ARU Digital Strategy
2017 - 2020

To systematically add digitally transformed solutions and processes
that create value for students, staff and external stakeholders,
and in doing so enable ARU to focus as much resource as possible
on our core academic mission.

Core Principles

Our digital strategy will deliver solutions that meet the following core principles

- Deliver superior and seamless user experiences
- Lead with digital first solutions
- Drive evidence based and data led decision making
- Deliver integrated and shared platforms
- Deliver efficiencies that maximise output and enable internal re-investment

Our digital campus

We will produce a clear and coherent description and plan for the digital infrastructure, systems and technology enabled processes we need to deliver on the university strategy. In the same way as a physical campus masterplan describes the relationship between form and function, core infrastructure and buildings and links this to the overall mission and character of a university we need to do the same for our digital plans. This will inevitably be a dynamic plan given how things are changing but should help shape decision making and communication. This will be developed as the work on the priority areas and initial programmes develop.

Priority Areas to support the University Strategy

Innovative digital solutions have the potential to enhance all aspects of our universities activities. The following high level areas are where focus will be placed over the next 3-5 years. A schedule of projects will be developed in each of these areas that will address operational priorities, dependencies and resourcing.

Theme 1:
Education, Research & Innovation, Engagement

Education

Learning Management System and integrated educational solutions

Technology enabled learning support to enhance student experience

Integrating MOOC's and open access resources to enable flexible delivery

Library and digital learning resources

Research & Innovation

Research bidding and grant support

Research Data storage and archiving

Open access publication support

Ethics and Compliance support

Community Engagement

Digitally showcasing ARU to the wider community

Enabling easier business and community engagement

Business and stakeholder linkage support

Theme 2:
Our People

Students

Integrated student journey

Reporting on student numbers, progress and outcomes

Staff

HR systems - self service

Recruitment processes

Reporting

Support for team working (Slack like functionality)

Intranet enhancement

The wider ARU Community

Alumni linkages and support

Fund raising

Theme 3:
Strengthening the underpinning operations of ARU

Solving Challenges

Data & Reporting

Project management and team working support

Infrastructure

Monitoring and reporting, including intelligent buildings

Space utilization in real time

Cybersecurity

Technical Support for staff and students

Resources

Data and reporting

Self service

Fully integrated operational workflows

Programmes & Projects

ARU will develop and deliver thematic programmes linked to the strategic priority areas identified above that will consider dependencies and capacity / capability for change.

Each programme will contain a variety of projects that will build the capability required. Each programme area will have a CMT member(s) as lead. The lead(s) will work with colleagues to identify priorities, sequence projects and make recommendations to the Digital Strategy Delivery Group (DSDG, see below) The initial programme areas are proposed as follows: -

Educational Experience :

- Lead – Director of Learning Development Services

Research Support

- Lead – Director of Research, Innovation Development Office

Student Journey

- Leads – Director of Marketing & Director Student Services

Staff Journey

- Lead – Director of Human Resources

Working Together

- Lead – Chief Information Officer

Data & Reporting

- Lead – Corporate Strategy & Projects Executive

For each of these areas we will identify and deliver opportunities for :-

- Digital transformation - Doing things differently
- Digital re-engineering - Doing things better
- Improve practices - Enhance what we already do

In addition, and in line with the digital philosophy, each programme will be required to both demonstrate both how it will add value for our students and staff and how it will enable us to better prioritise resources towards the core academic mission of ARU.

Running programmes & projects

Culture

One of the major barriers to delivery of our digital strategy will be setting and maintaining a whole of institutional culture that embraces the challenges with digitally transforming much of what we do. We will ensure that we are agile and creative in the way we address challenges. Much of what will need to be achieved will come from small incremental projects rather than major initiatives. This culture will be characterised by agility and creativity.

Agility

Velocity – we will work to increase the pace and progress of ARU through broad and proficient adoption of digital processes within a culture that supports constant testing and learning.

Focus – all projects will have a clear vision and purpose focussed on execution and delivery.

Flexibility - the oversight and governance arrangements will enable us to move fast and adapt rapidly to changing needs.

Creativity

A willingness to experiment.

The desire to look for and seek out new innovative ideas that challenge the status quo.

Make robust data driven decisions, focus, strong and clear mission.

Stop things when not working- institutional courage.

Supporting our people

We will develop and deliver a range of activities that support staff across ARU to understand, engage with and enhance the digital strategy.

In the longer term delivering the strategy should make everyone's working lives easier, but we recognise there will be a transition period and our people will need to be supported through change. We will undertake a current state assessment of our levels of technical and cultural readiness to embrace the digital campus in order to develop a programme of activities designed to support our people, including information and training to enhance their ability to use new technology, and adapt their behaviours and manage their use of technology so it enhances their work without creating additional digital overload. We will also build on new approaches to involve staff and encourage innovation and creativity, resulting in a more flexible and agile culture overall.

IT Architecture and Infrastructure

Although the digital strategy is focused on the processes and systems that will enhance and add value to our students, staff and other stakeholders the underpinning IT architecture and infrastructure are core components.

Our strategic approach is underpinned by the following key principles, which act as underlying general rules and guidelines:

- **Reuse solutions, rather than reinvent:** Where possible new requirements will reuse or adapt existing solutions, before considering procurement or developing new ones.
- **Out-of-the box solution implementation:** We will seek to implement solutions with processes and functionalities as provided by the product. Customisations will be carried out by exception.
- **Platform and device independent:** End-user solutions are accessible on any end-user device and any platform.
- **Self-service as standard**: Wherever appropriate self service capability for end-users (staff or students) will be an integral solution requirement and preferred method for accessing or updating information.
- **Hosting decisions are based on operational requirements and financial efficiencies:** Options for hosting will be selected based on total cost of ownership and business requirement with the consideration of the use of cloud based technologies and software as a service (SaaS).
- **Data has one source:** There will be one single version of the truth, with data being entered once as a master record and then re-used through data integration.
- **Data will be protected**: Data will be protected from unauthorised use and disclosure, ensuring that confidential, personal and personal-sensitive data is protected. Access rights will be granted based on roles and at the lowest levels necessary to perform required operations.

- **Secure information exchange and systems integration:** Data exchanges between systems will be configured to conform to defined integration standards that promote interoperability for data, applications and technology.
- **Secure single-sign-on authentication:** Standard Access Management and Identity Management solutions are applied to ensure identity relating information is exchanged securely between systems.
- **Adherence to regulations and accessibility standards:** All solutions must comply with relevant laws, regulations and statutory requirements and accessibility standards.
- **Systems are designed and maintained to ensure continuity of service:** Solutions will be designed to meet requirements for resilience and availability, ensuring they meet performance demands and continuity of service with minimal down time and data loss.
- **Solution architecture independent of organisation structure:** The architecture of solutions will be deployed around functional structures rather than current organisation structures.

Investments

The digital strategy will inform a 3-year rolling investment plan that supports the processes, people and infrastructure for the delivery of strategy. To be effective and transparent it will :-

- Bring together all funding into one area
- Strategically balance business as usual investments and new projects
- Enable Programme investments - multiple linked projects with dependencies
- Provide small project support and funding – for small stand-alone projects that deliver focussed benefits.

Supporting Business as Usual

We will develop realistic BAU budgets that provide an appropriate level of support for the whole university. This will need to be linked to a standard approach to maintenance releases and support. We will deliver an integrated approach for managing 'end of life' issues for ageing technologies.

New projects

There are two aspects for considering new project investment as we build and implement our digital strategy - the risk profile and the scale of the investment. We need to develop approaches that optimise investment decisions and monitoring processes for each of the 4 quadrants

Investment Matrix	Small	Large
High Risk	Rapid decisions, low threshold for stopping / significantly changing	High level of senior oversight, agile project management, low threshold for adjusting
Low Risk	Rapid decisions, light touch governance	Slower more detailed approval process, standard project management

Table 1: Investment Decision Matrix

Process investments

There will be a clear and unified approach for identifying potential process improvements. Whilst this will need to be unified we will need to adopt a balanced approach where small, low risk projects can be evaluated quickly and proceed quickly.

The approval process must allow local process improvement whilst at the same time avoids inadvertent duplication / conflicting outcomes.

Infrastructure investments

In the context of this strategy, infrastructure is taken to mean both the key hardware required and all enterprise level systems – both on premise and cloud hosted.

Infrastructure will be managed across ARU by the CIO.

Programme & Project management

Project management for infrastructure projects will be provided by the IT Services Projects office, who also administer relevant project budgets and manage IT supplier relationships. Infrastructure projects that deliver business applications will be overseen by a relevant project board, which will be chaired by an appropriate senior business owner.

In addition, for the effective delivery of larger changes as part of the digital strategy we will need effective shared programme and project management. This will need to include expertise in both waterfall and agile project management and will comprise a small central team.

Programme and Project management capacity will be enhanced by contract staff when the number / size of the projects requires it.

Priorities & Dependencies

Ensuring we have responsive and transparent mechanisms for setting priorities and assessing dependencies between various programmes and projects. Sitting alongside this will be a process for evaluating suggestions for enhancements that are suggested from across ARU. This function will be a key delegation for the Digital Strategy Delivery Group.

Disinvestments

What are we going to stop / change

We need to have a continuing enthusiasm for identifying things that we can / should stop. We must build a culture that encourages leaders to do this even when it might mean they get a smaller budget in the future if the outcome is a better outcome for ARU as a whole.

How do we effectively bridge the gap between disinvestment in the old and developing / delivering the new

Many of the digital investments we make in process improvement will need upfront investment. We need to have a process that identifies this up front need but also identifies and plans for the impact of the delivered solution.

How do we capture the savings from projects

When we initiate new projects, we will only be successful if at the end we offer better services and we capture the savings and reinvest them in our core mission. Our digital strategy group needs to consider how we best systematically make this happen.

Measures

The Digital Strategy Delivery Group will consider how we assess the impact and effectiveness of the programmes and projects that are part of the digital strategy.

Governance and Management

Diagram 1 shows the proposed governance and management structure. The Digital Strategy Steering Group will provide oversight of the overall strategy and ensure that the whole of ARU priorities continue to be met. The Digital Strategy Delivery Group will provide a governance function for the evaluation, prioritisation and delivery of Digital and IT projects and programmes.

Digital Strategy Steering Group (Quarterly)	Corporate Management Team (CMT)	Vice Chancellors Group (VCG)
Digital Strategy Oversight	Digital Strategy Delivery Group (DSDG)	Budget recommendations and spend oversight
Project Delivery Governance	Investment evaluation, priority setting	
Project Delivery Teams	Prioritised List of programmes and projects	