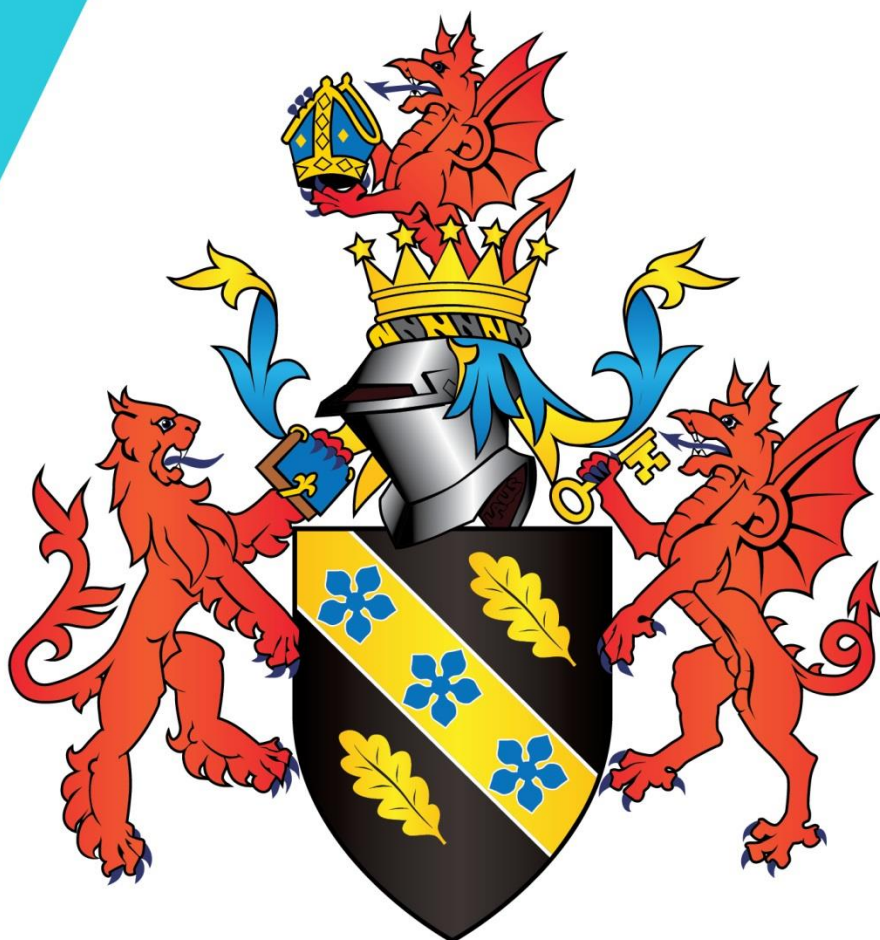




Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David



Information Technology Strategy 2021-24

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Introduction and Scope

This Strategy builds on the previous IT&S Strategy 2017-2020 and focuses on how we aim to provide Information Technology (IT) Services for the period 2021-2024. IT Services make up two (the IT Service Delivery Unit and the IT Systems & Infrastructure Unit) of the four units within the Digital Services Directorate which was established in early 2020. The new Directorate aligns key University strategies to underpin a new Learning and Teaching approach focussing on the institution's digital capacity.

This document sets out IT's vision, strategic objectives, and the high-level themes which support them. It considers the wider UWTSD group, exploring opportunities to collaborate, and discusses how IT's vision relates to the UWTSD Digital Strategy 2021-2023 and the overall University Strategy. It concludes by providing implementation and investment profiles with SMART annual action plans which will be used to monitor the delivery of the objectives over the coming three years.

Whilst this primarily is a University Strategy, it allows for alignment and collaboration with the University Group.

Background

The previous IT&S Strategy 2017-2020 focused on providing a sector leading IT platform for students, academics, and professional services, notably supporting University growth in Swansea and the Inner-City campuses, cutting through paper driven student processes, and underpinning league table improvements. Detailed analysis is available in our [IT&S Strategy 2017-2020 – Post Strategy Analysis](#) (summary in Appendix 3).

The global pandemic in 2020/21 presented a whole new approach to work and life, with constant adaptations to working, teaching, and studying. The most challenging environment in decades has presented a series of demands on IT and made for a period where things have never been busier, and innovation has flourished. IT has focused on making IT access location agnostic, supporting staff and students with online interactions and learning, and maintaining security in an increasingly hostile Cyber Security environment. This has been highlighted as an example of excellent practice in a recent Business Continuity audit.

This IT Strategy will shift the focus to wider engagement with Coleg Sir Gar and Coleg Ceredigion. We already consult with Further Education colleagues for expertise in both IT technical and policy areas and we will build on these links, with the fight against Cybercrime forming the primary engagement. Pooling our combined technical expertise and resources will build a stronger platform for us to ensure our security. Using this platform, we can build common themes in the areas of Wi-Fi and authentication for future joint campus developments, and also with our inter-site network connectivity modelling – looking for opportunities to optimise our connectivity and outlay.

A consultation exercise has been undertaken to strengthen the IT Strategy, and ensure it is aligned with student, academic and professional services needs and aspirations. This was an enlightening exercise, and the feedback has been incorporated, both enriching and focusing the content.

Vision

Our vision is clear, to provide first-class IT systems and services to staff and students, whilst underpinning sector leading research and development. IT is strengthened by closer ties with other units within the Digital Services Directorate, and we will build strong links to provide the platform for the UWTSD Digital Strategy 2021-2023 to succeed.

Our aim is to ensure the integrity and sustainability of IT services, systems, and infrastructure. An appropriate level of investment is necessary to ensure the success of our IT Strategy. The IT Strategy provides a clear spending profile over the next three years so that financial requirements are clear and financial support can be planned accordingly. The structure of the IT Strategy is flexible to adapt to the changing needs of the University.

Objectives

Our six strategic IT objectives for the next three years are as follows:

- **Simple, Available and Cyber Secure** – We want IT systems to be easily manageable, simple to access, available from anywhere 24/7, and resistant to increasingly frequent and sophisticated Cyber Attacks targeted at education providers.
- **Ensuring our IT Infrastructure keeps pace with University needs** – We want to give our students & staff a first-class, sector leading IT experience. Investing in new Wi-Fi technology, network switching, and upgrading interconnection speeds will improve reliability, resilience, and speed. Investing in learning technologies and infrastructure across the University will ensure we support the digital agenda and stay at the forefront of HE Sector developments. These initiatives will lead to significant enhancements in student and staff satisfaction with IT Services.
- **Enabling Data-Driven Decisions** – Building on the great strides made with data quality and availability through the previous strategy, we want to use the new Data Governance Policy and Working Group to improve data literacy and develop more meaningful data. We will build on our current report suite, with graphical reports, focussing on UWTSD KPIs in the areas of Quality and Finance to deliver a KPI dashboard that supports decision making for a wide range of stakeholders.
- **Student and Staff IT Inclusivity and Satisfaction** - Utilising benchmarks such as NSS, we will develop further links with users to understand their needs and to capture feedback throughout their student journey. We will also support digital inclusion, assisting both Student and Digital services by providing every student with a platform for success. We will develop a co-ordinated student engagement process, investing in Enterprise Service Management (ESM) and Customer Relationship Management (CRM) systems.
- **Learner Focused, Innovative IT Developments** - Implementation of new bilingually available IT systems and the continuous improvement of existing systems to facilitate the University's key objectives. Current priorities are centred on enhancing recruitment of new students and better retention of existing ones. We will provide IT solutions to ensure the success of Microcredentials and develop the CRM to enhance recruitment. We will focus on an integrated and class leading Virtual Learning Environment, learner analytics and engagement tracking, better supporting specific cohorts of students such as postgraduates and International. Alongside this we will maintain our long running support for Registry, Finance and Student Experience, streamlining department functions through technology and working towards removing all paper-based

processes. We will work in collaboration with student voice, academia, and professional services to ensure we continue to prioritise the most impactful developments and integrations.

- **Proactive, not reactive** – we will build our efficiency in Agile Scrum workload planning and Prince2 Agile Project Management, as well as utilising our management data to create data driven systems of work, such as understanding our IT ticket profile to mitigate systematic issues. Utilising advanced reporting of IT Ticket data allows early detection and prevention of reoccurring and shared issues, as well as the opportunity for the automation of common requests. This improves staff and student response times and the overall efficiency of the IT Service Desk provision. We will also concentrate on IT workforce professional development, to enhance systems knowledge and improve our ability to resolve issues at the first point of contact.

A number of high-level themes will support our Strategic objectives as follows:

IT Strategic objective	IT high level theme
Simple, Available and Cyber Secure	Cyber Security
	Cloud Migration
Ensuring our Infrastructure keeps pace with University needs	High speed Wi-Fi
	Campus network upgrades
	Learning Technologies
Enabling data-driven Decisions	Data Governance
	HESA Student Return and Data Futures
Student and Staff IT Inclusivity and Satisfaction	Student engagement and communications
	Equipment Leasing
	Online meetings and videoconferencing
Learner Focused, Innovative IT Developments	IT Development and Integration
	Virtual Learning Environment
Proactive, not reactive	Agile workload planning & Prince2 Agile Project management
	IT Ticket Data Reporting

- **Cyber Security** - Cyber-attacks on higher education are increasingly frequent and damaging. Maintaining confidentiality, integrity, and availability of IT systems, services and data are at the core of digital connectivity and our strategy is to employ a wide and comprehensive range of measures to ensure cybersecurity, paired with a well-planned response if incidents occur, ensuring swift remediation and minimal impact. This theme will be supported by a detailed Cyber Security Strategy, and we will utilise our support organisations, such as the Joint Information Systems Committee (JISC) and National Cyber Security Centre (NCSC) to maximise our effectiveness. Where IT systems are devolved, we will collaborate with those departments to ensure a consistent approach to security and to standardise authentication to disparate systems wherever possible.
- **Cloud Migration** - Intrinsically connected to Cyber Security, 24x7 digital connectivity is expected of modern IT services. Investing in Software as a Service (SaaS) and Platform as a Service (PaaS) Cloud Solutions are cost-effective ways of improving the availability of critical services, particularly out of hours, where a systems failure can go unrectified until the next working day. Again, investment is required, but our new reliance on IT systems necessitates a robust response.

- **High speed Wi-Fi** - Survey evidence suggests that students regard good Wi-Fi as one of the most important IT services. Over the next three years, moves to flipped campus provision will rely on a seamless, lightning-fast Wi-Fi service. Our Wi-Fi Strategy will concentrate on digital connectivity with in-room Wi-Fi solutions for student halls and the latest and fastest generation of Wi-Fi access points for common areas. There is significant investment involved, but the evidence shows this service sits at the heart of student satisfaction with IT.
- **Campus network upgrades** - IT will build on the network architecture investment in Swansea SA1 and Dynevor, London, and Birmingham campuses during the previous strategy, working closely with the provosts and colleagues in Estates and Facilities. Carmarthen, Lampeter, Cardiff, and Swansea Alex Road core, distribution and edge networking will be the focus with simplicity, reliability, and performance as our key principles. The design will include superfast interconnections and extend our current 'Clearpass' network access control to include dynamic security policies to control user access in real-time and improve Cyber Security. Digital signage will be refreshed and targeted to support marketing and communication.
- **Learning Technologies** - Classroom and laboratory spaces will be refreshed with learning technologies that provide pedagogically led easy to use collaborative and interactive solutions creating engaging learning experiences for staff and students. A particular emphasis will focus on developing hybrid learning solutions that will enable learning to be delivered locally, nationally, and internationally. Developing strong relationships with manufacturers and suppliers will enable a continuous evaluation of the latest developments such as immersive technologies to ensure that technologies are properly investigated, rigorously tested from a technical and pedagogical perspective, and implemented where appropriate.
- **Data Governance** - Data that is trustworthy and easy to interrogate gives us the edge in a competitive market. We will develop a Data and Business Intelligence Strategy to aid digital productivity by producing assured finance and quality data sets and analysis that allows all decision makers to inform their focus and choices, as well as enabling operational effectiveness within Institutes and Professional Services.
- **HESA student return and Data Futures** - We have made great strides in representing our position in the University market with better data and a focus on areas requiring improvement. Data Futures, a sector-wide transformation programme, led by HESA, will bring fresh challenges with multi in-year returns; defined data ownership and proactive data processes will be key to our success. We have supported continuous improvement with our National Measures and League Table Business Intelligence dashboards and will continue to build on our ability to analyse key measures, adding Staff Student Ratio, Retention and Qualifications on Entry dashboards.
- **Student engagement and communications** - We will continue to work with Student Union, Professional Units, and Institutes to ensure that our services and developments are advertised as widely as possible and all avenues for the sharing of information are utilised. We will also support digital inclusion, assisting both students and Digital Services by providing every student with a platform for success. We will build on current student engagement by implementing Enterprise Service Management (ESM) and Customer Relationship Management (CRM). These new systems will allow us to understand the students' needs and capture feedback throughout their student

journey. We will measure our success by benchmarking our performance in NSS and national surveys against other Welsh HEI's.

- **Equipment Leasing** - The leasing of IT equipment was first introduced in 2017 and has been very successfully in the refresh of aging assets across the University fleet. The development of a unified leasing plan will align the renewals of staff and student IT equipment across the University. An effective renewal plan with a commitment to sustainable procurement practices, will ensure a regular cycle to update University IT assets to technology that is relevant and supports the needs of staff and students.
- **Online meetings and video conferencing** - Being a geographically distributed University, our reliance on technology for meetings has always been in high demand, but it became a key communication and collaboration tool with much of the University working remotely. With the engagement of staff of students, there is a need to review our current video conferencing spaces and create a strategic plan for future developments. This will encompass our new ways of working and meet the growing and vastly changing requirements and demand, whilst facilitating simultaneous translation.
- **IT Development and Integration** - The IT Development team have enjoyed a great deal of success in recent years. This has led to unprecedented demand for centralisation of data, electronic forms, automated processes, and systems integrations. A three-year development and Integration plan will support the IT Strategy, supporting activities such as Doctoral College, Wales Global Academy, and strategic partnerships. Centralising data, reducing bureaucracy, and digital innovation with automation and artificial intelligence, are all at the heart of the plan. Digital productivity, learning and inclusion are key requirements for this work to ensure that these systems are accessible, bilingual, responsive, and easy to use.
- **Virtual Learning Environment** - For many years the virtual learning environment has been important to educators, but it came into sharp focus during the global pandemic. UWTSD currently utilises Moodle for resources, with online classes using Microsoft Teams. To further support digital learning, VLE developments will focus on modernising the Moodle experience, better navigation and functionality, and optimised speed and performance. Making the timetabling/Teams/Moodle online teaching experience more integrated and harmonious will be another key theme. We will develop a VLE Strategy and convene a focus group with staff and student representation to set priorities.
- **Agile working methodology & Prince2 Agile Project management** - Agile working made the transition from in-office to at-home working seamless. Based on organising 'what you do', rather than 'where you do it', it is a productivity tool which is easily adaptable to any situation. Its implementation has optimised IT productivity, and the focus for the next phase will be to better integrate Agile working and the management of IT projects whilst embedding Agile into continuous professional development (CPD) activities. We will make better use of the Microsoft 'DevOps' tools at our disposal, and champion the adoption of Agile working to support wider UWTSD projects.

- **IT Ticket Data Reporting** - Building on current reporting and data analysis, we will use the ESM and CRM implementations to develop further links with users to understand their needs and to capture feedback throughout their student journey. Further development of IT ticket data reporting and monitoring will allow for richer trend detection of common issues to help pro-actively resolve issues before they are identified by staff or students. The implementation of reports that can highlight common requests or issues across multiple professional units will also allow for the improvement of workflows to streamline processes.

Wider Strategies

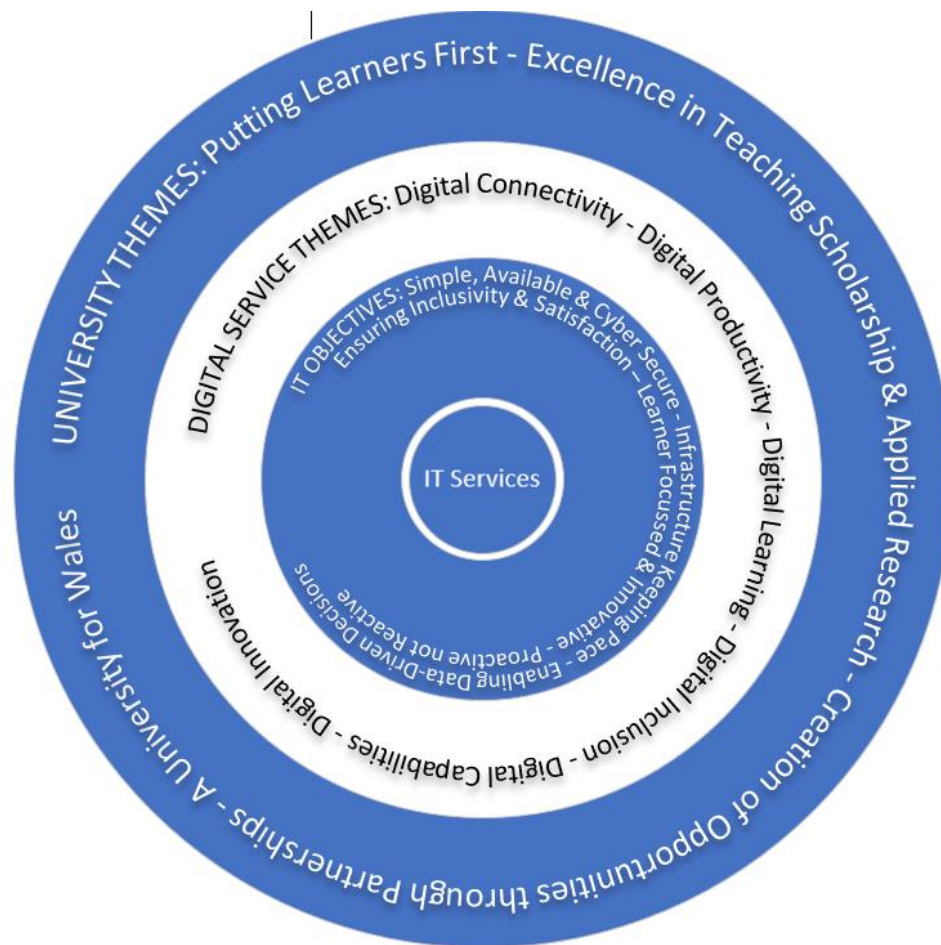
The Digital Strategy is centred around six Digital themes. Our IT Strategic objectives are aligned to these themes as follows:

Digital Strategy theme	IT Strategic objective
Digital Connectivity	Simple, Available and Cyber Secure
	Ensuring our IT Infrastructure keeps pace with University needs
	Learner Focused, Innovative IT Developments
Digital Productivity	Student and Staff IT Inclusivity and Satisfaction
	Enabling data-driven Decisions
	Proactive, not reactive
Digital Learning	Student and Staff IT Inclusivity and Satisfaction
	Learner Focused, Innovative IT Developments
Digital Inclusion	Simple, Available and Cyber Secure
	Student and Staff IT Inclusivity and Satisfaction
	Learner Focused, Innovative IT Developments
Digital Capabilities	Simple, Available and Cyber Secure
	Learner Focused, Innovative IT Developments
Digital Innovation	Ensuring our IT Infrastructure keeps pace with University needs
	Learner Focused, Innovative IT Developments

The IT Strategy also considers the wider University Strategy within all its decision making and action planning:

- Strategic Priority 1 – Putting Learners First
- Strategic Priority 2 – Excellence in Teaching, Scholarship and Applied Research
- Strategic Priority 3 – Creation of Opportunities through Partnerships
- Strategic Priority 4 – A University for Wales

Accordingly, the influence on IT Services thinking is threefold, University Strategic Priorities, Digital Strategy themes, and IT Strategic objectives. This relationship is visualised in Diagram 1 below.



The IT Strategy is also designed to be flexible so as to accommodate any future developments required to support new strategies. This will include the ability to support the principles of the Teaching and Learning Strategy as it is refreshed.

Measures of Success

The success of this strategy will be measured through the delivery of the IT Implementation profile presented in the Implementation/Monitoring section. This Implementation profile will be supported through the application of IT annual SMART action plans, an example of which is presented in Appendix 1.

The successful delivery of this Strategy is dependent on additional IT investment. Therefore, an indicative investment profile is included in Appendix 2.

Implementation / Monitoring Progress

Implementation and monitoring of progress achieved in delivering the implementation profile and annual plans will be overseen by the Digital Directorate Senior Management Team. Regular updates will be provided to the Operational Leadership Team, Academic Planning Team and Senior Directorate as required.

Implementation Profile

	Year 1	Year 2	Year 3	Benefit
Simple, Available & Cyber Secure	Implement MS AoVPN and FortiClient EMS VPN access, evaluate JISC/Alibaba VPN	Implement BGP between Swansea and Carmarthen FortiGate's	Review firewall architecture	Reduced Information Security Risk. Improved IT systems availability. Improved access from anywhere
	CyberSecurity Essentials Plus BAU & extend end-point monitoring.	CyberSecurity Essentials Plus BAU, implement Data Loss Prevention (DLP)	CyberSecurity Essentials Plus BAU	
	Implement Security Information Event and Mgmt (SIEM)	Create ethical hacking policy and system of work	Create CyberSecurity Essentials higher apprenticeship opportunities for those completing Level 3 quals	
	Implement FortiGate HA pair in Carmarthen & Decommission ServerNet Gateway	Implement ***new Aruba protocol***	Upgrade Swansea FortiGate HA pair	
	Migrate HR System to SaaS Cloud	Implement web apps (PaaS), upgrade Compellent SAN & backup devices	Implement SQL managed instance (PaaS)	
	Support WISA Security Operation Centre (SOC) internal implementation	Support WISA SOC commercialisation	Support WISA SOC commercialisation	
	Implement Azure AD authentication on and off campus	SCCM / MDT Zero touch process	Migrate AD connected laptops/mobile devices to Azure AD / Zero touch process	

	Year 1	Year 2	Year 3	Benefit
Ensuring our IT Infrastructure keeps pace with University needs	Upgrade student halls Wi-Fi - Carmarthen ABN1-4	Upgrade student halls Wi-Fi - Lampeter LTH, Bowen, Loftmark, Morris	Upgrade student halls Wi-Fi – Carmarthen, Non & Myrddyn, Swansea Llys Glas	High speed, reliable Wi-Fi and network infrastructure. latest interactive learning technologies, virtual and augmented reality (immersive technologies). Improved student perception.
	Update Campus networking and Wi-Fi – Alex Rd, UoW Registry, CAWCS	Update Campus Wi-Fi – Carmarthen & Lampeter Student Villages and create business case for room and building utilisation analysis using Wi-Fi footfall data	Update Wi-Fi with high student & staff footfall	
	Upgrade Carmarthen ABN Halls networking. Commission networking and Wi-Fi for London Oval developments and new Cardiff Learning Centre	Upgrade Carmarthen Server Core and Distribution, upgrade Halliwell & CWAD Edge switching	Upgrade London, Carmarthen and Lampeter Edge switching, upgrade Swansea core	
	Support Estates CCTV update. Support Estates Door Access Systems standardisation	Support Swansea Innovation Matrix development and research focused Internet of Things (IoT)	Support University Estate developments	
	Upgrade 20-30 learning spaces per year to facilitate face-to-face, virtual or hybrid learning	Upgrade 20-30 learning spaces per year to facilitate face-to-face, virtual or hybrid learning	Upgrade 20-30 learning spaces per year to facilitate face-to-face, virtual or hybrid learning	
	Write Data & Business Intelligence strategy with agreed process for Institute restructures	Create UWTSD policy for Software Procurement	Create UWTSD KPI strategy	Improved Data Quality. Better access to management information for decision makers.
	Implement Quality APR and student engagement reports, update application and new student enrolment reports	Create Finance income and expenditure dashboards. Create marketing reports from CRM data.	Full UWTSD KPI Data Dashboard	
	Revise collection of HESA student data, define data owners and	Undertake Data Futures beta pilot and initial implementation	Undertake Data Futures full implementation	

	Year 1	Year 2	Year 3	Benefit
Enabling data-driven Decisions	enhance reporting to cater for Data Futures tri-annual return			
	Review data warehouse model	Implement assured data sets and extend data warehouse	Extend assured data sets and extend data warehouse	
	Implement single Enterprise Service Management System for all relevant professional services, with consideration for the CRM	Implement CRM for Enquiries to Application with consideration for the Enterprise Service Management System	Extend CRM to engagement for enrolled student	Co-ordinated student engagement process. Log of student interactions. Better intelligence on applicants and recurring student issues. Flat spending profile and regular replacement of user devices Location independent interactions for staff and students. Less staff travel.
	Implement a fully integrated University wide AI self-service chat bot with our ESM service, and ensure IT services and enhancements are well advertised	Develop an AI strategy which automates delivery of student specific data on request	Explore opportunities for joint development of automation with WISA research students	
	Create unit analysis and response plan to each survey, benchmarking our performance in NSS against other Welsh HEI's	Create unit analysis and response plan to each survey, benchmarking our performance in NSS against other Welsh HEI's	Create unit analysis and response plan to each survey, benchmarking our performance in NSS against other Welsh HEI's	

	Year 1	Year 2	Year 3	Benefit
Student and Staff IT Inclusivity and Satisfaction	Develop unified leasing plan for all owned and current leased equipment	Equipment renewal based on leasing plan	Equipment renewal based on leasing plan	
	Review usage of our current video conferencing spaces and create a strategic plan for future developments, facilitating simultaneous translation	Undertake virtual meeting room developments	Undertake virtual meeting room developments	
	Implement improved Moodle user interface	Write a UWTSD VLE Policy with Terms of Reference	Perform SWOT analysis of Moodle and evaluate alternatives	Improved student experience and retention. More efficient processes for staff and students. Better collection and visibility of key data.
	Resolve Moodle performance issues. Complete a review of hosting options (SaaS/PaaS)	Setup a VLE focus group		
	Implement Skooler Moodle Teams integration & Celcat Calendar module	Implement Celcat Outlook calendar integration with Teams enabled events/appointment	Implement further integrations to simplify staff/student experience	

	Year 1	Year 2	Year 3	Benefit
Learner Focused, Innovative IT Developments				
	JISC Learner Analytics pilot	JISC Learner Analytics full rollout	Learner Analytics additional metrics	
	Doctoral College & Postgraduate Data	Curriculum Management	Create Software Development higher apprenticeship opportunities for those completing Level 3 quals	
	Online Application Form	Student Services Data	UoW student records, website and certificate printing integration	
	Direct Enrolment, eCommerce and SITS integration for Micro Credentials	Electronic processes and automation for Home and International Registry, Finance - Ph1	Electronic processes and automation for Home and International Registry, Finance – Ph2	
Proactive, not reactive	Implement Project Roadmap	Utilise Microsoft 'DevOps' functionality to manage BAU better within Agile working	Develop Microsoft 'DevOps' functionality	More efficient teamwork. Empowerment of team members. Understand voice of staff and students. Improve data analysis and automate internal processes. Proactively monitor and resolve issues before they are reported.
	Review and update current automated tasks into new ESM service	Extend reporting and monitoring to all professional units within the new ESM service	Implement additional automated processes based on reports and monitoring	

	Year 1	Year 2	Year 3	Benefit
UWTSD Group	Create UWTSD Group CyberSecurity forum	Integrated approach with CSG to Wi-Fi for Carmarthen campus joint provision	Explore WAN integration opportunities	Sharing skills and efficiency savings.

References

- [UWTSD Mission and Vision](#)
- [UWTSD Strategic Plan 2017-2022](#)
- [UWTSD Teaching and Learning Strategy](#)
- [UWTSD ITS Strategy 2017-2020](#)
- UWTSD Digital Strategy 2021-2023 (DRAFT - not yet published)
- [UWTSD Digital Skills Framework](#)
- [CSG/Coleg Ceredigion Strategic Plan 2019-2024](#)
- [Harvard University IT Strategic Plan](#)
- [University of York IT Strategy 2017/18-2019/20](#)
- [University College Dublin IT Strategy 2020](#)
- [Powering UK higher education | JISC](#)
- UWTSD Survey and League table overview & Resources Satisfaction by Campus (supplied by Student Experience)
- [Student digital experience survey insights survey 2020: UK HE findings](#)
- [Teaching staff digital experience survey insights survey 2020: UK HE findings](#)

Document Version Control

Version No:	Reason for change:	Author:	Date of change:
V1.0	Initial Draft	MM/BT	
V1.1	Application of University template and Impact assessments	CG	09.06.21

(this should include the journey of the strategy policy through the Committee structure).

Appendix 1: IT Annual SMART Action Plan 2021-22 (to be updated)

Project	Description	Business Driver and Objectives	IT Strategic Objective	Year AP Added	Business Sponsor	Campus	Project Lead	% Done	Estimated completion	Notes
Implement MS AoVPN and FortiClient EMS VPN access, evaluate JISC/Alibaba VPN			Simple, Available & Cyber Secure	20/21	Digital Services	All	AD/NL	50%	Q4 2021	
CyberSecurity Essentials Plus BAU & extend end-point monitoring.			Simple, Available & Cyber Secure	20/21				0%		
Implement Security Information Event and Mgmt (SIEM)			Simple, Available & Cyber Secure	20/21				0%		
Implement FortiGate HA pair in Carmarthen & Decommission ServerNet Gateway			Simple, Available & Cyber Secure	20/21				0%		
Migrate HR System to SaaS Cloud			Simple, Available & Cyber Secure	20/21				0%		
Support WISA Security Operation Centre (SOC) internal implementation			Simple, Available & Cyber Secure	20/21				0%		
Implement Azure AD authentication on and off campus			Simple, Available & Cyber Secure	20/21				0%		
Upgrade student halls Wi-Fi - Carmarthen ABN1-4			Infrastructure keeping pace	20/21				0%		
Update Campus networking and Wi-Fi – Alex Rd, UoW Registry, CAWCS			Infrastructure keeping pace	20/21				0%		
Upgrade Carmarthen DEWI Core and ABN Distribution & Edge, & Lampeter Distribution			Infrastructure keeping pace	20/21				0%		
Support Estates CCTV update.			Infrastructure keeping pace	20/21				0%		
Support Estates Door Access Systems standardisation			Infrastructure keeping pace	20/21				0%		
Write Data & Business Intelligence strategy			Enabling data-driven Decisions	20/21				0%		
Implement Quality APR and student engagement reports, update application and new student			Enabling data-driven Decisions	20/21				0%		
Revise collection of HESA student data and define data owners to cater for Data Futures tri-annual			Enabling data-driven Decisions	20/21				0%		
Review data warehouse model			Enabling data-driven Decisions	20/21				0%		
Implement single Enterprise Service Management System for all relevant professional services, with consideration for the CRM			IT Inclusivity and Satisfaction	20/21				0%		
Implement a fully integrated University wide AI self-service chat bot with our ESM service			IT Inclusivity and Satisfaction	20/21				0%		
Create unit analysis and response plan to each survey			IT Inclusivity and Satisfaction	20/21				0%		
Leasing Content			IT Inclusivity and Satisfaction	20/21				0%		
Online meetings and VC Content			IT Inclusivity and Satisfaction	20/21				0%		
Implement improved Moodle user interface			Innovative IT Developments	20/21				0%		
Resolve Moodle performance issues. Complete a review of hosting options (SaaS/PaaS)			Innovative IT Developments	20/21				0%		
Implement Skooler Moodle Teams integration & Celcat Calendar module			Innovative IT Developments	20/21				0%		
JISC Learner Analytics pilot			Innovative IT Developments	20/21				0%		
Doctoral College & Postgraduate Data			Innovative IT Developments	20/21				0%		
Online Application Form			Innovative IT Developments	20/21				0%		
Direct Enrolment, eCommerce and SITS integration for Micro Credentials			Innovative IT Developments	20/21				0%		
Implement Project Roadmap			Proactive, not reactive	20/21				0%		
SD Action Content			Proactive, not reactive	20/21				0%		
Create UWTSO Group CyberSecurity forum			UWTSO Group	20/21				0%		

Appendix 2: Indicative Investment Profile

IT Strategic objective	IT high level theme	Year 1*	Year 2**	Year 3
Simple, Available and Cyber Secure	CyberSecurity	£36,500	£37,000	TBC
	Cloud Migration	£11,000	£330,000	
	Learning Technologies	£330,000-£500,000	£330,000-£500,000	
Ensuring our IT Infrastructure keeps pace with University needs	High speed Wi-Fi	£161,000	£190,000	
	Campus network upgrades	£163,000	£235,000	
Enabling data-driven Decisions	Data Governance	£9,500	£19,000	
	HESA Data Futures			
Student and Staff IT Inclusivity and Satisfaction	Student engagement and communications	£60,000	£60,000	
	Equipment Leasing (including Digital Bursary support)	£600,000	£1,000,000	
	Online meetings and videoconferencing			
Learner Focused, Innovative IT Developments	IT Development and Integration	£68,000	£68,000	
	Virtual Learning Environment	£30,000-60,000	£30,000-60,000	
Proactive, not reactive	Agile workload planning & Prince2 Agile Project management			
	Support ESM service			
UWTSD Group			£30,000	
TOTAL		£1,469,000 - £1,669,000	£2,329,000 - £2,529,000	

*Yr1 figures form IT's Capital budget request submission for 2021-22

**Yr2 figures are indicative following early discussions and will be used to inform our engagement with Finance for the budget period 2022-23

Appendix 3: IT&S Strategy 2017-2020 – Post Strategy Analysis Summary

Background

The IT&S Strategy 2017-2020 was built to support the four Institutional strategic priorities:

- Putting Learners first
- Excellence in Teaching, Scholarship and Applied Research
- Creation of Opportunities through Partnerships
- A University for Wales

Overview

Of the 44 objectives, 98% are completed, demonstrating the strategy has been central to IT&S development over the period. A detailed analysis is included in Appendix I.

The four-year span of the Strategy has been a turbulent time, we have seen a growth in both the size and maturity of IT&S, whilst having to respond to two major University restructures due to financial constraints. We have made significant improvements to IT infrastructure, user hardware and software, organisation and methods of working, and integration of systems. We have also seen the centralisation of corporate returns and the staff & student intranet under the IT&S umbrella.

This strong and resilient platform gave us the foundations to provide an excellent response to the challenges of COVID restrictions – combining a solution to homeworking with a backdrop of significantly increased cybersecurity risk to Universities, to allow unrestricted access to resources and allowing University staff and students to operate as freely as possible.

Notable achievements

SA1 Campus

IT investment in new IQ and Fforwm buildings in SA1.

IT&S supported the University's significant financial investments in SA1 with state of the art Wi-Fi and networking infrastructure, learning spaces and technology, PC's, and printers. This included bespoke distributed data centres in IQ and Fforwm with a storage area network and virtual environment for provision of IT servers and services.

Yr Egin Campus

IT investment in Yr Egin, Carmarthen

IT&S supported S4C in creating a modern headquarters, with IT equipment to underpin requirements for Wi-Fi, office space and live broadcasting. This has paved the way for UWTSO and S4C to develop in tandem.

Satellite Campuses

IT investment in new learning centres in England – London Holborn, Birmingham Sparkhill & Quay Place

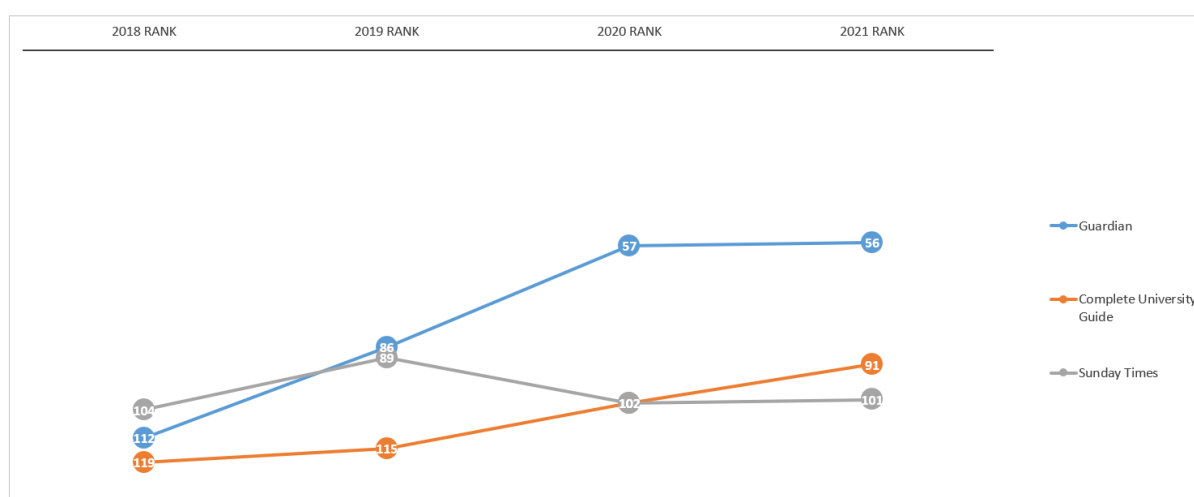
IT&S supported the University's growth in London and Birmingham. Significant student number increases in the English campuses pay testament, supporting the many written and spoken accolades to these developments.

Data Collection

Improvements in data collection and reporting to improve league table position. We have risen from 112th to 56th in the Guardian League table.

IT&S led the professional services drive to improve our University League Table status by better representing ourselves with our data. This was achieved with a variety of systems and reporting developments to better capture metrics such as qualifications on entry, improving the quality of data at the point of entry using data checks and MyTSD forms with data validation so Registry processes could be devolved, and reporting systems to support Quality metrics such as Annual Programme Review (APR).

Overall league table position comparison



System Uptime & Resilience

Improvements to system uptime and security resulting in Cyber Essentials Plus accreditation

IT&S have worked together to simplify the network infrastructure, adopting a common network blueprint, along with automation and empowerment of service delivery technicians to undertake frequent tasks. This includes a new storage area network, 802.x authentication, and adoption of a single firewall technology solution. We have also implemented Microsoft security features including but not limited to Multi-Factor Authentication, safe-links, and attachments.

Response to COVID lockdown arrangements

IT&S worked tirelessly to maintain a working environment following the overnight change from on campus to off campus provision. We have implemented VPN solutions for both staff and students, replaced large swathes of user devices, and implemented Microsoft Teams for

collaboration, meetings, and telephony whilst maintaining our security perimeter. In addition, a self-service setup process was implemented for new laptops enabling us to directly post new equipment to staff homes which has drastically increased the speed and efficiency of deploying equipment to staff.

Improving Wireless provision

In the modern age Wi-Fi has become everything for students. Our response is well underway, adopting modern Aruba Wi-Fi 5&6 technology in all new and refurbished campuses (SA1, Dynevor & Birmingham), along with an ongoing rollout to Carmarthen and Lampeter halls using state of the art guest networking, including eduroam and govroam education and government network access. Continuing this investment will be a central theme of the new IT&S Strategy, as we see a significant campus-based correlation between student NSS scores for Learning Resources and the quality of Wi-Fi provision in that location.

Structure & Workload Planning

Improved organisational structure and AGILE workload planning.

We have adopted Agile scrum workload management for management of developmental tasks, whilst implementing a team leader tier in the department. This has optimised our productivity and organisation, which is borne out in our success with systems developments following the reintegration of the SITS project team.

Improvements to Finance reporting and processes

Better forecasting, identification of student income and collection of fees

At the time of writing the policy the University actual income against forecast was suffering a deficit of £6m and we had issues with uncollected fees. We have worked with Finance over the entire period to help make our finance processes and reporting more systematic and accessible, and better integrated with our student record system. We are still on this journey, but we are now forecasting with accuracy and collecting fees efficiently. This is underlined by Finance now running a £1m surplus.

Student NSS survey

The NSS survey is an important tool to measure the success of IT&S services across the University and within the survey, there are two questions that IT&S focus on to assist IT&S with our continual improvement in our performance within the National Student Survey in addition to other satisfaction surveys.

Throughout the strategy period, there has been a substantial improvement both overall and across our campuses with the results of the NSS survey questions relating to IT&S with the combination of the two scores increasing which shows a positive delivery of this strategy.

In relation to the IT Resources question we have seen:

- 6% overall increase from 73% to 79%
- 12% increase in Lampeter from 67% to 79%
- 7% Increase in Carmarthen from 72% To 79%

- 8% Increase in London from 71% to 79%

In relation to the Course Specific Resources question we have seen:

- 4% overall increase from 79% to 83%
- 6% increase in Lampeter from 80% to 86%
- 7% increase in Carmarthen from 77% to 84%

In London we also saw a 10% increase in the first two years of the IT&S strategy from 76% to 86%.

We identified that our primary goal would be to exceed 80% satisfaction in our combined score and are pleased to have surpassed this goal having an overall improvement of 5% increasing from 76% to 81% in our combined overall score for the two questions relating to IT&S within the NSS Survey.

