

Carmarthenshire County Council

Digital Schools Strategy 2018 – 2021

Annual Progress Report 2020/21



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Digital Schools Strategy 2018 - 2021

Annual Progress Report 2020/21



In May 2018 Carmarthenshire County Council produced its first ever Digital Schools Strategy from 2018 to 2021. That Strategy sets out our vision, underpinned by overarching principles and key priorities areas for the provision of ICT Services to Schools across Carmarthenshire.

Our strategy aims to improve the current provision of technology within schools, creating the conditions to allow everyone involved with delivering education in Carmarthenshire, along with

pupils and parents to take full advantage of the opportunities offered by digital technology in order to raise attainment, ambition and opportunities for all.

The strategy outlines the technology we will deliver and support within schools, underpinning the skills and confidence of teachers whilst improving access to digital technology for all learners. We want to ensure that digital technology is a central consideration in all areas of curriculum delivery and that ICT is embedded deeply to enhance the overall quality of education throughout the county. Our strategy sets out how we underpin our ambitious approach to transform the way we deliver our services to Schools and ensuring that our teachers can achieve the ambitions of the National Digital Competence Framework.

Whilst 2020 was a challenging year for everyone, it placed significant pressure on ICT to ensure that learning continued to be delivered at home whilst students were unable to attend their normal classes. The foundation provided within our strategy and in particular the move into the Hwb learning environment allowed teachers and students to maintain contact and to continue learning.

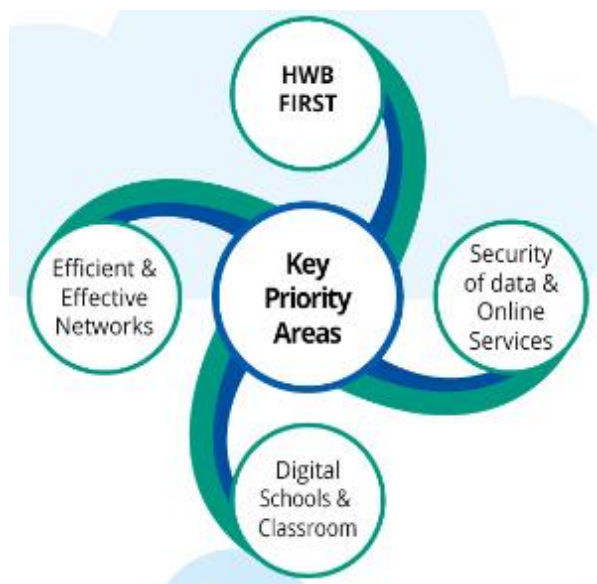
The Authority fully participates in the Hwb EdTech Programme, a transformational strategic initiative Welsh Government that has seen £92m of investment within schools in Wales. The objectives of the programme are fully aligned with several Carmarthenshire objectives and has seen our schools benefit from an investment in new infrastructure and devices of £3.27m in 2019/20 and £1.79m in 2020/21.

It was agreed by the Executive Board and Corporate Management Team that the Digital Schools Strategy would be reviewed annually, and we would report our progress in delivering on our key projects in this, our Annual Report.

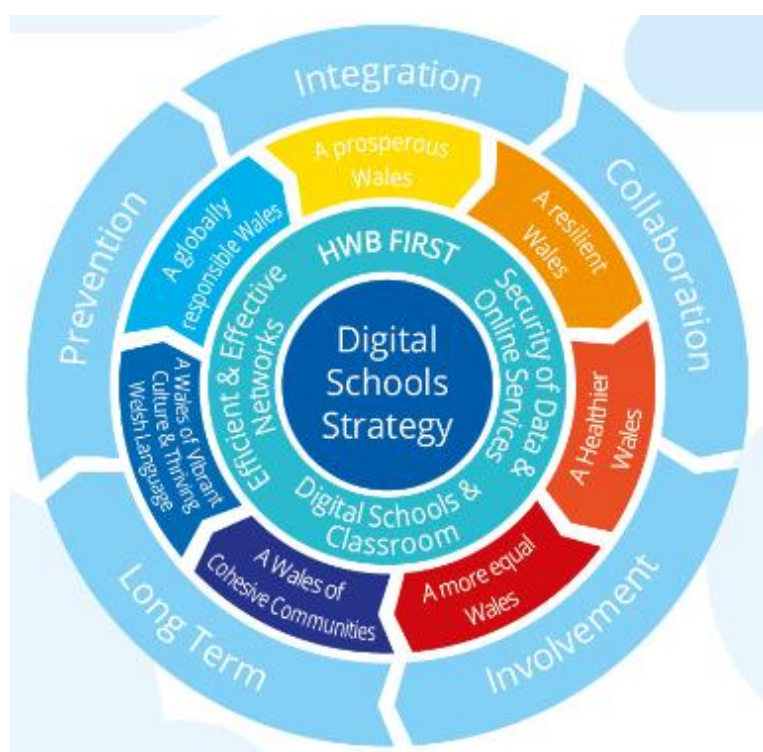
Why do we need a Digital Schools Strategy?

Carmarthenshire County Council's ICT Services Division provides extensive support and services to all schools across the Authority. Our Digital Schools Strategy provided the vision, underpinned by overarching principles and key priority areas for the provision of ICT Services to and in schools.

The schools' use of technology promotes innovative learning by digitally confident students, inspired by skilled and creative teaching. Welsh Government's Digital Competence Framework is distinct from ICT. Digital Competence is one of three cross-curricular responsibilities, alongside literacy and numeracy; it focuses on developing digital skills which can be applied to a wide range of subjects and scenarios that are transferable to the world of work.



This fully costed and resourced Digital School's Strategy outlines where we intend to take the ICT provision within Schools over the coming years, to ensure that schools have the appropriate technology to deliver the Digital Competence Framework. The audience for this Digital Schools Strategy are our schools, teachers, governors, staff and elected members.



ICT Services, through the Service Level Agreements it has in place with schools, articulates how we will continue to support schools of a day-to-day basis with its ICT support and services.

We will adopt the Sustainable Development Principles of the Wellbeing of Future Generations Act in our design and implementation of all transformational activity and new digital technologies to assist us in delivering the Future Generations Wellbeing Objectives



A Digitally Enabled Carmartheshire

To help achieve this bold vision within Schools we must:

- Align all digital technology to the needs of teachers, learners, the Curriculum and the Digital Competence Framework.
- Fully migrate all schools to the Welsh Government HWB digital learning platform.
- Make digital connectivity and bandwidth the foundation of our schools technology stack, providing reliable and fast access to the Internet and HWB environment.
- Harness cloud environments to deliver technology anywhere, anytime for schools, teachers, staff and pupils.
- Decommission our central and schools based on premises infrastructure and replace with virtual cloud technology where at all possible.
- Assist schools wherever possible to achieve efficiency savings without affecting learning outcomes.
- Ensure schools have access to cost-effective ICT equipment, with a reasonable life span, that is supported by the central service and can be purchased within financial regulations.
- Provide timely remote and onsite support to ensure that essential equipment is available at key times.
- Provide appropriate web filtering controls to ensure that Internet users are safe online.
- Help and encourage schools to take ownership and responsibility of all matters relating to ICT within their school.

ICT is an ever-changing environment. It is critical that the services and technology provided to schools underpins the key objectives of teaching and learning in order to enable students to reach their full potential and to fulfil the requirements of the Digital Competence Framework.

Overarching Principles

To achieve the ambitions laid out in this Digital Schools Strategy we will adhere to the following overarching guiding principles:



There are significant and compelling drivers to adopt a **HWB FIRST, CLOUD FIRST APPROACH** towards teaching resources, technologies and infrastructure. We will pursue and migrate to these solutions where at all possible.



Fully commit and align schools ICT provision to the **NATIONAL ICT AGENDA** as directed by Welsh Government where at all possible, to include but not limited to HWB, LiDW2, 21st Century Schools and the requirements of the Digital Competence Framework.



We currently host and support a variety of complex and ageing legacy technologies both centrally and within schools. Supporting and maintaining these is both resource intensive and educationally restrictive. We will seek to **RATIONALISE & CONSOLIDATE TO HWB** at every opportunity.



We will take advantage of potential benefits and efficiencies through the active investigation, pursuit and adoption of **NEW & EMERGING TECHNOLOGIES**. Where there is potential to add significant value within schools, we will pursue that technology.



We will strive to **IMPLEMENT ALL CHANGES** in a methodical and controlled manner. We will consult and communicate frequently with all relevant stakeholders.



Where there are opportunities to underpin and add value through **COLLABORATION**, we will do so, locally, regionally, nationally, across the education sector, the public sector, and private sector.

Resources and Efficiencies

Throughout 2020/21 we have invested a significant amount of financial and staffing resources ensuring that our Schools continue to develop and improve their digital curriculum delivery and that technology is enhanced in order to raise attainment levels for all. We have made significant investments in our people and skills, digital systems and services, and in providing a robust and resilient infrastructure to underpin Education delivery across the County. In addition to the Service Level Agreement funding, all of which is reinvested in Schools ICT, we have invested the following over the past financial year:

Capital Investment

- **£35K** on upgrading and enhancing Schools internet connectivity, working alongside Welsh Government and the all Wales Public Sector Broadband Aggregation team.
- **£360K** on ICT provision at new and refurbished schools via the Authority's Modernising Education Programme.

People & Skills

Whilst 2020/21 has indeed been a very different year, we have invested **£12K** in upskilling ICT staff, providing them with the skills and ability to take our ambitious adoption of Digital Transformation and technology forward including the delivery of Schools ICT provision and support. In addition, we've taken advantage of fully funded local, regional and national development opportunities offered through Welsh Government, Academi Wales, the Institute of Leadership and Management and the Council's internal Learning and Development department.

Doing so is helping to develop and retain the Digital leaders and workforce of the future within Carmarthenshire who are working alongside colleagues in the Education department and Schools to shape our Digital Schools of the future.

The core Hwb Programme implementation team have also worked closely with Welsh Government, Microsoft and Google to manage our devices within their systems. Carmarthenshire was the first Authority in Wales to achieve integration on the greater part of its hardware estate.

Efficiencies Delivered

- **£29K** annual savings delivered through the migration of Carmarthenshire Schools to the all Wales HWB Digital learning platform. This money has been reinvested in essential Cyber Security and Anti-Virus technology for all Schools.
- **£79K** of annual efficiencies for Schools via renegotiated Printing and Telecommunications contracts.
- **£33K** of revenue efficiencies achieved so far through the introduction of cashless catering systems across schools.
- **£25k** per annum from adopting the Hwb Device Management system instead of procuring an independent software package

Engagement

In line with our departmental purpose, which is to “*engage with and understand our customers to help them deliver effective services*”, a significant amount of work has gone in to ensuring we are as proactive as possible in terms of customer care and engagement with Schools, our Education Department and Welsh Government throughout the year. This includes:

- Representing Carmarthenshire at the Welsh Technical Standardisation group, including piloting of presentation model to group.
- Representing Carmarthenshire on the Welsh Government Device Management forum, working closely with the Hwb Team, Microsoft and Google.
- Chair of the National Hwb EdTech Delivery Board for 2020/21
- Leading on all ICT related matters on the corporate Modernising Education project delivery board.
- 6 monthly technology development days for all secondary school ICT network managers.
- Attending quarterly meetings with all primary school’s digital champions.
- 6 monthly meetings with secondary school’s heads of curriculum for ICT.
- Attending primary schools head teacher meetings on at least a quarterly basis.
- Attending secondary school head teacher meetings.
- Regular attendance at Education department management team meetings.



Modernising Education Programme

In addition to our ICT provision to schools via our Service Level Agreement, ICT Services also leads on all ICT related matters relating to the authority's Modernising Education Programme. This includes decisions and recommendations regarding the strategic direction of technology within new and refurbished schools as well as the delivery of that technology including procurement, configuration, installation and support.

Throughout 2020/21 we have successfully completed the full ICT implementation of Ysgol Pum Heol, Ysgol Llangadog and Ysgol Rhys Prichard, as part of our Modernising Education Programme. This work and investment has provided students and teachers with 21st Century technology to deliver first class digital education.

As part of our work across the MEP program we have modified our digital blueprint for Carmarthenshire schools to fully align with the Welsh Government Education Digital Standards document.





Hwb Digital Learning Platform

Management of all Windows and Chrome devices within Hwb platform – During 2019/20, Carmarthenshire worked closely with Welsh Government, Microsoft and Google to manage devices within their respective systems, securely managed within Hwb. This has saved the Authority £25k per annum by migrating into the Hwb system that is supported by Microsoft and Google. The efficiencies have been reinvested into the school ICT service and into additional bandwidth for schools.

Rollout of Devices via Hwb – during the pandemic, a quick rollout of devices was essential to support teachers and learners in schools. With financial and technical support from the Hwb team, all 4785 Windows devices and 5552 Chromebooks were provisioned using the respective “White Glove” service. This means that devices were delivered directly to schools for them to log in using their Hwb username and password, knowing that they would work directly out of the box, putting them in the hands of learners far quicker and reducing visitors to schools during the pandemic. It further supported teachers in delivering lessons via the Hwb environment on equipment that provided a consistent and reliable experience.

Provision of Learner Devices via Hwb – the Authority has provided over 900 Chromebooks and Neverware Laptops (a Windows laptop converted to a Chromebook) to students to enable them to continue with their learning at home. These are all provisioned and managed, safely and securely within the Hwb environment, with additional web filtering enabled for enhanced safeguarding.

Migration of all teacher and student data from on premises solutions into HWB’s secure platform – Building on the planning carried out during 2019/20 and under challenging conditions in 2020/21, approximately 80% of all Primary School teacher data has now been migrated from onsite and local storage into the safe and secure Hwb cloud platform. All secondary schools have commenced the journey, with all providing their learning materials online. Two schools have eliminated nearly all of their on-premise data storage. Significant benefits have already been felt, with online lessons, student work and marked work all integrated within Hwb. It is planned that this will continue during 2021/22 until all onsite data storage is migrated.

Migration of all schools websites from on-premise Umbraco solution into the HWB digital platform – This work has been further delayed during 2020/21 as was not possible to provide adequate onsite training and hands-on migration support during the Covid pandemic. The decision to delay was also influenced by the potential risk of making any significant website

changes when many schools used their existing website for communication with parents. In the meantime, we have acted to ensure this delay has no adverse effect on Carmarthenshire Schools and the integrity of their websites. The existing on-premise environment has been updated and security patched to ensure optimized performance and that all Schools retain a fully functioning website for the foreseeable future.

Hwb EdTech Programme

The EdTech Programme is an innovative and transformational scheme that aims to significantly improve the digital infrastructure within all maintained Schools in Wales. The scheme underpins the Education Digital Standards for Wales and aims to ensure that each Local Authority's has a plan in place to ensure that the ICT and learner experience each school is consistent, standardised and sustainable.



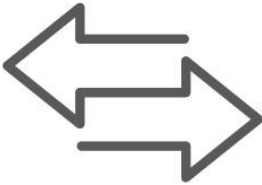









The Authority has worked closely with its schools to design and implement a long term Hwb Sustainability Scheme to ensure that the investment from Welsh Government is replaced as and when required into the future. Carmarthenshire was the first Authority in Wales to have a full sustainability scheme implemented.



With full access to schools anticipated during the next 12 months, it is expected that the deliverables of the project in terms of consistency, standardisation and sustainability will be fully achieved so that staff and students will receive the full benefits.

The sustainability scheme is reviewed annually to ensure that the hardware is replaced at the appropriate time, giving the best opportunities for staff and learners.

Carmarthenshire has received a funding allocation of £3.27m in 2019/20 and £1.79m in 2020/21. Whilst access to schools has been challenging during the pandemic, they have already benefitted from the following works:

Replaced data cabinets in 16 schools	Repaired/Extended 40 school networks	Implemented 318 switches at 74 Schools	Distributed and installed 1751 Staff Windows devices
			
Installed 3034 Student Windows devices	Rolled out 1500 connectivity docks on teacher desks	Provided 715 PC's	Distributed 5552 Chromebooks for Student Use
			
Enrolled 1350 existing Chromebooks into the management system	Provided 1669 student iPads – already enrolled into their new management system	Delivered 262 Trolleys for schools to safely and securely store and charge their devices	Replaced 103 broken screens and projectors across all schools
			



Welsh Government have provided an additional **3141** Chromebooks to schools and also granted a further allocation of **£878k** during 2021/22

Efficient & Effective Networks



Learning in a Digital Wales 2 (LiDW2) joint investment Project – All schools have been upgraded as planned. With the developments within Digital Learning, impacted by the increase in numbers of devices, now that students have returned to the classroom this is having an effect on network connectivity in some schools. Three schools were upgraded to 1gbps as a pilot project with Welsh Government and we are currently working with BT PSBA to increase the bandwidth of two others. School internet usage is monitored and analysed on a weekly basis to ensure sufficient bandwidth is provided.

Adoption of Cloud hosted web content filtering – We worked closely with BT and Welsh Government colleagues throughout 18/19 to scope, test and configure this new collaborative, all Wales solution for Web filtering in Schools. All schools are now migrated to the solution with excellent results. During the initial lockdown period, we worked with Welsh Government, BT and their filtering provider to jointly develop a cloud-based filtering solution for Chromebooks that were lent to students at home. This now forms part of the standard offering to all schools within Wales.

Schools Wireless Network maintenance and development – The overall upgrade of the Wireless network was completed on time. However, with changing pupil numbers in schools and challenges to provide flexible and Covid-compliant learning, further developments have been made to the network in 2020/21.

Security of Data & Online Services



Expansion and evolution of schools' infrastructure cyber security capabilities – Year-on-year, we have made improvements to our cyber-security portfolio, to ensure that our networks and data remain safe. We have installed a new core Firewall and have consistently ensured that our school filtering is on the latest security patch. Bandwidth requirements have increased significantly and with the new schools firewalls and switching purchased from our Hwb EdTech Programme allocations, over 70% of our schools have already been upgraded to take advantage of the new faster, safer technology. Remaining schools are scheduled for completion by end Summer holidays 2021.

The safety provided by the Hwb environment has already provided benefits to our email users, but with Blended Learning being a key feature of learning during lockdown, the safety from the Microsoft Teams and Google Meet applications within Hwb have provided important functionality in a safe and secure way.

Review, upgrade and evolution of schools' antivirus and device encryption solutions – The implementation of a cloud-based antivirus solution has been extremely successful, however through the Hwb EdTech collaboration with Welsh Government, access to other software packages have become available and the Primary Schools have been migrated to product within that portfolio. Secondary school provision is under review and a decision will be made in 2021/22. Currently Welsh Government are working on a central device encryption package for which we anticipate providing to our schools when it is available.

Digital Schools & Classrooms



Classroom Hardware Provision – Significant savings and service improvements had been obtained from the standardisation and streamlining of our product portfolios. However, the implementation of the Hwb EdTech Programme, with its centralised purchasing framework and all-Wales economies of scale has now superseded this arrangement for high value items. The Carmarthenshire framework remains for consumables and small peripherals (such as

Microsoft Enterprise Agreement (Software) – The All-Wales agreement between Welsh Government and Microsoft has been immensely beneficial to our staff and learners. All students have access to Microsoft Office on 5 of their personal devices and all of our Windows devices have the latest versions of Windows 10 and Microsoft Office.

The most significant development in 2019/20 has been the full adoption of the Device Management services that are fully implemented within the Hwb environment. All new devices are already enrolled within Microsoft InTune or the Google Management Console, requiring all users requiring to authenticate with their Hwb username and password. This provides significant security and achieves many of our future identified security objectives.