The Welsh Government acknowledges the findings of the report and offers the following response to the five recommendations contained within it.

**Recommendation 1** – We recommend that the 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 us to revisit these issues at a later date.

**Accept** – We recognise the Committee’s concerns and we have initiated actions to improve the pace of delivery, most of which were already in train ahead of the Committee’s final report. The Committee has recognised that evidence gathering by the Wales Audit Office for its Review began some 2 years ago and since that time, a number of improvements in our whole system governance of informatics programmes and digital change have been put in place.

The National Informatics Management Board was repurposed to ensure a focus on how the Health Boards and NWIS were working together to improve the delivery of the agreed *Informed Health and Care: a digital strategy for health and care* and this was reflected in the evidence provided to the Committee. In addition, the Committee will be aware of the commitment to increase investment in and focus on digital and informatics contained within *A Healthier Wales* which was issued earlier this year as the joint health and social care long term plan for Wales. This was in response to detailed commentary from the Parliamentary Review about digital opportunities and progress and informed by engagement across service users and providers.

I would expect that regular reporting will give the Committee an opportunity to see progress in respect of the recommendations in the Parliamentary Review and the Auditor General’s report. In addition to Welsh Government making additional investment available, within six months the three-year National Informatics Plan will be in place and the reviews of the digital architecture and governance of informatics in NHS Wales will have been completed.

**Recommendation 2** – The Committee was also very concerned by the evidence we heard on system outages, infrastructure and resilience. Given recent evidence of further outages since we took evidence, we would like further assurance from Welsh Government that the systems are resilient. We recommend the Welsh Government set out a clear timetable for putting the digital infrastructure of NHS Wales on a stable footing.
Accept – As would be expected, I can assure you that critical systems are regularly and routinely tested to ensure that they are fit for purpose. Data centre services in Wales are provided within a quality environment that has been independently accredited to ensure that standards meet ISO requirements. The last accreditation was in September 2018 and all ISO accreditations are up to date.

The Committee will wish to be aware that NWIS is putting greater focus on undertaking routine maintenance (e.g. firmware upgrades) and in undertaking upgrade activities outside of core working hours. In the past five years £9.3m in additional funding has been provided by Welsh Government to fund essential replacements. NWIS is developing a business case to secure additional funding to reduce the likelihood of further downtime. We also expect each Health Board and Trust to have appropriate business continuity plans in place, including the use of the Joint Emergency Services Interoperability Principles for managing major ICT or cyber security incidents.

Welsh Government will continue to prioritise funding towards critical systems and this will be reflected in the three-year all-Wales National Informatics Plan which will go to the National Informatics Management Board (NIMB) in December. This will be further informed by the output of the architecture review due to commence early in the New Year. We will expect each Health Board and Trust’s Integrated Medium Term Plan (IMTP) to reflect this nationally agreed agenda.

Recommendation 3 – In the discussions on the use of Cloud computing and the impact of recent outages, it was deeply concerning that, when many consumer systems appear to have very robust performance and up-time, the NHS in Wales is struggling to run its own data centres with 21 outages in the first 6 months of 2018 – one outage every 9 days. The Committee recommends a review of the senior leadership capacity in terms of skillset and governance within both NWIS and the wider NHS Digital Team.

Accept – The “Use of Cloud” Task and Finish Group developed guidance for the use of Cloud services in NHS Wales. This guidance encourages the use of cloud services alongside traditional software and infrastructure deployment models within the business case process and in April 2018, the NHS Wales Informatics Management Board, which includes representatives of Welsh Government, NWIS and each health board and trust in Wales, approved the guidance document for publication.

NWIS has worked on the adoption of new cloud services for several years and currently supports more than 10,000 users, using Microsoft Office 365 cloud services for email, file storage, Skype and other services. NWIS is also supporting Health Boards who are working on using PowerBI (Business Intelligence services) using the Cloud. One of the suppliers of GP systems for NHS Wales (is using ‘UKCloud’ to host the systems for its GP practices.
In addition to this, NWIS has worked with Microsoft and NHS Wales organisations over the past 18 months to put the underpinning systems in place to allow NHS Wales organisations to be able to consume cloud services from Microsoft Azure.

We are committed to significantly increase investment in digital infrastructure, technologies and workforce capacity, supported by stronger national digital leadership and delivery arrangements, as already promised in *A Healthier Wales*.

The Committee will also be aware of the commitment in *A Healthier Wales* to review hosted national functions, which includes NWIS, with the aim of consolidating national activity and clarifying governance and accountability. This was discussed in evidence to the Committee.

The leadership requirements across the whole system are a feature of the review of governance of informatics which will report to Welsh Government in January. This review, started earlier this year, has interviewed around one hundred people engaged in digital leadership and informatics management, including clinicians, across the NHS and will report early in the New Year. This action was already in place in advance of the Committee’s recommendations, generated by the Parliamentary Review. Importantly this will be a whole system review and not limited to a review of NWIS capability and capacity.

**Recommendation 4** – 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. We recommend that any additional funding apportioned to NWIS needs to be tied to reorganisation to achieve the improvements that are required.

**Accept** – We have always recognised the complexity and the challenges in delivering our vision of a single electronic record and previously accepted the WAO recommendation earlier this year to commission a review of our approach to building the digital architecture to support this. This work is now in train and will ensure that current market developments are considered as well as providing an overview of the rationale for local v national systems. This will build upon last year’s decisions including the agreement to mandate national data repository systems, the setting up of the Welsh Technical Standards Board and to develop plans for a “National Data Resource” which will enable us to make a step change in how we capture, manage and use the data that we have across our health and care systems.

These actions as well as the governance review and the establishment of the NHS Executive, as signalled in *A Healthier Wales*, will inform the future shape and structure of informatics in the NHS in Wales and help to respond visibly to the Committee’s concerns. The increased investment in digital committed to in *A Healthier Wales* will be advised by the three-year National Informatics Plan.

I trust the Committee will acknowledge that there will need to be continued investment in NWIS for the business-critical support and developments, delivered nationally, for which it is responsible, while these actions are underway.
The Committee will also wish to note that NWIS-driven initiatives have resulted in cost benefits, as well as operational ones. As examples: NWIS negotiations with Microsoft three years ago saved 40% on licensing costs of an Enterprise Agreement; the Picture Archiving and Communications procurement (PACS) saved £15m – against current Health Board-level contract costs; the GP systems and services procurement represents a saving of £1m per year on the core contract cost; and the deployment of a managed-print service across all GP practices is anticipated to generate savings in the region of £4m across the seven-year term. I am content to share further details of value for money in respect of National ICT implementations.

It is important to recognise the responsibility of each Health Board and Trust to work alongside NWIS in the development and delivery of national systems and align their local investment plans to achieve the agreed national vision for an integrated electronic patient record.

**Recommendation 5** – We recommend that NWIS looks 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.

**Accept** - We recognise that sharing of good practice is essential as the NHS in Wales continues to deliver high quality services. This is important when addressing the challenges of recruiting quality staff within the digital space and there are opportunities to share, learn and adapt.

NWIS is increasingly working and exchanging information with other public bodies from within and outside Wales, such as Local Authorities, particularly in the implementation of WCCIS, and with the National Cyber Security Centre at a UK-level.

We also told the committee of Welsh Government engagement with NHS Digital, the Department of Health, the Scottish Government and Northern Ireland. We will facilitate and encourage more engagement, building on existing contacts and example of innovation. This will include engagement with the Digital Health Ecosystem Wales, the multi-stakeholder entity, including health, academia and industry, established under *Informed Health and Care*. The NHS clinical informatics community is also directly represented on the Welsh Government’s Digital Transformation Panel.

The Welsh Government works across multiple agencies by working closely with the Office of the Chief Digital Officer to share lessons learned across the wider public sector in Wales.

As referenced above, the NHS’s Welsh Technical Standards Board has accepted the GDS Digital Design Principles and the Welsh Government Digital Service Standards to ensure a consistency of approach when developing new services.