

Digital Schools Strategy

“The next steps on the *‘Hwb First, Cloud First’* ladder”

2022 - 2025

carmarthenshire.gov.wales

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Deputy Leader



Digital technology is already firmly established in modern life but historically, its benefits have not always been fully felt within our education establishments.

The overnight near-ubiquitous adoption of Digital Learning during the various lockdown periods remained embedded with schools once they returned to their “new normal” and Hwb is now accepted across Carmarthenshire as the default repository for learning. It has also been essential in keeping learners engaged with their peer groups when being unable to attend school for any period of time.

This strategy builds on the progress made over the last three years to continue the development 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.

This 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 remains embedded deeply so as to enhance the overall quality of education throughout the county.

Wendy Walters
Chief Executive



Welcome to Carmarthenshire County Council’s Digital Schools Strategy 2022-2025. This strategy sets out the next steps that we will follow to deliver our ambitious approach to transform the way we deliver our services to Schools.

Staff, learners and School Leaders have had a very challenging period over the last two years but they have achieved significant progress in the adoption of digital learning and the delivery of the new curriculum.

There are several tough challenges facing education in the years ahead and utilisation of all the available resources made available to schools will support staff and learners in maximising the use and effectiveness of our latest digital innovations.

The adoption of the Hwb environment, followed by the deployment of the Hwb programme and integral sustainability scheme provides schools with a firm foundation on which to deliver.

The Digital Schools Strategy will be reviewed annually and we will report our progress in delivering on the key projects in our Annual Report.

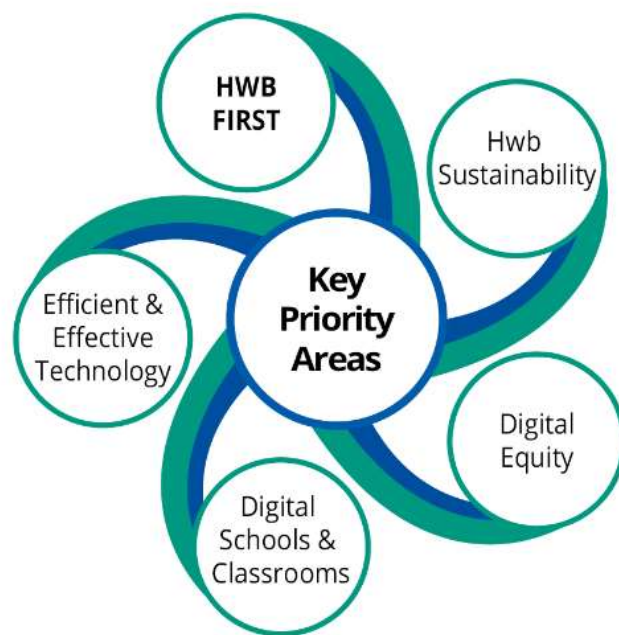
Building on the Foundation

The previous Digital Schools Strategy outlined the vision, principles and priorities for the ICT service provision to Carmarthenshire's schools. This new strategy aims to build on the foundations of those works, and supporting the principles of Welsh Government's Hwb Programme, sets out the key priorities and deliverables, to move our staff and learners forward.

The past two years have been challenging for all teachers, learners and leaders. The dependence upon ICT has increased significantly and the transition from traditional learning methods to online delivery has been swift. Schools should rightly be proud of what has been achieved in a short time.

The schools' use of Technology promotes innovative learning in school, at home and between students from different schools and establishments. This in turn results in digitally confident students who are inspired by such skilled and creative teaching.

This fully costed and resourced three year Digital Schools 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 and the Curriculum for Wales. The audience for this Digital Schools Strategy are our schools, teachers and staff, elected members and the leadership of the Authority.



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

We will adopt the Sustainable Development Principles of the Well Being and 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 Carmarthenshire”

To help achieve this bold vision within Schools we must:

- Align all digital technology to the needs of the teachers, learners, the Curriculum and the Digital Competence Framework.
- Continue migrating all schools into Welsh Government’s Hwb digital learning platform.
- Strive to continue reducing digital exclusion for learners by working with schools, partners and other stakeholders to improve access to digital resources
- 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-premise infrastructure and replace with virtual cloud technology where at all possible, giving preference to Hwb-hosted solutions.
- Use the Hwb Sustainability Scheme to ensure that staff and learners have equality of access to fit-for-purpose ICT equipment, giving a standardised and consistent experience across all schools.
- Assist schools to achieve efficiency savings without affecting learner outcomes, leveraging corporate contracts wherever possible.
- 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 and Curriculum for Wales

Overarching Principles



We have seen significant benefits from adopting our **HWB FIRST, CLOUD FIRST APPROACH** towards our teaching and learning resources, technologies and infrastructure. We will continue to pursue and migrate to these solutions where at all possible.

Continue to fully commit and align our Schools ICT provision to the **EDUCATIONAL DIGITAL STANDARDS** as directed by Welsh Government where at all possible, to include but not limited to Hwb, 21st Century Schools and the requirements of the Digital Competence Framework/Curriculum for Wales.

Work with schools, utilities and families to constantly improve **EQUITY OF ACCESS TO DIGITAL LEARNING RESOURCES** for our learners. The ultimate aim is that no learner in our schools ever feels digitally left behind.

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 continue to **RATIONALISE AND CONSOLIDATE TO HWB** at every opportunity.

We will take advantage of potential benefits and efficiencies through active investigation and best-fit assessment, leading to the pursuit and adoption of **NEW AND 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 and across the education, public and private sectors.

Carmarthenshire's Digital Estate

Communications (Voice & Data)

Core Schools Network Circuits: **112**



Wireless Access Points: **2171**



Core Schools routers supported: **112**



Schools Data switches: **518**



Schools Telephone systems: **65**



Data Centers

2 resilient data centres
20 centrally virtualized servers
32 Secondary servers
62 Mac Servers
25+ Tb of Cloud Hosted Data



End Users

Schools staff: **3,800**
Learners: **27,500**



Devices

Primary Laptops & PCs: **2,500**
Secondary Laptops & PCs: **4,600**
Tablets: **2,800**
Chromebooks: **8,200**

Continue the Hwb First, Cloud First Journey



What it means

- Continue to fully exploit the products and services within Welsh Government's Hwb Learning platform. This system has provided the key foundation to support learning throughout the Covid-19 lockdown period and now forms a key element of education provision in the post-pandemic phase.
- To reduce costly physical infrastructure within schools, reducing the capital expenditure required to replace this infrastructure.
- Reduction of the physical infrastructure within schools also equates to a reduction in the power consumption and a decreasing carbon footprint for each school campus, year-on-year. This will align with the Authority's pledge of being Net Zero Carbon by 2030.

Why is it important?


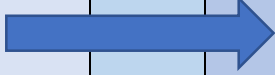
- School data is such a valuable asset, we should ensure that it is stored in the most secure, resilient, efficient, cost effective and appropriate location.
- That it is accessible in a secure manner for staff and learners to teach and learn at home, ensuring our students continue to learn when it is not possible to attend school.
- It allows our students to learn new skills and subjects whilst meeting new people and gaining new experiences across different campuses.
- The proliferation and variation of on-premise data storage and services both centrally and within Carmarthenshire's schools is neither sensible nor sustainable. Our continuation of the

Hwb journey allows us to continue to scale down and decommission this physical infrastructure for future years.

- The digital tools and resources within the Hwb platform supports a national approach to planning and delivery, enables sharing of skills, methods and resources between educational practitioners in Wales; supports teaching and learning in Welsh and English and provides equal access to free, classroom focused tools and resources for all teachers and learners in Wales.

How will we continue the Hwb First, Cloud First Journey?

- Identification and migration of remaining schools data from any on-premise data source, including any new opportunities arising from additional or emerging functionality within Hwb. In particular, the migration of school websites that were on hold during the Covid-19 Pandemic to support schools in distributing work and information to parents and learners.
- Ensuring that all new and existing devices are managed within the Hwb administration tools. Removes hard-to-manage and expensive to maintain legacy devices.
- That in future technology refreshes and curriculum updates, of cloud-hosted software packages should be our default, unless there are significant and compelling reasons to retain on-premise.
- To work with Welsh Government, exam bodies, the Hwb team and specialist subject colleagues within the Authority to investigate options for cloud-hosting Music, Design & Technology and ICT software.

Key Projects	Key Outcomes	2022	2023	2024
Further assessment of onsite infrastructure and decommissioning of all possible onsite server infrastructure.	<ul style="list-style-type: none"> • Modern, safe and sustainable data storage solution. • Secure, highly resilient and highly available data storage solution. • Increase functionality relating to sharing and collaboration of data. • Reduction in power consumption and decrease carbon footprint 			
Migration of remaining devices into the Hwb management system	<ul style="list-style-type: none"> • Safe, secure and trackable solution for managing and administering all school devices. 			
Review of key software packages utilised in schools to establish additional options for migration to the cloud to support blended and digital learning	<ul style="list-style-type: none"> • Safe, secure and cloud-based solution to allow students greater access to software outside of dedicated classrooms and facilities. • To work with and to inform Welsh Government and examination bodies to identify options for alternative software provision. • To work with schools to evaluate suitable software packages for a comprehensive provision within Music, Design & Technology and ICT. 			

Hwb Sustainability Programme



What it means

- That we will work closely with Welsh Government to refresh and improve our networking and wireless infrastructure to ensure our learners have a fit-for-purpose network.
- That we will actively engage with our schools on a regular basis to review the programme to ensure it continues to meet needs and that all schools have equal ICT provision for their staff and learners.
- Using the Welsh Government Hwb grant, Carmarthenshire ICT Services will refresh and increase the number of devices in schools, ensuring learners have a greater equity of access to an age-appropriate device.
- That the technology used to teach is fit-for-purpose and supports learner engagement within classrooms.



Why is it important?

- Ensure that all learners have equal access to devices across every school, thus eliminating barriers to creativity and learning due to outdated or lack of technology.
- Eliminate digital inequality between schools so that all students have an equal opportunity to succeed.
- Provide teachers with a fit-for-purpose device upon which to deliver their lessons, that is fully integrated with the Hwb environment.

- Improve service provision by integrating Welsh Government's Education Digital Standards fully into the Hwb Programme roll-out.
- Schools no longer need to worry about how they can afford to replace or improve their technology. Their regular contributions to the Hwb Sustainability scheme replaces end-of-life equipment when needed, so a school does not go without because of budget issues.

How will we continue to effectively deliver the Hwb Sustainability Programme?

- Continue to work with Welsh Government to be a key contributor and influencer to the all-Wales Hwb programme.
- To fully utilise the contracts and frameworks provided by Welsh Government in order to achieve the best possible value for money in all purchases from the scheme.
- Ensure that the scheme is reviewed and updated annually so that it is always responsive to changes in teaching and learning .
- Review the numbers of devices within schools on a termly basis and to adjust the types and quantities of devices to maintain equality.
- Provide all schools with the opportunity to share their digital learning plans and to look for opportunities as to how they can be supported within the framework of the scheme.
- Seek opportunities to upskill all Schools ICT staff to support the new equipment and to ensure that every teacher and learner is able to realise their aims.

Key Projects	Key Outcomes	2022	2023	2024
Welsh Government Hwb Programme	<ul style="list-style-type: none"> • Work closely with Welsh Government colleagues and groups to represent Carmarthenshire learners. • Manage and implement the Hwb Programme to the specific requirements of Welsh Government. • Implement Education Digital Standards as part of the programme rollout. 			
Carmarthenshire's Hwb Sustainability Programme	<ul style="list-style-type: none"> • To review equipment age profiles, conditions and numbers to ensure that all staff and learners have equal access to digital resources. • Consult with schools regularly to ensure that the scheme responds to changes and continues to fulfil needs. • Work with colleagues within and external to the Authority to take advantage of any learning opportunities to improve skills. 			

Digital Equity


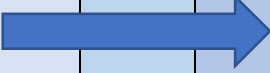


What it means

- Working towards ensuring that none of our learners are disadvantaged because they are unable to gain access to online learning resources, whether in school or at home.
- To improve access to Hwb resources, homework and create opportunities for learners to learn new subjects, whether available in their school or not.
- Making sure every teacher has the same opportunity and confidence to deliver their subject efficiently and effectively.
- Taking every opportunity to deliver Anytime, Anywhere learning and to explore every possibility to make it a reality for all students, with the aim that no learner is left behind.
- That students who are unable to attend school are able to still learn and participate with their peers, whilst working to improve their outcomes.
- That in the event of a lockdown, education can continue to be delivered and that teachers are able to keep in touch with all students, particularly vulnerable learners.
- That students have access to the best possible selection of subjects, whether taught in person or electronically, to allow them to move forward into the future career choices.
- To work with Families who have connectivity issues at home to signpost options and solutions so they can have the most appropriate and cost-effective solution for their needs.

Why is it important?

- That all students can participate in all online learning opportunities, irrespective of their own situation.
- Teachers have the confidence to teach their students knowing that the devices are the same and that there is a consistent experience every time.
- To consider options for a scheme where learners can borrow a school device for short periods of time when they are unable to attend their classroom.
- Evaluate the demand, options and funding paths for providing a more permanent scheme to provide students with their own devices for their secondary school career.
- Provide signposting and advice to families who are having difficulties with connectivity and access to the internet.

Key Projects	Key Outcomes	2022	2023	2024
Evaluate options for a student device scheme	<ul style="list-style-type: none"> Consider all viable options to provide all or some students with access to a device, both inside and outside school to improve learner outcomes. 			
Improvements to Digital Connectivity	<ul style="list-style-type: none"> To coordinate support and guidance for families who have poor internet connectivity at home but wish to improve their facilities. 			

Digital Schools & Classrooms



What it means

- Empowering teachers and learners to be as efficient and effective as possible in the right place, at the right time based on the needs of education.
- Facilitating truly Digital Schools through the efficient and appropriate deployment of laptops, tablets, productivity tools and aligned technologies.
- Ensuring that schools have the right provision of devices within the Hwb Sustainability scheme to support digital learning.




Why is it important?

- Digital Education has – and continues – to evolve rapidly in terms of the tools and technologies available to staff and learners on a daily basis.
- The Covid-19 pandemic has firmly embedded digital learning within the expectations of learners and skill sets of staff. These skills must not be lost, but sustained and developed.
- To ensure continuous improvement in teacher and learner outcomes, schools must evolve and keep pace with this technology.
- To give teachers the confidence that they can teach using reliable and good quality devices with the confidence that lessons can be delivered consistently and without incident.
- The technology used most commonly in classrooms, offices and meetings, whether in-person or online, can and should facilitate the aims and objectives of schools, the Local Authority and Welsh Government.

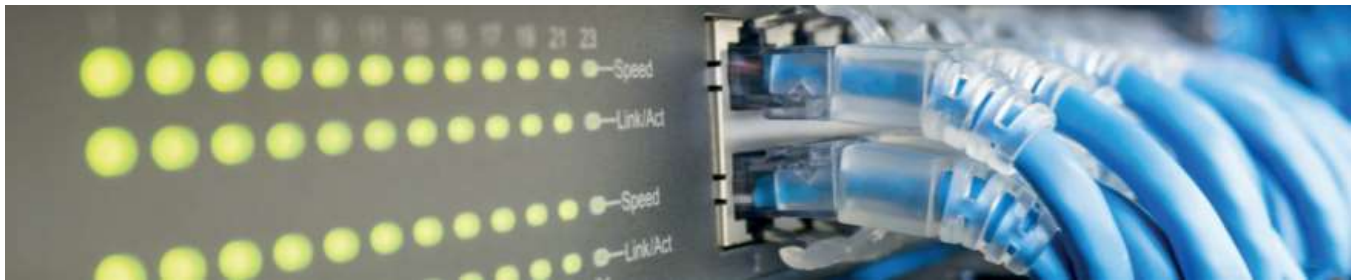
- To reduce any gaps between the technology and skills by continuing to work closely with the Education Department's internal training schemes.

How will we achieve Digital Schools and Classrooms?

- Encourage and promote the continued development of the first class productivity and collaboration tools available within the Hwb Digital Learning Platform.
- Working closely with schools to ensure end-user devices are upgraded and/or replaced at the relevant intervals agreed within the Sustainability Scheme.
- To work with and help find solutions for schools to offer an increased range of examined subjects through Blended Learning and other collaborative partnerships.
- Provide schools with access to the relevant frameworks and mechanisms to extract maximum value for money on all of their ICT-related expenditure.
- Continue to deploy technologies that facilitate a truly agile approach to learning, allowing teachers and learners to connect, communicate and access resources from the most appropriate location in relation to their needs.
- Provide consultancy to assist secondary schools to embrace digital learning, including device loan and "Bring Your Own Device" schemes.

Key Projects	Key Outcomes	2022	2023	2024
Ensure Classroom Hardware Provision supports teaching and learning	<ul style="list-style-type: none"> • Provision of the right device in the right place, at the right time for teachers and learners. • Support schools to benefit from the device investment. 			
Support Digital Learning	<ul style="list-style-type: none"> • Work closely with schools and the Local Education Authority to provide a joined-up approach to Digital, Blended and Remote Learning. • To support innovative ways of teaching and learning. 			
Support Partnership working with our Schools	<ul style="list-style-type: none"> • Ensure that centrally negotiated contracts provide maximum value for money and efficiencies. • Work with Secondary schools to implement BYOD (Bring Your Own Device) where appropriate. 			

Efficient & Effective Technology



What it means

- A resilient, 21st Century data and voice network infrastructure that facilitates and underpins teaching and learning across the County and keeps Carmarthenshire's learners safe online.
- Sufficient bandwidth for all schools, to facilitate fast and effective access to the internet, Hwb and all other cloud-based teaching and learning resources and data.
- Ensuring that schools data, systems and services are secure.
- Managing and protecting the integrity of devices and appliances to minimise any opportunity for losses or breaches.

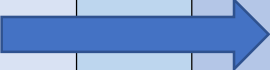
Why is it important?

- To ensure schools have quick and easy access to the digital resources needed to meet the demands of the curriculum.
- To facilitate communication and collaboration between schools and other learning establishments to give our students every possible opportunity.
- To share data, systems and services locally, regionally and nationally.
- Demand on bandwidth has grown rapidly since learners have returned to school after remote learning and we fully expect this demand to increase consistently in future years.
- To ensure the Local Education Authority and schools are meeting their obligations in terms of safeguarding Carmarthenshire's pupils.

- Data, systems and digital services are crucial in delivering 21st Century Education. With the increased and ever-evolving cyber threat to individuals and organisations, it is essential that we continually develop and enhance our protection accordingly.

How will we deliver Efficient and Effective Technology?

- Securing and investing central capital funding and human resource to achieve all of the above.
- Constantly working with partners to improve, maintain and enhance our County-wide network and wireless provision to increase bandwidth, improve filtering, eradicate bottlenecks and speed up access.
- Continue to lobby Welsh Government, Openreach and other providers for increased broadband coverage across the County to support students and teachers accessing online resources at home.
- To support families by providing advice and guidance to improve their current connectivity at home.
- We will act responsibly, plan ahead and be realistic regarding all aspects of schools ICT security to ensure our network is protected with suitable cyber-protection.
- We will upgrade our device protection and encryption to ensure the security and integrity of schools hardware and devices.
- We will provide secure authentication and access to core central services for the appropriate teachers and staff as and when necessary.

Key Projects	Key Outcomes	2022	2023	2024
Bandwidth Review & Management	<ul style="list-style-type: none"> Ensure that the internet connection remains fit for purpose. Take advantage of new and emerging technologies to make better use of bandwidth. 			
Digital Connectivity	<ul style="list-style-type: none"> Improved connectivity for staff and learners by working with stakeholders to identify areas for improvement and technology options. Facilitate provision of advice and guidance to assist families and staff in improving their digital connectivity. 			
Device Management & Software Deployment	<ul style="list-style-type: none"> Faster deployment of devices and software packages. Ability for staff to manage own devices and software installations using a controlled and protected approach. 			
Review & Evolution of Cyber Security capabilities	<ul style="list-style-type: none"> A more resilient and secure digital environment. Improved response capabilities to a cyber breach. 			