018 – one outage every 9 days. PAC recommended the Welsh Government set out a clear timetable for putting the digital infrastructure of NHS Wales on a stable footing.

NWIS reported that it had been working on replacing this infrastructure over the past two years. £1.32 million funding had been provided by the WG to upgrade the WLIMS (Welsh Laboratory Information Management System) infrastructure, upgrading data storage and replacing 7 year-old hardware which is over seven years old. The committee regraded the proposal by the Director of NWIS to spend a further £6m on replacing servers as "throwing good money after bad, when the alternative is to switch existing system to a modern Cloud infrastructure".

The report found that NWIS needed a greater focus on undertaking routine maintenance, but was struggling to manage the tension between funding innovation and maintaining legacy systems. “It is a no-win scenario with either more delays to much needed new systems or risks of serious incidents and outages. This is essentially robbing Peter to pay Paul and not an acceptable or sustainable position” PAC reported.

This approach was typified by the experience of CaNISC, the online computer system for Cancer Services. PAC uncovered that CaNISC has a red risk rating because Microsoft stopped providing support for the system in 2014. Witnesses flagged concerns that it is a cyber-security risk as there is additional work to plug security holes and apply “patches”. The Committee was concerned that it has taken so long to reach the stage of having a business case, when it must have been clear long ago that it needed replacing.

PAC found that the evidence received on service outages and resilience was a microcosm of the wider picture. “Funding is stretched, with NWIS balancing the competing priorities of sustaining infrastructure while under pressure to deliver new systems. There are deep concerns about the lack of clarity around accountability and responsibility when things go wrong and putting things right again. We heard of delays in NWIS, in this case in producing reports on the incidents. We also heard of difficulties in sometimes getting NHS bodies to engage with NIWS in identifying the causes of problems. We remain concerned that the issues around system outages have not yet been fully resolved” the PAC report said.

The Committee said it saw no substantial evidence of take-up of Cloud services from NWIS, nor grasp of the opportunities presented by the Cloud. It also said it not see sufficient evidence of a deep level of Technological or Digital understanding, and little evidence that the benefits of Cloud computing are being fully identified.

Funding & Procurement

PAC said that without significant additional resources it do not think that an electronic patient record can be rolled-out in a reasonable timeframe. But added: “By additional resources, we do not necessarily mean new money for the NHS that would otherwise go to other public services. A key rationale for the electronic patient record is that it makes services more efficient and reduces mistakes, which are costly to put right. The NHS as a whole needs to take a longer-term, collective view of investment in informatics, on an invest-to- save basis”.

The committee was told that the cost of delivering the vision in each NHS body and NWIS’ contribution to National systems is tentatively estimated at £484 million on top of existing budgets, with £195 million capital and £288 million revenue. Of this £484 million, £196 million is identified as needed by NWIS, with the rest required by Health Boards and NHS Trusts. The Welsh Government accepted the Auditor General’s recommendation to carry out a full cost-benefit analysis of the investment. This is tied to wider reviews of the overall approach to infrastructure and system design and prioritisation.

“NWIS is currently overstretched and improvement requires far more than simply pouring more money into the existing organisation, which is unlikely to achieve significantly different results” the report said.

PAC said the Welsh Government should be very open-minded when looking at the funding options for NWIS. “It is clear that there needs to be a shift away from CapEx towards more revenue-funding. Also, we have the view that Digital / IT is still seen as a cost-centre, rather than an opportunity to improve patient care and experience, and reduce the overall Administration and Clerical budgets” the report said that a simpler and more transparent arrangement is required.

During the inquiry, the Welsh Government agreed to adopt the Government Digital Service design principles under a new Welsh technical standards board. The standards adopted by the Welsh Government are based on the principles of the Agile approach to developing digital services. However, the procurement processes run counter to an iterative approach. The ‘5 case model’ for business cases may be too rigid as it involves specifying everything up front. The Committee welcomed the work the Welsh Government is carrying out with the NHS England and the UK Treasury on how to adapt its business case process to allow it to take full advantage of the digital approach and agile approach to developments.

Capacity & Capability:

The Public Accounts Committee said NWIS needs between 5 and 10 new senior leaders, and the roles of NHS Wales Chief Information Officer and NHS Wales Chief Clinical Information Officer need sufficient authority and prominence within the Health Service.

Capacity also needs to be freed up within the system. There was criticisms of health boards for not sufficiently freeing up clinical time, so that clinicians can get involved in developing and testing new systems; it noted that the Auditor General’s report found that NWIS’ staff are frustrated at the difficulties they experience in getting clinicians to engage. However, PAC added that leadership should not fall to a small group of interested clinicians.

The report noted threats to NWIS’s existing capacity and capability as a result of the persistent criticisms that it had attracted from the reports cited above. PAC said the scrutiny had created reputational damage which had “impacted the attractiveness of NWIS as an employer in a market for technical skills which will always be very competitive”. The Committee argued that a more radical solution be considered. A lot of the work of NWIS is not NHS-specific (this includes cyber security, Cloud computing and software development processes), much of this is undertaken across all of the public services in Wales, especially South Wales which already has well regarded Digital functions such as those at the DVLA and ONS.

Recommendations

1. The Public Accounts Committee receives six monthly updates from the Welsh Government on progress in implementing the digital recommendations in the Parliamentary Review and the Auditor General's report in order to enable it to revisit these issues.
2. The Committee recommended that the Welsh Government set out a clear timetable for putting the digital infrastructure of NHS Wales on a stable footing.
3. The Committee recommended a review of the senior leadership capacity in terms of skill set and governance within both NWIS and the wider NHS Digital Team.
4. Any additional funding apportioned to NWIS needs to be tied to reorganisation to achieve the improvements that are required.
5. We recommend that NWIS look to increase its work with other public bodies, including those from UK Government. This approach could work on a number of levels, from the sharing of good practice on recruitment to the creation of Government Digital Service which could work across multiple agencies

Appendix 2

Meetings

- Caren Fullerton, Welsh Government Chief Digital Officer
- Andrew Griffiths, Carwyn Lloyd-Jones, Alison Smith, Michelle Hall, Helen Thomas and Gary Willock, NWIS
- Frances Duffy and Ifan Evans, Health Innovation, Welsh Government
- David Hinchelwood Bove and David Dinsdale, Atos
- Chris Owen, Head of Digital Learning Unit, Welsh Government
- Andy McDonough and Hannah Robinson, CapGemini
- Avril Lewis, Chris Meadows and Christian Coates, ESTnet
- Dr James Chess, Chris Brownlee, Richard Evans, Gareth Howells and Andrew Davis, Morriston Hospital
- Karen Jones and Steven John, Neath Port Talbot Council
- Phil Bear, ICT Service Manager, City of Cardiff Council
- Matt Wintle, Admiral Insurance
- Dyfed Alsop, Welsh Revenue Authority
- Carl Taylor, Welsh Water
- Jennifer Campbell, Kate Donaldson, Trish Quinn and Hugh Wallace, Social Security Transformation, Scottish Government
- Roger Halliday, Chief Statistician, Scottish Government
- Katy McNeil, CivTech Programme, Scottish Government
- Brian Hills, Data Lab, Scottish Government
- Colin Birchenall, Julie Kane, Local Government, Scottish Government
- Neil Frow, Andy Butler, Paul Thomas, Mark Roscrow and Dawn Benning, NHS WSSP
- Professor Philip Brown, Chair, WG Digital Innovation Review
- Daniel Hurford, Dr Chris Llewelyn and Cllr Peter Fox, WLGA
- Crispin O'Connell, Chief Technical Officer, Welsh Government
- Reg Kilpatrick, Director of Local Government, Welsh Government
- Ann Beynon, Valleys Taskforce
- Peter Sueref, Data Science Director, UK. British Gas
- Alwen Williams, Director Wales, BT Group

Appendix 3

Local Digital Declaration

Introduction

This declaration affirms our collective ambition for local public services in the internet age, and our commitments to realising it. It commits us working on a new scale to:

- design services that best meet the needs of citizens
- challenge the technology market to offer the flexible tools and services we need
- protect citizens' privacy and security
- deliver better value for money

This joint endeavour was initiated by the UK Ministry for Housing, Communities and Local Government (MHCLG), the Government Digital Service (GDS), and a collection of local authorities and sector bodies from across the UK. We invite all local authorities and the organisations we collaborate with to join us by ***signing the Declaration*** and committing to deliver a first action from which we can all benefit.

The opportunity

Never before has it been possible to collaborate so effectively, to deliver services across so many boundaries, to interrogate our data so insightfully, to realise such great efficiencies, and to reshape public services for the benefit of all while retaining local sovereignty.

Great work has already been done to transform our services using digital tools and technology. But we have an opportunity to do more.

Our ambition

We want to co-create the conditions for the next generation of local public services, where technology is an enabler rather than a barrier to service improvements, and services are a delight for citizens and officials to use. We know that one size doesn't fit all, but by developing common building blocks local authorities will be able to build services more quickly, flexibly and effectively. Only in this more open and flexible market will we unlock our full potential for innovation.

Our ambition requires both a culture shift and a technology shift, and we've agreed 5 principles to help us do it:

1. We will go even further to redesign our services around the needs of the people using them. This means continuing to prioritise citizen and user needs above professional, organisational and technological silos.
2. We will 'fix our plumbing' to break our dependence on inflexible and expensive technology that doesn't join up effectively. This means insisting on modular building blocks for the IT we rely on, and open standards to give a common structure to the data we create.
3. We will design safe, secure and useful ways of sharing information to build trust among our partners and citizens, to better support the most vulnerable members of our communities, and to target our resources more effectively.
4. We will demonstrate digital leadership, creating the conditions for genuine organisational transformation to happen, and challenging all those we work with to embrace this Local Digital Declaration.
5. We will embed an open culture that values, incentivises and expects digital ways of working from every member of our workforce. This means working in the open wherever we can, sharing our plans and experience, working collaboratively with other organisations, and reusing good practice.

Our commitments

MHCLG will establish a delivery team to support all Declaration co-signatories in realising this ambition. It will play a leadership role within central government, advocating for the approach set out in this declaration. It will work with councils as equal partners to create the tools and conditions for reform, delivering common technical patterns and routes to procurement for core services. And, as part of a collective effort alongside local government networks, it will help local authorities find out about priority projects that support this mission and support the continued growth of the local digital community.

In addition, each co-signatory will commit to the following activities:

Our leaders, service managers, board members and politicians will:

- Make sure that digital expertise is central to our decision-making and that all technology decisions are approved by the appropriate person or committee. This will ensure that we are using our collective purchasing power to stimulate a speedy move towards change.
- Have visible, accessible leaders throughout the organisation (publishing blogs, tweeting and actively participating in communities of practice), and support those who champion this Declaration to try new things and work in the open.
- Support our workforce to share ideas and engage in communities of practice by providing the space and time for this to happen.
- Publish our plans and lessons learnt (for example on blogs, Localgov Digital slack; at sector meetups), and talk publicly about things that have could have gone better (like the GOV.UK incident reports blog).
- Try new things, from new digital tools to experiments in collaboration with other organisations.
- Champion the continuous improvement of cyber security practice to support the security, resilience and integrity of our digital services and systems.

Our transformation, information technology and digital teams will:

- Research how to reuse existing user research, service design, common components, and data and technology standards before starting to design or procure something new.
- Build capacity in service-design, so that each service we transform is informally tested by our peers against our national ***service standard*** where appropriate (GDS will be publishing a local-friendly iteration).
- Where appropriate every new IT solution procured must operate according to the ***technology code of practice***, putting us in control of our service data, using open standards where they exist and contributing to their creation where they don't.
- Share knowledge about digital projects where there is an opportunity for potential reuse or collaboration with others.

- Work together to establish the trust frameworks we need to safely analyse and share personal data. This will allow us to better serve our shared customers and reduce the need to ask citizens for the same information multiple times.
- Work together to create common solutions that allow us to check people's eligibility for services with central government and others in real time with their consent.
- Take inspiration and ideas from a wide range of sources, and participate individually in communities of practice and interest outside the organisation
- (for example, *LocalGovCamp*, *OneTeamGov*, and related networks and events).