
Carmarthenshire County Council

Digital Schools Strategy 2018 – 2021

Annual Progress Report 2018/19



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In May 2018 Carmarthenshire County Council produced its first ever Digital Schools Strategy 2018 - 2021. That Strategy sets out our vision, underpinned by overarching principles and key priority 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 so as 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.

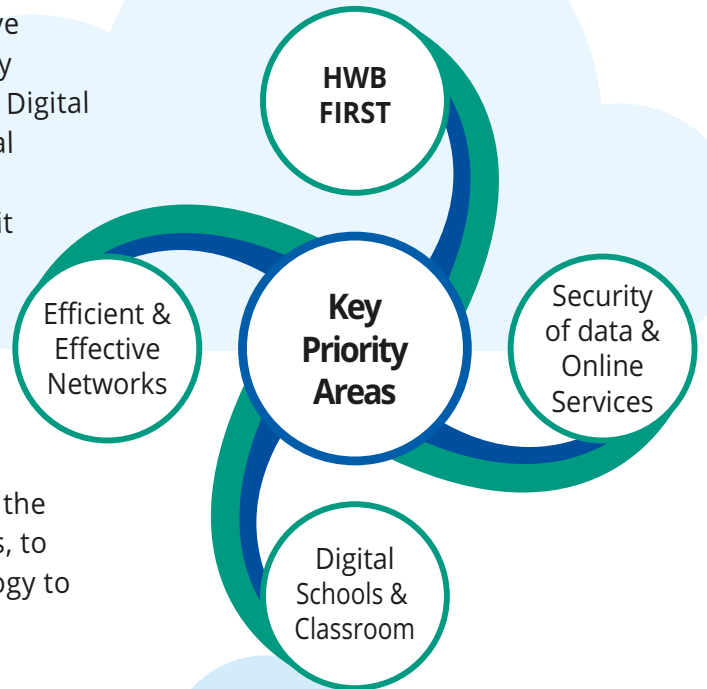
It was agreed by the Executive Board and Corporate Management Team that the Digital Schools Strategy would be reviewed annually, and we would report our progress in delivering on our key projects in this, our Annual Report.

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 1st ever Digital Schools Strategy for Carmarthenshire sets out our vision, underpinned by overarching principles and key priority areas for the provision of ICT Services to and in Schools.

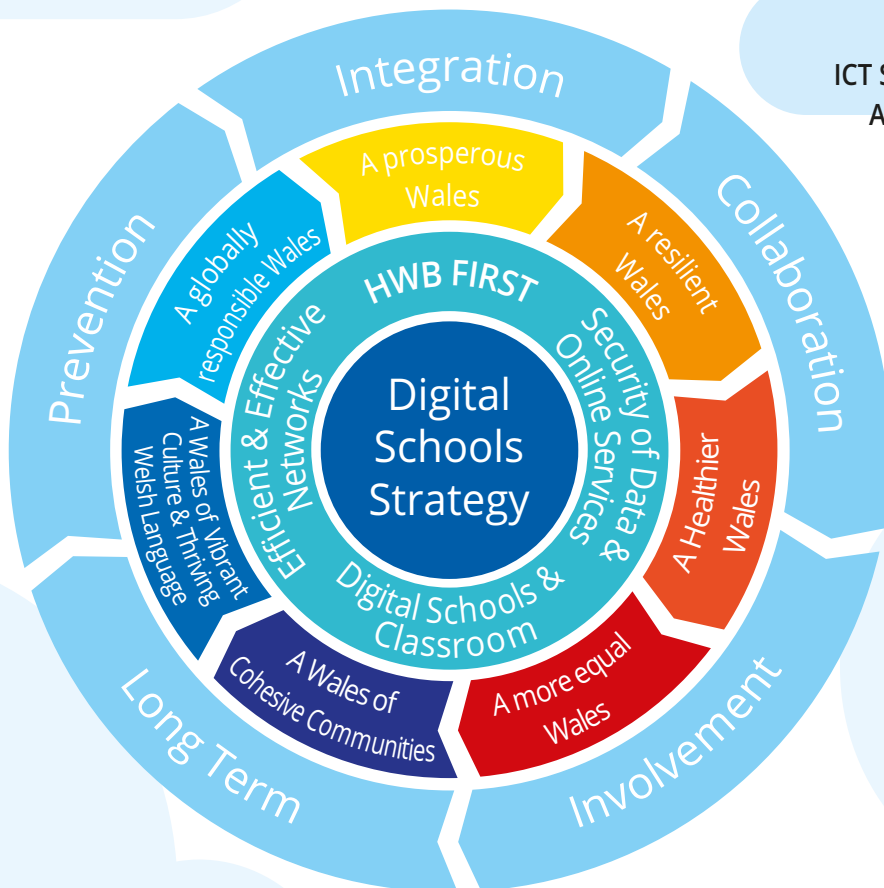
The schools' use of technology promotes innovative learning by digitally confident students, inspired by skilled and creative teaching. Welsh Government's Digital Competence Framework is distinct from ICT. Digital competence is one of three cross-curricular responsibilities, alongside literacy and numeracy;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



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 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 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.

Resources and Efficiencies

Throughout 2018/19 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

£475K on Schools Wi-Fi networks, ensuring that our pupils and teachers have access to all digital learning resources via the best possible wireless infrastructure.

£31K on upgrading and enhancing Schools internet connectivity, working alongside Welsh Government and the all Wales Public Sector Broadband Aggregation team.

£590K on ICT provision at new and refurbished schools via the Authority's Modernising Education Program.

People and Skills

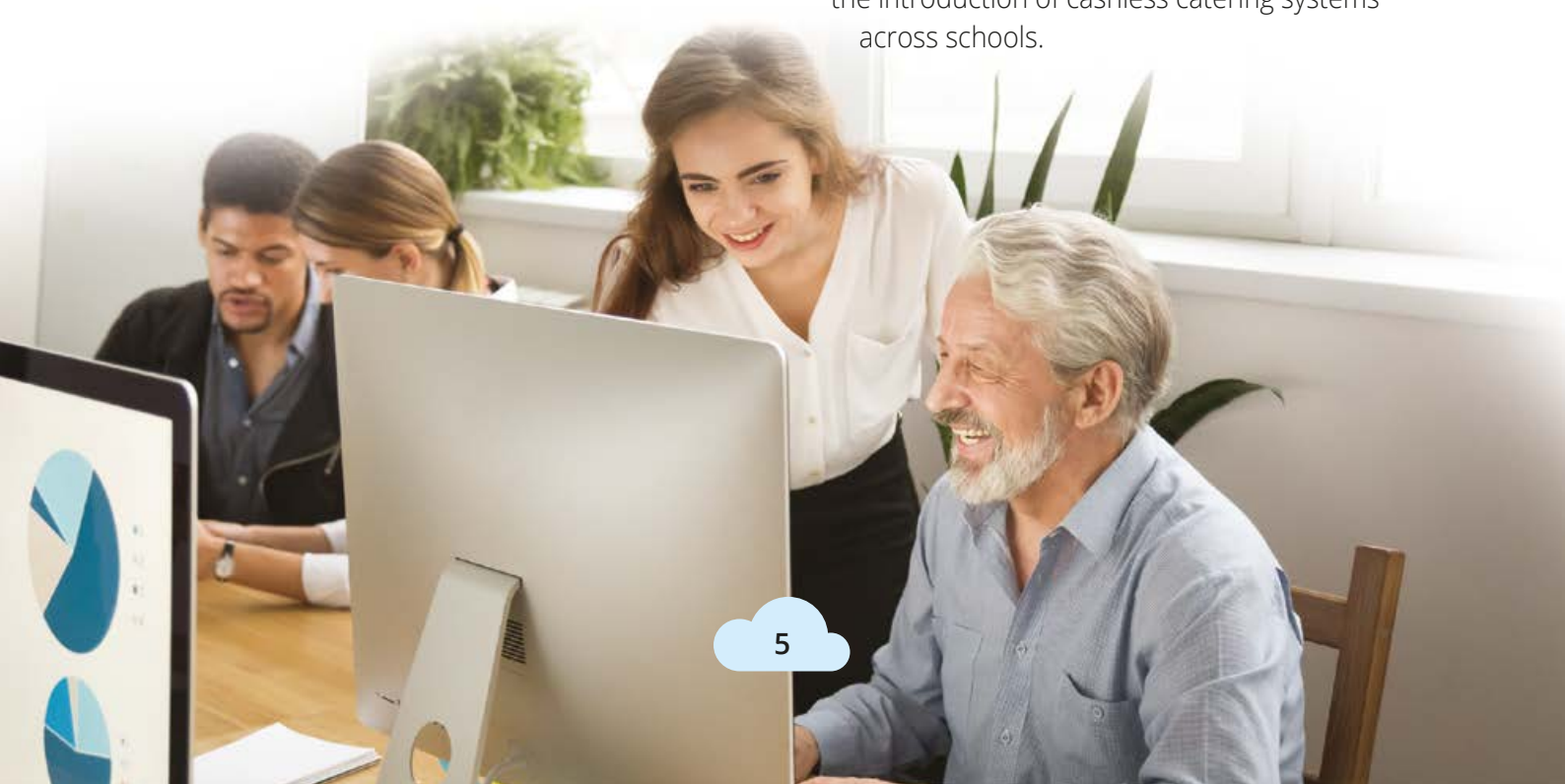
We have invested £37K over the past 12 months in upskilling ICT staff, providing them with the skills and ability to take our ambitious adoption of Digital Transformation and technology forward. In addition, we've taken advantage of fully funded local, regional and national development opportunities offered through 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 and support for our Digital Schools of the future.

Efficiencies delivered

£29K 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 Worth of 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.



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 Educational Digital Standards group.
- Representing Carmarthenshire on the all Wales “Learning in a Digital Wales” executive board project group.
- 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 quarterly primary schools head teacher meetings.
- Attending secondary head teacher school’s meetings.
- Regular attendance at Education department management team meetings.

This engagement activity is essential in ensuring we are aligning our work to the needs of all stakeholders, it informs our strategic direction and in turn sets our goals and desired outcomes.



Modernising Education Program

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 program. 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 2018/19 we have successfully completed the full ICT implementation of Ysgol Pontyberem, Penrhos, Parc y Tywyn and Llangadog as part of our Modernising Education Program. This work and investment is providing students and

teachers with 21st Century technology to deliver first class digital education.

As part of our work across the MEP program we are developing a digital blueprint for Carmarthenshire schools which defines all the recommended technologies required within each of our schools and that all schools should be working towards. This blueprint will help meet our aspirational vision for schools, will help to address the changing needs of the learning environment, and is aimed at ensuring we all meet the educational digital standards of Welsh Government.



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 physical infrastructure refresh and replacement exercises which traditionally occur every 5 to 6 years and are costly and often wasteful. This should result in decreased capital infrastructure expenditure, with schools taking full advantage of Welsh Government's significant investment in HWB.
- For workloads that migrate to the cloud outside of the HWB environment such as web filtering, 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.

On premise Zimbra to HWB Office 365 email migration

During 2018/19 Carmarthenshire became the first authority in Wales to successfully migrate our entire schools email environment from on premise, to the HWB Digital learning platform, taking our own existing email addresses with us. The project has delivered £29K of efficiencies as referred to on page 5, which has been re-invested, funding a new essential antivirus and cyber security solution for all schools. The HWB email migration has ensured that every teacher and learner in Carmarthenshire has access to email anytime, anyplace, anywhere including from off network locations and from home. The project has delivered a modern, safe and sustainable email solution which is more secure, resilient and highly available for all Carmarthenshire Schools.

Migration of all teacher and student data from on premises solutions into HWB's secure platform

Preparations and planning have occurred throughout 18/19 to ensure we are ready to migrate all Schools data over the coming year. We are currently working closely with 4 of our secondary schools, migrating all on premise data from their locally held servers to the HWB Digital learning platform. We are also working with colleagues from the Education Department and with School's Digital champions to migrate locally saved data across all primary Schools to HWB. We expect to have completed the migration of all Primary and Secondary Schools data by the end of 19/20. Benefits of this work include improved accessibility to data, from any internet connected site or device, a reduced cost in paper and printing for Schools, improved Disaster Recovery and Information Security capabilities and improved sharing and collaboration functionality.

Migration of all schools websites from on premises Umbraco solution into the HWB digital platform

This work has been delayed throughout 18/19 due to reprioritisation of tools available within HWB by Welsh Government. In order for the HWB platform to be able to host our Schools websites there are changes required within the environment which can only be made by Welsh Government and Google. We await the outcome of this reprioritisation in order to understand the potential of continuing with this action. 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 premises environment has been updated and security patched to ensure optimized performance and that all Schools retain a fully functioning website for the foreseeable future.



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.

Learning in a Digital Wales 2 (LiDW2) joint investment Project

Forty one sub speed schools have had their PSBA internet connectivity upgraded to 100Mbps fiber this year as part of the project. Welsh Government have funded the capital costs of upgrading these circuits whilst ongoing revenue costs have been factored in to the SLA between Schools and the ICT Service. We've also made significant internal network changes and upgrades on our County back bone network to facilitate this increase in bandwidth for Schools. Capital investment from the Authority has also been invested where necessary to pay for new network infrastructure at all 41 subspeed schools, to ensure they can exploit the increased internet connectivity delivered by LiDW2.

Adoption of Cloud hosted web content filtering

We've 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. We are one of the first Authorities in Wales to begin adopting the solution and currently have three trial sites live, two secondary and one primary school. These are Queen Elizabeth High School, St John Lloyd and Johnstown Primary School.

These Schools have been migrated over to the new solution from existing on premises Web Filtering and are now performing as expected. All remaining schools will be migrated during 19/20, once acceptance testing has been completed. This project is delivering significant bandwidth and connectivity improvements for Schools via a more resilient, less resource intensive filtering solution. The ability for schools to link directly to the internet means they will experience further improvements in performance and bandwidth capabilities.

Schools Wireless Network maintenance and development

18/19 has seen the investment of £475K on the renewal, maintenance and development of

Schools Wi-Fi networks. ICT Services are leading on the project, securing the funding through the Corporate investment program and facilitating its repayment via the ICT Services SLA over the next 6 years. Following a successful tender exercise, the procurement has taken place with deployment of the solution planned for 19/20. This will help to ensure that our pupils and teachers have access to all digital learning resources via the best possible wireless infrastructure for the next 10 years. This project is provisioning Schools with an enhanced, refreshed wireless network which is sustainable and fit for purpose.



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 whilst remaining GDPR compliant.

Expansion and evolution of schools' infrastructure cyber security capabilities

During 18/19 we've made significant developments in this area, benefiting both Schools and Corporate customers. We've procured an additional core security firewall for our County backbone network, dramatically increasing our

ability to securely support increasing bandwidth requirements. We've also conducted a review of all internal security firewalls and removed legacy infrastructure, enhancing our Cyber security. We've strengthened and improved mail filtering capabilities in partnership with Welsh Government, decommissioning our on premises solution and fully adopting the HWB mail filtering solution. This has led to significantly less spam reaching teacher and learner mailboxes, which in turn dramatically decreases risk and potential vulnerabilities.

Review, upgrade and evolution of schools' antivirus and device encryption solutions

18/19 has seen the procurement and deployment of a new Antivirus solution across all Carmarthenshire Schools. This £54K investment is helping to ensure that all Schools have a well-protected, safe end-user device and server estate. The new product, which is now fully deployed, provides us with improved virus detection, greater control over end user devices, and cloud based administration and monitoring which facilitates full protection and administration outside of school premises. The product is fully licensed and funded for 2 years with the option to extend for a further 2 years should we wish to. We will seek to enhance this protection through the consideration and potential adoption of device encryption during 19/20.

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.

Classroom Hardware Provision

During 2018/19 we have successfully established a new contract with a dedicated supplier for the cost

effective and consistent procurement of end user devices for all schools. As part of this work we've also conducted a significant piece of work reviewing and streamlining our internal procurement, delivery and configuration processes. This has allowed us to dramatically reduce the time it takes for laptops, tablets and other peripherals to be bought, delivered and set up at schools. Online portals have been created, allowing schools to select from a limited and pre-specified list of items which are suitable for their needs and can be supported by ICT Services. This project has delivered a much-needed cost effective and consistent approach to schools' device hardware to the benefit of all parties. The list of available items is reviewed on a quarterly basis, informed by Schools and staff feedback, to ensure it remains effective and relevant.

Microsoft Enterprise Agreement (Software)

Our intention to implement an all-encompassing Microsoft licensing agreement for all Carmarthenshire schools has been superseded by some extremely positive news from Welsh Government. A deal between Microsoft and Welsh Government has been announced, giving all schools, teachers and students across Wales fully funded and licensed access to Microsoft software (Office & Windows). Wales will be one of the first countries in the world to fund Microsoft classroom software applications for all maintained

schools. The licensing deal contains a range of Microsoft products, including the full desktop version of Microsoft Office 365 which includes a Welsh language interface and proofing tools, along with additional security features. Also included is Minecraft Education Edition with Code Builder which provides a range of ways for learners to explore, create and experiment with coding. All

teachers and learners will be able to download and install the latest versions of all these software applications on up to 5 personal devices at no cost. Online versions of the software applications will continue to be available through Hwb for use anywhere, such as public computers in libraries and through personal computers and devices.

