

Carmarthenshire County Council ICT Services

Digital Schools Strategy 2018 – 2021

‘A HWB First, Cloud First Approach’



EICH CYNGOR arleinamdani
www.sirgar.llyw.cymru

YOUR COUNCIL doitonline
www.carmarthenshire.gov.wales



Leader

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

This 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.

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

*Cllr. Emlyn Dole,
Leader of Carmarthenshire County Council*



Chief Executive

Welcome to Carmarthenshire County Council's Digital Schools Strategy 2018-2021. This 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.

We continue to face some tough challenges ahead against a backdrop of on-going austerity and it is essential we maximise the use of the very latest digital innovations.

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

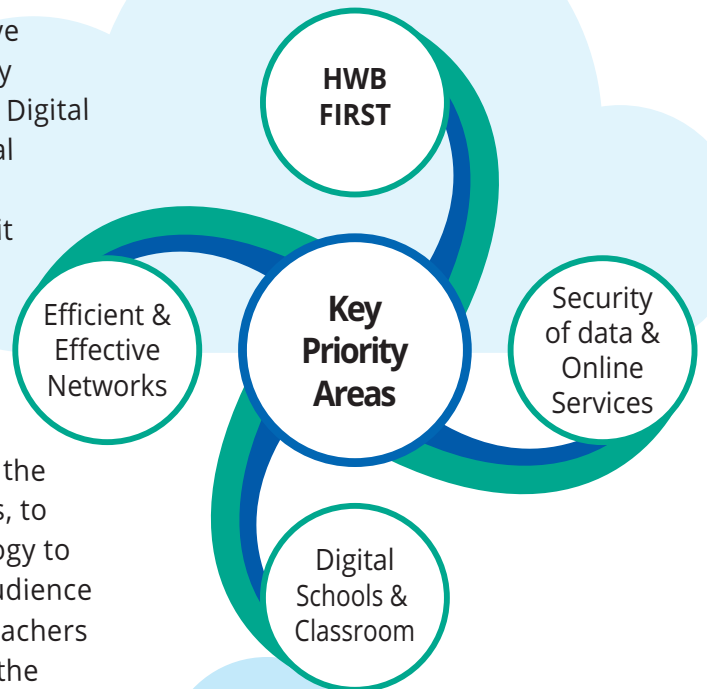
*Mark James,
Chief Executive of Carmarthenshire County Council*

Why do we need a Digital Schools Strategy?

Carmarthenshire's ICT Services Division provides extensive support and services to all schools across the Authority. This will be the 1st ever Digital Schools Strategy for Carmarthenshire that sets out our vision, underpinned by overarching principles and key priorities areas for the provision of ICT Services to Schools.

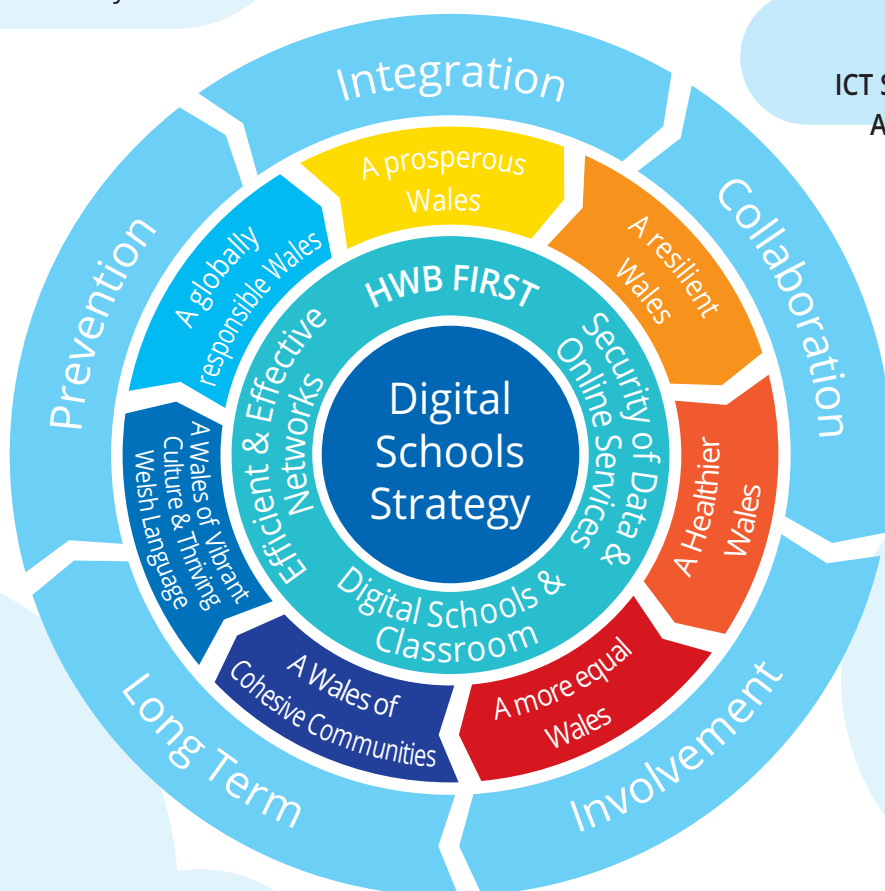
The schools' use of technology promotes innovative learning by digitally confident students, inspired by skilled and creative teaching. Welsh Government's Digital Competence Framework is distinct from ICT. Digital competence is one of three cross-curricular responsibilities, alongside literacy and numeracy;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

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. 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 Agreements it has in place with schools articulate how 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 Future Generations Act in our design and implementation of all transformational activity and new digital technologies to assist us in delivering the Future Generations Well Being Objectives.





Our Vision

'A Digitally enabled Carmarthenshire'

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.

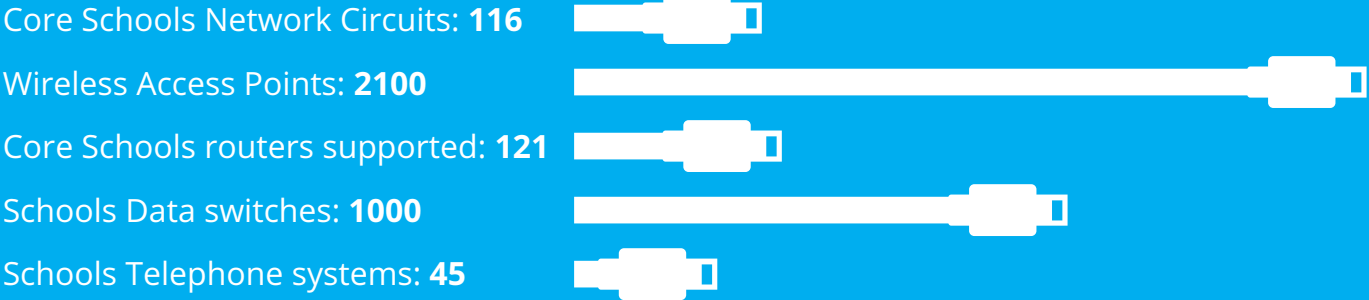
We will take advantage of potential benefits and efficiencies through the active investigation, pursuit and adoption of **NEW & EMERGING TECHNOLOGIES**. Where there is potential to add significant value within schools, we will pursue that technology.

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.

Carmarthenshire's Digital Estate

Communications (Voice & Data)



Data Centers

Data Centres - **2 plus DR site**
Schools Servers: **45 virtualized centrally, 54 in Secondary**
Storage Servers: **43 in primary**
MAC Servers: **46**



End Users

Schools staff: **3,600**
Pupils: **27,000**



Devices

Primary Laptops & PCs: **8500**
Secondary laptops & PCs: **5254**
Tablets: **4000**
Chromebooks: **247**

HWB First

What it means

- Fully migrating to and exploiting Welsh Government's cloud-based services within the HWB digital learning platform. This will form one of the key foundations to future learning developments in the classroom and at home.
- A reduction in costly, cyclic, wasteful physical infrastructure refresh and replacement exercises. This should result in decreased capital infrastructure expenditure, with schools taking full advantage of Welsh Government's significant investment in HWB.
- For non-HWB workloads that migrate to the cloud this means transitioning to more revenue based operational expenditure as we evolve to an "as a service" model for various hardware, software and services.

Why is it Important?




- Schools data is an extremely valuable asset. Just as we store our finances in a bank rather than on premises, schools should store their data in the most secure, resilient, efficient, cost effective and appropriate place.
- The proliferation of on premises data storage and services both centrally and across Carmarthenshire's schools is neither sensible

nor sustainable. Our schools HWB first, Cloud first journey will allow us to scale down and decommission much of this physical infrastructure in the coming years.

- The HWB platforms digital tools and resources support a national approach to planning and delivery; enable the sharing of skills, methods and resources between education practitioners in Wales; support teaching and learning in Welsh and English; and provide equal access to free, classroom focused tools and resources for all teachers and learners in Wales.

How will we achieve 'A HWB First, Cloud First Approach'?

- Any schools ICT workload that can be migrated to the HWB platform, will be. Examples include all schools domains, email, data storage, productivity tools and websites.
- In every future technology refresh or adoption that cannot be migrated to the HWB environment, we will consider alternative cloud options our default, unless there are significant and compelling reasons to retain on premises.
- Working closely with Welsh Government and the central HWB team to ensure timely, well-managed changes and migrations.

Key Projects	Key Outcomes	2018	2019	2020
On premise Zimbra to HWB Office 365 email migration.	<ul style="list-style-type: none"> • A modern, safe and sustainable email solution. • A more secure, resilient and highly available email solution. 			
Migration of all teacher and student data from on premises solutions into HWB's secure platform.	<ul style="list-style-type: none"> • A modern, safe and sustainable solution for data storage. • A more secure, resilient and highly available data storage solution. • Increase functionality relating to sharing and collaboration of data. 			
Migration of all schools websites from on premises Umbraco solution into the HWB digital platform.	<ul style="list-style-type: none"> • A consistent, safe and sustainable solution for schools websites. • The ability for schools to take full ownership of and self-manage their websites and content. 			

Efficient & Effective Networks



What it means




- A truly resilient, 21st century data and voice network infrastructure that facilitates and underpins teaching and learning across the county.
- Sufficient bandwidth and internet access for all schools, to meet both current and future digital education needs.
- Fast and effective access to the internet, HWB and all other Cloud based teaching and learning resources and data.

Why is it Important?

- To ensure schools have quick and easy access to the digital resources required to meet the demands of the Digital Competence Framework.
- To facilitate communication, collaboration, sharing of data, systems and services locally, regionally and nationally.
- The demand on our bandwidth and internet connectivity channels from schools, corporate services and partners has grown rapidly. We fully expect this demand to increase in the coming years.

How will we achieve 'Efficient and Effective Networks'?

- By securing and investing significant central capital funding and human resource to achieving all of the above.
- Working closely with schools, our Education Department, Welsh Government and BT to increase bandwidth at all schools via the LiDW2 project.
- Redesigning our network and Internet provision to facilitate a migration to cloud based web filtering, eradicating central bottlenecks and speeding up internet access.
- By maintaining, refreshing and enhancing the County wide all schools wireless network.
- Continuing to lobby Welsh Government and BT for increased broadband coverage across the County to support students and teachers accessing online resources at home.

Key Projects	Key Outcomes	2018	2019	2020
LiDW2 joint investment project.	<ul style="list-style-type: none"> • Upgrade of network circuits and infrastructure at 39 sub speed schools. • 100mbs network feeds at every primary and secondary. 			
Adoption of Cloud hosted web content filtering.	<ul style="list-style-type: none"> • A more resilient, less resource intensive filtering solution. • The ability for schools to break out directly to the web, exploiting maximum bandwidth capabilities. 			
Schools Wireless Network maintenance and development.	<ul style="list-style-type: none"> • An enhanced, refreshed wireless network at all schools. • A sustainable and fit for purpose wireless network for the next 5 years. 			

Security of Data & Online Services



What it means

- Keeping Carmarthenshire's pupils, teachers and staff safe online.
- Ensuring schools' data, systems and services are secure.
- Managing and protecting the integrity of devices and appliances.



Why is it Important?

- 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 develop and enhance our protection accordingly.

How will we achieve 'Security of Data & Online Services'?

- We will act responsibly, plan ahead and be realistic regarding all aspects of schools' ICT security.

- We will seek to decommission on premises storage, migrating to a secure "as a service" model for infrastructure, platform and software wherever possible (HWB).
- We will ensure our countywide schools' network is protected via the relevant firewalling, access controls, permissions and other suitable cyber protection.
- We will migrate to a more resilient cloud based web content filtering solution to protect all schools' web traffic and users.
- We will upgrade our device protection and encryption where necessary 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	2018	2019	2020
Expansion and evolution of schools' infrastructure cyber security capabilities.	<ul style="list-style-type: none"> • A more resilient and secure digital environment. • Improved response capabilities to a cyber breach. 			
Review, upgrade and evolution of schools' antivirus and device encryption solutions.	<ul style="list-style-type: none"> • A well protected, safe end-user device and server estate for schools. 			

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, smartphones, productivity tools and technologies.

Why is it Important?

- Digital education has and continues to evolve rapidly in terms of the tools and technologies available on a daily basis.
- To ensure continuous improvement in teacher and learner outcomes, schools must evolve and keep pace with this technology.
- The technology used most commonly in classrooms, offices, meetings etc. can and should facilitate the aims and objectives of schools, the education department and Welsh government.

How will we achieve 'A modern Digital Workplace'?

- Encourage and promote the adoption of first class productivity and collaboration tools available within the HWB digital learning platform.
- Assisting schools in ensuring end-user devices are upgraded and updated in terms of hardware and software, providing users with the latest features and functionality.
- Provide schools with the relevant frameworks and mechanisms to procure and extract maximum value for money for all their device hardware needs in accordance with our SLA's.
- Scope, assess and potentially procure and manage an all schools Microsoft Enterprise Agreement for software, in order to achieve standardisation and financial savings through economies of scale.
- Deploying 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 and advise secondary schools who wish to offer a "Bring Your Own Device" scheme for teachers and learners.

Key Projects	Key Outcomes	2018	2019	2020
Classroom Hardware Provision.	<ul style="list-style-type: none"> • A cost effective consistent approach to schools' device hardware. • Schools hardware devices that can be supported via the SLA with ICT Services. 			
Microsoft Enterprise Agreement (Software)	<ul style="list-style-type: none"> • An all-encompassing licencing agreement for Carmarthenshire schools. • A more cost effective and efficient way of licensing all schools Microsoft solutions. 			