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Digital Strategy

2021-2025

Digital Transformation @ Aberystwyth University

Introduction

Welcome to Aberystwyth University's Digital Strategy. The purpose of this strategy is to look ahead and set out a vision for adopting a digital approach across the organisation. Over the period outlined in this strategy, digital will be core to all the institution's activities and this document sets out how it will be used to enhance learning and teaching, research, our administration, and processes, as well as our global presence.

This strategy has been developed through consultation with our students, staff, heads of departments, and the Executive team. It has drawn evidence from numerous sources including the National Student Survey (NSS), Module Evaluation Questionnaires (MEQs), Tell us Now (TUN) comments, Information Services (IS) User Surveys, and the three JISC Digital Experience Insights surveys (for teaching staff, professional staff, and students). Furthermore, the latest reports and literature (see references), conferences, and other University digital strategies have helped formulate it. We expect this strategy to be a "living document", that will be updated over the period considering experience, the changing environment and priorities, and levels of funding available. However, the wider themes and principles laid out in this Digital Strategy are likely to remain more constant and help the University navigate a way forward.

The Digital Strategy has been fully costed and detailed action plans developed. Capital and revenue budgets to support implementation of the Strategy will be submitted as part of the annual planning round process.

This document sets out an ambitious vision to transform the University into a sector-leading digital organisation. It is supportive of the University's Strategic Plan 2018-2023, Learning and Teaching (APEX) Strategy 2019-2022, and the Research and Innovation Strategy 2019-24. The strategy will work with and complement the University's Estates and People strategies. This document also reflects the priorities of the Welsh Government's Digital Strategy for Wales. It is worth noting for clarity what this strategy is not:

- ✕ It is not a strategy for the Information Services (IS) department; it is a University-wide strategy that should be owned across the organisation.
- ✕ It is not just about computers or IT; people and culture are key to this strategy, as is the way we work.
- ✕ It is not just about learning and teaching; it covers all aspects of the University's business.

Digital is a force of disruption, with the business models of entire industries from music, publishing, and retail being transformed. The rate of change of the digital revolution is accelerating. A wave of maturing technologies such as artificial intelligence, automation, augmented / virtual reality, Internet of Things (IoT), robotics, data analytics, and mobile / 5G present huge opportunities as well as threats to Universities. The expectations of current and prospective students around their digital experience with the University is also evolving fast. Aberystwyth University cannot afford to be complacent; it needs to be technologically engaged and move forward on a path of greater digital maturity. The overall purpose of the strategy is to place the University on a strong footing to respond proactively to wider digital and societal trends, the rapidly changing technological environment, and ultimately to be successful in achieving its objectives through digital transformation.

Tim Davies, Director of Information Services, June 2021

Context

The Global Pandemic

Work had begun on this strategy in 2019, however in early 2020 the global COVID pandemic forced the UK into lock-down. In the University's case, this involved a rapid shift to staff working from home and students learning online. Digital was critical to adapting to the challenges we all faced. Changes in practice and adoption of technologies that would have previously taken years happened in weeks. This demonstrated that barriers could be overcome, and change implemented quickly where there was a need and sense of urgency. The Information Services (IS) department had to act very quickly and respond to this rapidly changing situation. In general, more digitally-enabled organisations have fared better in the pandemic. They were better able to meet the needs of their customers remotely, operate in an online environment, and adapt quickly to external events. We need to continue with this agile and responsive approach as the norm and not the exception as we move forward post-pandemic. This strategy has been revised in 2021 in light of the pandemic, which reflects the acceleration of already pre-existing digital trends; a "digital shift".

Technology Trends

Several emerging longer term technological themes are having a growing impact on industry, the world of work, education, and society in general. The term "Industry 4.0" or the "Fourth Industrial Revolution" has been used to describe the impact of these technologies, including:

- Artificial intelligence
- Automation
- Internet of things
- Big data and analytics
- Virtual & Augmented reality
- Robotics

Acceleration of these trends is disrupting entire industries and business models. HE has been largely unimpacted by technological disruption, with digital initiatives mainly seen as peripheral, supportive, and focused on narrow functional areas. However, "Education 4.0" looks to use these technologies for learning, teaching, and the wider student experience as well as preparing students for the world of work in Industry 4.0. These developments are taking place against a backdrop of rising expectations, increased competition, cost and funding pressures, sustainability targets, as well as potential opportunities for disruption to the HE sector through digitally-enabled new markets and business models. This strategy will engage the University with these technologies.

Aberystwyth University

At Aberystwyth, digital and information services have played an important role in the overall excellent student experience at the University in recent years. The IT NSS results have been consistently high and now (2020) the highest in the UK amongst Universities in the Times & Sunday Times League table (94%). Library services (including information resources) rank third in the UK and top in Wales at 93%. Course specific resources (including equipment and software) also ranks very high at 93% satisfaction. In an exemplar of "Digitalization" and the potential of digital, technology played a central role in enabling the Module Evaluation (MEQ), Tell us Now (TUN) and Your Voice Matters (YVM) quality enhancement processes with resultant dramatic increase of the University's NSS satisfaction and league table ratings from 2015 onwards. Learning technologies and the student voice initiatives mentioned above were specifically noted in our 2018 Gold TEF award and digital was widely mentioned in Times & Sunday Times awards for "University of the Year for Teaching Quality". Internal surveys (until the November 2020 survey during COVID) showed highest levels of user satisfaction with IS services since the survey began over 15 years ago. In pushing the digital agenda forward at Aberystwyth, IS has focused on many non-spend means to achieving these results. These have included a strong focus on the student voice and customer service. IS has been awarded the Customer Service Excellence (CSE) award which benchmarks IS as sector leading in many aspects of customer service.

While there are many positives around the current digital landscape at Aberystwyth University in 2021, there are several challenges we face:

1. A legacy of long-term under-investment in technology that has only recently began to improve.

2. Partly because of this, an uneven investment in digital solutions across the University's operations, with most focus being on learning and teaching.

3. Furthermore, this has resulted in extensive use of in-house and on-prem solutions to fill the gaps that are now obsolete, overly complex, and difficult to maintain and develop. This includes core business systems such as the student record system.

4. Historically, a decentralised approach to IT that has meant many digital assets are not managed centrally with resultant negative security, reliability, sustainability, and value for money effects.

5. Lack of "ownership" of digital across the institution including data and systems that relate to roles and functions.

6. While improved by the pandemic requirements to work remotely, the digital skills and capabilities of our staff and students are very variable, impacting the University's ability to leverage digital and our students' employability prospects.

Digital Mission

The mission of the Digital Strategy is to

"Empower Our People through Digital Technology and Information".

Digital Vision

The vision is

"Transforming Aberystwyth University into a Sector-Leading Digital Organisation".

The strategy consists of

Foundations

These cross-cutting themes represent the "foundations" of the Digital Strategy (at the bottom of the diagram below). These can be seen as pre-requisites and supportive to the pillars above.

Digital Skills

Ensure that our staff and students have the skills, capability and confidence to use digital technologies at the University and in their studies. Students graduating from Aberystwyth University will have the digital skills needed for the workplace of tomorrow.

Cyber Security

As an area of high risk, the University's Cyber Security must be prioritised and be an all-institution owned issue. A wide range of activity will be undertaken including training, collaboration with external bodies, achieving standards, and implementing new technologies, to mitigate the risks.

Digital Infrastructure

We will ensure the University has a robust, modern, and well-maintained IT and communications infrastructure. Key to our infrastructure strategy is the "Cloud First" and "Smart Campus" approaches.

Digital Workplace

This theme will focus on enabling a "Hybrid Working" model for staff. Hybrid will involve staff working some of the time remotely and some in the office.

Pillars

These represent specific functional areas for digital development and enhancement. In each of these areas we will utilise Digital to increase efficiency, improve quality, support the development of new business models, markets and / or funding streams.

Deliver an Excellent Learning, Teaching and Student Experience

This strand will focus on supporting the delivery of the University's Learning and Teaching Strategy, 2019-2022 "Aberystwyth Pedagogical Excellence (APEX) Strategy" through developing a "Blended Learning" framework, review of the main learning and teaching technologies and policies, reviewing the future of assessment, and responding to digital inclusion.

Support Research and Innovation Excellence

This strand of the Digital Strategy will focus on supporting the delivery of the University's Research and Innovation Strategy 2019-24. This will include implementing technology to support the research lifecycle and business engagement, delivering hybrid research events, responding to the open science agenda, and reviewing the delivery of research IT.

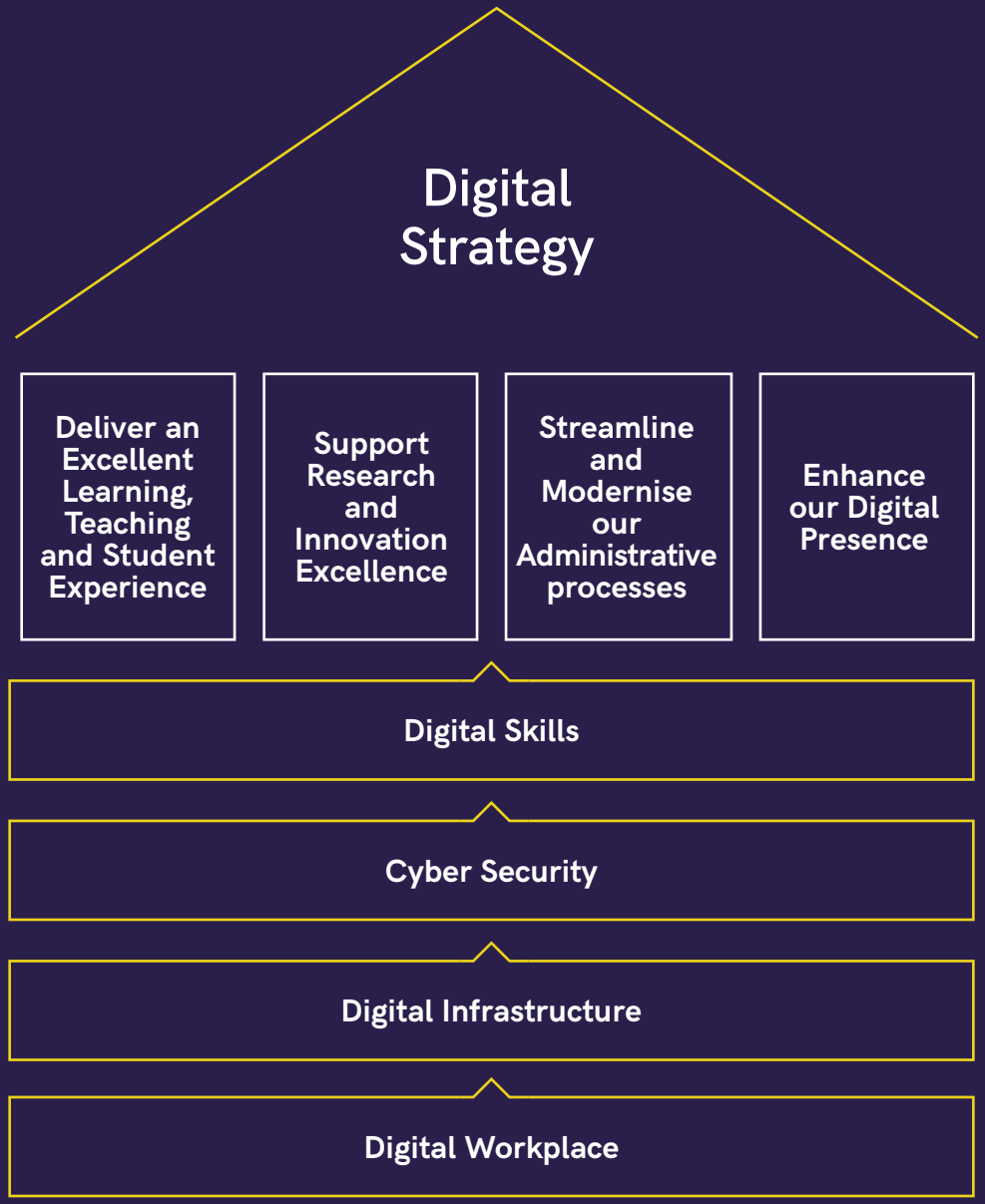
Streamline and Modernise our Administrative Processes

Digital will be used across the University to improve the efficiency and quality of processes. We will review, develop, redevelop or replace key business systems; ensure, where systems are implemented, they are consistently adopted; and take forward an initiative on improving customer service across the University.

Enhance our Digital Presence

This theme will focusing on enhancing the University's digital presence through continued implementation of enterprise Customer Relationship Management (CRM), review of the web site, and development of an Intranet.

These foundations and pillars support the overall digital strategy that in turn is supporting the delivery of the University's strategic objectives.



Guiding Principles

▲ One University.

We should operate consistently, using simple and uniform processes, removing bureaucracy, and breaking down silos. This will involve the focus on institution wide as opposed to departmental or team goals. There will be higher levels of cross-organisational alignment and collaboration.

▲ Excellence.

Digital services should be high quality, innovative, deliver added value, personalised, and enable users to be more productive. Innovation will be strategic and driven by the University's objectives. Effective agile project and change management will support delivery of high-quality solutions.

▲ Ownership.

Data and systems must be clearly owned within the organisation. Leaders and managers will be digitally engaged.

▲ Security.

Security must be embedded in the University's culture and be everyone's business.

▲ Capability.

Our staff and students must have the skills and confidence to fully leverage digital solutions and information.

▲ Customer First.

Solutions and services should be built around the customer at the centre. In general, they should also be developed in conjunction with the customer. Solutions should be intuitive.

▲ Data has One source.

Data should be integrated, not duplicated. Data quality is critical to the organisation and will be increasingly used in informing and adjusting the University's course.

▲ Cloud First.

Cloud based delivery will be selected by default, only developing internally and / or hosting on premise where there is no viable alternative or where this adds value.

▲ Accessible.

All services need to be accessible to all and available from any device, easy to use and navigate.

▲ Bilingual.

Digital platforms should be available in both Welsh and English, supporting the bilingual nature of the University and Welsh culture. Digital should support sustainable Welsh-speaking communities.

▲ Well-being.

Digital initiatives should consider the wellbeing of those who use the service, as well as promoting equity, diversity, and inclusion.

▲ Sustainable.

All initiatives should consider their environmental impact with the aim of supporting a reduction in resource consumption and achieving our net zero target by the end of the 2030-1 financial year.

Digital Transformation

As outlined in the Vision, this strategy aims to digitally transform the University. The term "digital transformation" is used widely, but what exactly does this mean?

"Digital Transformation" can be seen as the in the context of other stages: "Digitization", through to "Digitalization", and then to "Digital Transformation". Digital transformation itself should not be seen as a destination, more of a journey. The terms and examples are explained further below:

- Analogue to digital
- Organise information

- Automate processes
- Streamline processes

- Strategic
- Cultural change
- Coordinated/ organisational wide

Digitization

Digitization is the process of moving analogue information to a digital format. Examples would be handouts, lecture notes and slides being made available digitally on the VLE; simple web-based forms to capture information; scanning chapters of books and making them available; and lectures that are delivered live but also recorded digitally and made available for viewing afterwards.

Digitalization

Digitalization involves transforming individual processes and operations. This leverages the opportunities afforded by digital in a specific area to automate and streamline processes. One example might be digital assessments being created and submitted, marked and fed back all online. The process includes text matching for plagiarism detection and new methods of feedback such as audio or video.

Digital Transformation

Digital Transformation is described by Educause as follows, "In the context of sweeping social, economic, technological, and demographic changes, digital transformation (Dx) is a series of deep and coordinated culture, workforce, and technology shifts that enable new educational and operating models and transform an institution's business model, strategic directions, and value proposition." It involves the strategic and coordinated organisation-wide use of technologies alongside cultural change. An example here might be the managed adoption of blended learning and hybrid working approaches that transform the estate and deliver our education to new markets and in new models.

Aberystwyth University, and most UK HEIs, is applying Digitization and Digitalization to varying degrees. Pre-COVID, while there are many good examples of the application of digital, most are not strategic, and the sector lags behind others in this regard. The vision, as outlined earlier, is the Digital Transformation of Aberystwyth University.

Measures of Success

The Digital Strategy covers a wide range of areas of activities and new projects. Many of these will have their own KPIs to measure their individual success. We recommend the creation of a Digital Management Group (DMG) that will consider how to assess the effectiveness of individual projects that are part of the Digital Strategy. At a strategic level, the following indicators will be used to measure success of the strategy:

- NSS results for questions relating to Digital (Under "Learning Resources").
- MEQ "Learning Resources" question results.
- IS User survey.
- JISC Digital Insights Survey.

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