Australian
National
University
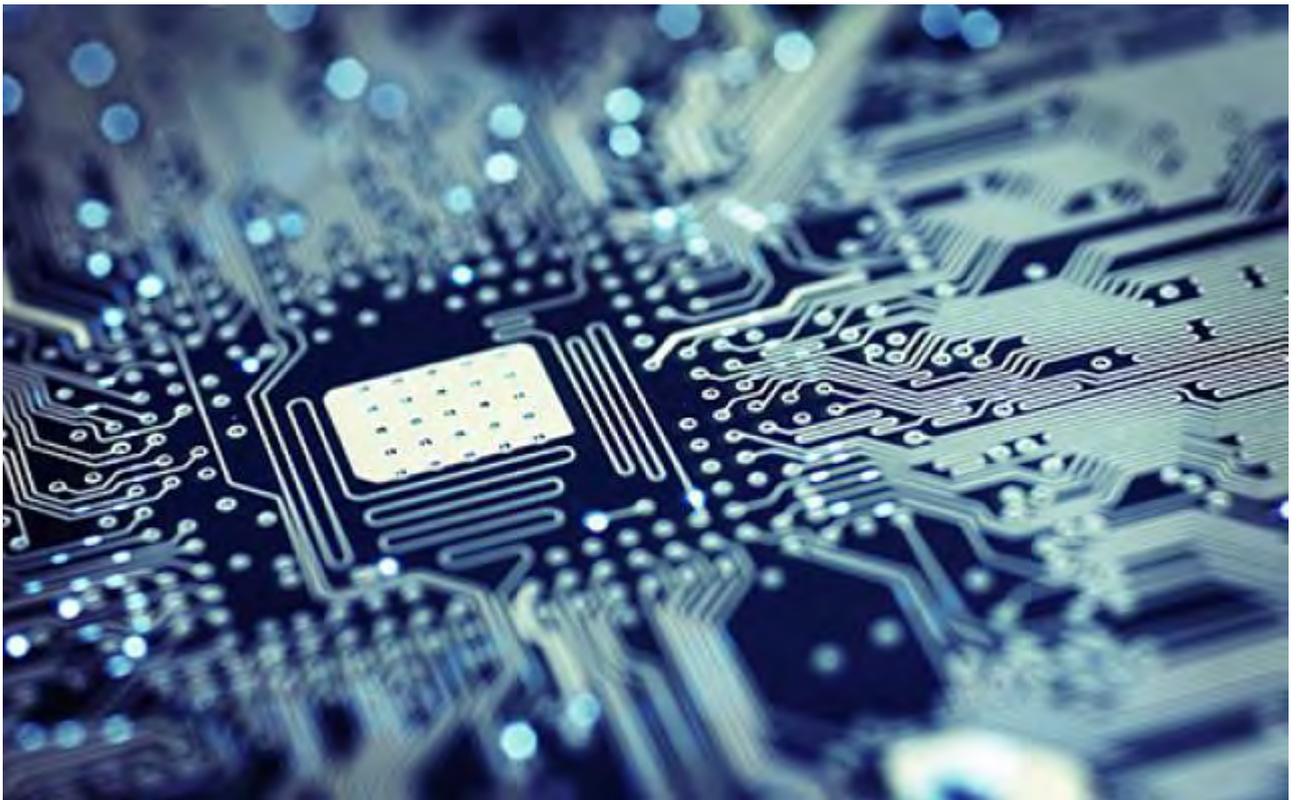
University Information and Communication Technology Governance Committee (UICT)

2016 - 2017

Technology Portfolio

24 April 2017

Document Information

Document Title	2016-2017 Technology Portfolio
Document Reference	Technology and Telecommunications/System Administration/2016-2017 Technology Portfolio

Document Change History

Version	Date	Author	Description of Change
0.1	15/9/15	Kus Pandey	Draft version
0.2	27/7/16	Helen Duke	Updated version following June 2016 UICT
0.3	11/8/16	Helen Duke	Removal of finance information following meeting with Director ITS.
0.4	17/8/16	Helen Duke	Updated to include potential and pipeline projects.
0.5	19/8/16	Helen Duke	Updated to include comments from Kus Pandey.
0.6	5/9/16	Helen Duke	Updated to include comments from Karen Hill and finalise draft.
0.7	13/9/16	Helen Duke	Incorporate additional comments from Karen Hill. Added additional infrastructure projects I17-I21.
0.8	11/10/16	Helen Duke	Incorporate changes following meeting 11/10/16 with ANU Online and Registrar Student Administration.
0.9	14/10/16	Helen Duke	Incorporate further updates following feedback from stakeholders on potential projects.
0.10	17/10/16	Helen Duke	Incorporate changes following review by Director ITS.
0.11	17/10/16	Kus Pandey	QA, plus final additions.
0.12	28/10/16	Helen Duke	Add I1.P7 description and change status to 'completed'. Add ERA to pipeline.

0.13	7/11/16	Helen Duke	Modifications to add additional projects SE22, R4, R4, remove SE7 and pipeline from POW. POW covers 2016-2017 only.
0.14	11/11/16	Kus Pandey	Updated document name and internal references.
0.15	21/2/17	Helen Duke	Update Portfolio to incorporate changes to projects and resourcing/timelines.
0.16	27/2/17	Helen Duke	Incorporate feedback from Director ITS. Update project descriptions for R4 and R5. Add multi factor authentication to 'other' projects.
0.17	27/2/17	Helen Duke	Accepted changes and finalised for UICT 1/2017.
0.18	10/4/17	Helen Duke	Updated to reflect UICT 1/2017 decisions. Updated title and project descriptions for R2 and R5 projects to reflect project information provided by Karen Cameron (SIG project manager). Removed SE8 project following SIG feedback. Minor other updates from ITS AD and Manager feedback.
1.0	24/4/2017	Kus Pandey	Final version for UICT submission.

Table of Contents

Introduction

This document outlines the current approved projects for the Technology Portfolio, which have been forecast to be delivered during 2016-2017.

These projects cover the three core business streams of the University:

1. Student Experience
2. Research
3. Corporate Support

The University Information and Telecommunications Technology Governance Committee (UICT) provides funding to support ANU system innovation (new capabilities) and Information and Communication Technology (ICT) investments, including system and software upgrades and installations for Tier 1 and approved Tier 2 systems[1]. In particular, these funds seek to support ICT projects or programs that:

1. *Run the business*, that is, involve upgrades to existing Tier 1 and approved Tier 2 systems where there is an ongoing need to maintain the system into the future in accordance with its product lifecycle;

2. *Grow or transform the business,* by providing new capability which is strategically important to the University; and

3. *Ensure compliance* with the University's statutory or legal obligations.

Separate funding is available for projects targeted specifically towards ICT infrastructure improvements. This funding aims to deliver robust and contemporary foundational ICT infrastructure and services to maintain our competitiveness within the higher education sector. The infrastructure projects are designed to create an environment for agile and innovative ICT-based service delivery. A 10 year forward investment plan has also been developed as a separate document. Note, infrastructure funding is not available for general funding bids.

This Portfolio will be updated as required to incorporate additional projects approved by UICT.

---

[1] Tier 1 systems are University-wide systems that support the core business of the University – research, teaching or learning – with data critical to the University as a whole. Tier 2 systems are non-core university-wide systems or core local systems. Tier classifications for individual systems are determined by UICT.

UICT Program of Work

The UICT Program covers the three core business streams: Student Experience, Research and Corporate Support, and comprises a number of discrete projects. These projects have been identified as either new capability or product lifecycle upgrade.

Student Experience:

ANU has a diverse range of support services, programs, and activities to enhance the student experience and help students succeed at university. These projects include:

Id	Project Name	New Capability	Product Lifecycle
SE0	ANU Online Program	-	-
SE1	ANU Online - Lecture Recording (Echo360) Upgrade		X
SE2	ANU Online - Moodle Upgrade 3.1 (Completed)		X
SE3	ANU Online – ePortfolio (Completed)	X	
SE4	ANU Online – Digital Content Repository	X	
SE5	Timetabling – Exam Scheduling (Completed)	X	
SE6	Student Administration System Upgrade (Completed)		X
SE9	EvaSys Upgrade		X
SE10	Studylink enhancements (Completed)	X	
SE11	Studylink Phase 2 (College Enhancements)	X	
SE12	Student Experience Analysis and Architecture (Completed)	X	
SE13	Admissions, Scholarships and Accommodation (ASA)	X	
SE14	StarRez	X	
SE15	ANU Online – Moodle Upgrade 3.3		X
SE16	ANU Online – Learning Analytics	X	
SE17	ANU Online – Adobe Connect Upgrade and Enhancements		X
SE18	ANU Online – Moodle Enhancements		X
SE19	ANU Online – Echo 360 Enhancements		X
SE20	ANU Online – Moodle Upgrade 3.5		X
SE21	Customer Relationship Management (Scoping)	X	
SE22	Curriculum Management	X	

(Note. SE7 Timetabling – Class Allocation does not appear in the above list as it is a potential future project for the 2018 Portfolio of Work)

Research:

ANU is a research-intensive university and our research priorities reflect the challenges facing the world today. From next generation solar energy solutions to political engagement strategies, ANU researchers are working at the forefront of their fields and changing the world for the better. These projects include:

Id	Project Name	New Capability	Product Lifecycle
R1	Research Information Management System	X	
R2	Higher Degree Research (HDR) Admissions	X	
R3	Costing and Pricing (Phase 3) (Completed)	X	
R4	ERA 2018		X
R5	HDR Exam and Thesis Submission	X	

Corporate Support:

Corporate Support services are activities which provide enterprise-wide services and encompass activities such as human resources, financial management, information technology, legal services, building facilities, planning and performance, and service improvement. Corporate Support ensures the University has the appropriate infrastructure to support its research, education and community engagement objectives. It is responsible for coordinating the overall budget, resource allocation and planning processes to ensure the optimal use of University resources. These projects include:

Id	Project Name	New Capability	Product Lifecycle
CS1	ES Financials Upgrade (v9.2) (Completed)		X
CS2	ANU Workspace Program	X	
CS3	Collaboration Toolset - Alliance Replacement	X	
CS4	Data Integration Phase 1 (establish foundation)	X	
n/a	Chemical Management System (2015) (in production)	X	
CS5	Data Integration Phase 2	X	

Infrastructure Program of Work

This Program aims to deliver robust and contemporary foundational ICT infrastructure and services which enable teaching and research, and maintain our competitiveness within the higher education sector. The key priorities for 2016-2018 are:

Id	Project Name	New Capability	Product Lifecycle
I1.P1	Wireless Enhancement Project (Ongoing Upgrades)		X
I1.P2	Internet Gateway Refresh Project (Completed)		X
I1.P3	Network Policy Enforcement Project	-	-
I1.P4	Campus Network Refresh (Campus Core)		X
I1.P5	Campus Network Refresh (Distribution and Access)		X
I1.P6	Data Centre Switching Refresh		X
I1.P7	IP Address Management (IPAM) Refresh Project (Completed)		X
I8	Data Centre Strategy and Refresh		X
I10	Identity and Access Management (Phase 2)	X	
I12	Managed Print Service	X	X
I14	Audio Visual Refresh (Ongoing Upgrades)	X	
I15	Legacy Server Replacement		X
I16	Enterprise Storage and Cloud Enablement	X	
n/a	Pebble Decommissioning (Completed)	X	
I17	Telephony Upgrade		X
I18	Web Server Upgrade		X
I19	Oracle Hardware Upgrade		X
I20	Data Centre Upgrade	X	X

Note. The funding provided for ICT Infrastructure is not available for general bids via UICT, but is provided here for visibility.

2016-2017 Indicative Project Roadmap

(The roadmap includes projects underway, approved and/or under consideration)

	2016				2017			
	Q1	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Student Experience				SE1. ANU Online – Lecture Recording (Echo 360) Upgrade				
			SE2. ANU Online – Moodle Upgrade 3.1 (Completed)				SE15. ANU Online – Moodle Upgrade 3.3	
			SE3. ANU Online – ePortfolio (Completed)					
				SE4. ANU Online - Digital Content Repository				
	SE5. Timetabling – Exam Scheduling (Completed)							
			SE6. Student Administration System Upgrade (Completed)					
	SE9. EvaSys Upgrade							
			SE10. Studylink Enhancements (Completed)			SE11. Studylink Phase 2 – College Enhancements		
			SE12. Student Experience Analysis and Architecture (Completed)		SE13. Admissions, Scholarships and Accommodation (ASA)			
						SE14. StarRez		
						SE17. ANU Online – Adobe Connect Upgrade and Enhancements		
					SE18. ANU Online – Moodle Enhancements			
						SE19. ANU Online – Echo 360 Enhancements		
		SE21. Customer Relationship Management (Scoping)				CRM Phase 2 (pending Business Case approval)		
				SE22. Curriculum Management				
Research				R1. Research Information Management System (RIMS)				
					R2. HDR Admissions			
		R3. Costing and Pricing (Phase 3) (Completed)						
					R4. ERA 2018			
					R5. HDR Exam and Thesis Submission			
Corporate Support	CS1. ES Financials (COMPLETED)							
		CS2. ANU Workspace Program						
			CS3. Collaboration Toolset – Alliance replacement					
		CS4. Data Integration Phase 1				CS5 Data Integration Phase 2		
	Chemical Management System (IN PRODUCTION)							
Infrastructure	I1.P1 Wireless Enhancement Project (Firewall) (Completed)		I1.P1 Wireless Enhancements (Ongoing Upgrades)					
	I1.P2 Internet Gateway Refresh Project (Completed)							
	I1.P3. Network Policy Enforcement							
			I1.P4 Campus Network Refresh (Campus Core)					
			I1.P5. Campus Network Refresh (Distribution and Access Layers)					
			I1.P6. Data Centre Switching Refresh					
	I1.P7 IP Address Management (IPAM) Refresh (Completed)							
			I1.P8. Data Centre Strategy and Refresh					
			I10. Identity and Access Management (IdAM) (Phase 2)					
							I12 Managed Print (TBC)	
			I14. Audio Visual Refresh					
	I15. Legacy Server Replacement							
			I16. Enterprise Storage and Cloud Enablement					
	Pebble Decommissioning (Completed)							
				I17. Telephony Upgrade				
							I18. Web Server Upgrade	
							I19. Oracle Hardware Upgrade	
							I20. Data Centre Upgrade	

Student Experience Projects (SE)

SE0. ANU Online Program

Project Sponsor	Business Owner	Project Manager
DVC (Academic)	ANU Online Lead	Richard Robinson (ANU Online)

Project Description:

ANU Online is a multi-year program of work that commenced in 2013. The Program builds upon work carried out in 2013 to deliver an upgrade to Moodle, and in 2014-15 delivering Turnitin and a pilot of a lecture capture solution. This Program will include ePortfolio linked to Moodle, Content Repository for Education, Echo 360 Active Learning Platform and a Moodle upgrade.

Key Objectives:

The ANU seeks to achieve global leadership in the provision of an outstanding educational experience via the use of transformational educational technologies. Under the direction of the Deputy Vice-Chancellor (Academic), and in partnership with ITS, the ANU Online Program is responsible for the implementation of a suite of tools which will enhance the educational experience provided by the ANU and ensure ANU staff and students have access to modern teaching and learning technologies.

UICT Status:	Delivery Timeframe:	Delivery Status:
Program approved. Project proposals required for individual projects.	2016 – Q4 2018	In progress

SE1. ANU Online - Lecture Recording (Echo360) Upgrade

Project Sponsor	Business Owner	Project Manager
DVC (Academic)	ANU Online Lead	Richard Robinson (ANU Online)

Project Description:

Echo360 Lecture Capture technology is the University's digital lecture delivery system. From 1/7/17, the vendor will no longer support the University's version of Echo360 as it is being replaced by Echo360's 'Active Learning Platform' (ALP) that will be delivered and managed by Echo360. This project will upgrade Echo360 to the ALP and provides new capabilities for the University. Echo360 ALP will enable lecturers and academic staff to continue to provide passive lecture recording capabilities and also to modernise approaches in lecture delivery with more interactive and engaging lecturing tools. Echo360 Active Learning Platform can be used to support 'Blended Learning' and 'Flipped Classroom' experiences.

Key Objectives:

- Replace the end of life lecture capture software application.
- Implement educational technologies which enable lecturers to modernise approaches to lecture delivery, including interactive tools built into the lecture capture system.
- Ensure student and academic staff have access to a modern teaching and learning solution.
- Provide an enterprise level lecture capture and playback management solution for supporting modern teaching methods such as 'blended learning' experiences.
- To reduce data hosting costs and issues associated with the existing externally 'self-managed services' solution used for lecture capture and storage, with a vendor managed solution.

Dependencies:

- Union Court redevelopment impact on teaching spaces
- Data Integration project

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q2 2017 – Q3 2017	In progress. Target go-live date is July 2017.

SE2. ANU Online - Moodle Upgrade 3.1

Project Sponsor DVC (Academic)	Business Owner ANU Online Lead	Project Manager Peter Nguyen (ITS)

Project Description:

The ANU Moodle 3.1 upgrade project is part of the product lifecycle management of the University's Moodle based Learning Management System (WATTLE). The University currently uses Moodle 2.7 and the support for this version is coming to an end with the release version of Moodle 3.1. The University undergoes regular upgrades of Moodle to include the latest Moodle features, eliminate bugs and defects from previous versions, and improve security.

Key Objectives:

- Upgrade the University's current Moodle environment supporting its Learning Management System from Moodle 2.7 to 3.1.
- Provide a flexible platform that allows plugins and modules to facilitate modern teaching requirements with new Moodle 3.1 features for Academic Staff and students such as Gradebook improvements, Competencies Based Education Support and Global Search API.
- Improved WATTLE integration and interfacing with other teaching and learning tools such as: Turnitin, Echo360 Lecture Capture, Adobe Connect. Equella and more.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q3 - Q4 2016	Completed. Project Closure Report submitted to 1/2017 UICT.

SE3. ANU Online - ePortfolio

Project Sponsor DVC (Academic)	Business Owner ANU Online Lead	Project Manager Richard Robinson (ANU Online)

Project Description:

The ANU ePortfolio project aims to provide the University new capabilities with a platform where students can collect and demonstrate their learning and achievements independent of the course by creating an online portfolio of their work. ANU ePortfolio will enhance existing courses by having integration with the University's Learning Management System (WATTLE). The ANU will be able to offer students the capability to build and export a portfolio of their work online for reflecting on learning processes and outcomes, presenting outcomes across their degrees, and for presenting examples of their work for future academic and professional applications.

Key Objectives:

- Provide the platform where students can collect, share and demonstrate their learning and achievements.
- To enable student collaboration on assignments in a shared online space with the ability to submit directly to the Learning Management System WATTLE (Moodle).
- Create a course independent online space for students to write reflective journals, while undertaking travel scholarships, internships and work experience programs.
- Create an online space for academic and professional staff to collect and record their professional development.

• Provide the ability to export students and staff ePortfolios in a transferable format.	

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q3 2016 – Q2 2017	Upgrade completed 1/2/17. Project Steering Committee has request that project be transferred to BAU.

SE4. ANU Online – Digital Content Repository

Project Sponsor DVC (Academic)	Business Owner ANU Online Lead	Project Manager Richard Robinson (ANU Online)

Project Description:

The project aims to cater as a single hosting platform for teaching, research and library content along with integration with the University's Moodle system. The ANU will select a suitable product to integrate with Wattle (Moodle) for discovering, re-using and sharing resources, or for collaborating in resource creation. The project is expected to provide necessary data usage statistics which will help the University to plan in future. The project will also safeguard ANU from copyright breach.

Key Objectives:

- Improved lecturer experience by enabling easy course material access of other ANU courses to academics.
- Improve learning experience by improving content accessibility and content search. Easy content integration for courses.
- Reduce risk of copyright breach.
- Establishment of University-wide security management for digital learning and teaching resources.
- Financial savings of reduced copyright survey for CAL, Screen rights or Music survey.
- Minimisation of duplicate course contents with single digital content repository implementation.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q3 2016 – Q4 2017	In progress

SE5. Timetabling – Exam Scheduling

Project Sponsor DVC (Academic)	Business Owner Registrar (Division of Student Administration)	Project Manager Maxine Danaro (DSA)

Project Description:

Implement a new Exam Scheduling system (Databee) and decommission the existing Scientia Exam Scheduler version 2.0.0 in order to provide a stable and supported interface which integrates with other enterprise systems such as the Student Administration System (SAS). Additionally, the current Exam scheduling system operates on aging ITS infrastructure which is currently not supported and needs to be decommissioned.

Note. A new version may be released in 2017 which will require an upgrade.

Key Objectives:

- To have a Vendor supported software, operational on the latest ITS supported infrastructure to facilitate exam scheduling activities and reduce the risk of system failure.
- Establish and automate business processes to support the operational activities of the University's exam scheduling function, many of which are currently manual and paper based.

- Stable, supported and automatic integration between the Exam Scheduling System and other enterprise systems including the Student Administration System (SAS).
- Where possible, implement new features, such as enhanced examination security (e.g. attendance lists with photos, photo ID lookup by invigilators via tablets, etc.).
- Expand the number of coursework examinations that are timetabled / managed automatically to include mid semester examinations, 'special' examinations, external distance ANU examinations and 3rd party institution examinations.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q1 2016 – Q1 2017	System implemented June 2016. Minor work remaining under BAU for secure printing.

SE6. Student Administration System Upgrade

Project Sponsor DVC (Academic)	Business Owner Registrar (Division of Student Administration)	Project Manager Colin Faith (ITS)

Project Description:

The Student Administration System Upgrade Project will consist of upgrading the currently running Campus Solutions version 9.0 to the latest version 9.2, replacing deprecated functionality and implementing the relevant system enhancements and new delivered functionality.

Key Objectives:

- Migration to Campus Solutions 9.2.
- Moving to the latest version of PeopleTools (8.55).
- Replacing deprecated functionality with new delivered functionality.
- Replacing modifications with new functionality where applicable.
- Implementing enhancements where possible.
- Ensuring all existing integrations with Campus Solutions are also maintained and/or improved.

Note. Other project work will help realise the benefits of the upgrade.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q3 2016 – Q2 2017	Completed. Project closure report to be finalised.

SE9. EvaSys Upgrade

Project Sponsor Executive Director (Administration and Planning)	Business Owner Director (Planning and Performance Measurement)	Project Manager Sara Rowley (PPM)

Project Description:

Collecting feedback from staff, students and the external community is a growing area of activity for all areas of ANU. Currently, the University uses EvaSys (version 5.1) to deliver all formal course and teaching surveys, as well as a broader suite of education related feedback such as the Higher Degree Exit survey.

Likewise, a range of internal units evaluate programs through EvaSys such as the Academic Skills and Learning Centre and the Statistical Consulting Unit. Feedback and market research projects such as the 2015 Administrative Services survey, and Choosing ANU market research have also been deployed via EvaSys.

EvaSys is also used to host research projects from staff and students as an alternative to freely available

survey tools which may not comply with the Australian Privacy Principles. EvaSys version 5.0 was launched in 2011 and 5.1 was released to the market in 2012. Features available after the proposed upgrade, such as combining multiple survey invitations into a single email to reduce survey burden and the capacity to redact offensive comments, were identified as key improvements in the SELT review recommendations reported to UEC 4/2015.

The project is an independent piece of work but supports the planned Educational Excellence framework in development.

Key Objectives:

- Upgrade existing software used to administer course and teaching, feedback and market research surveys. The upgraded software will provide expanded functionality that will reduce the volume of individual end of semester course and teaching survey invitations received by coursework students, allow the application of more sophisticated survey logic to reduce survey burden and streamline editing of student responses to reduce data quality issues.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q2 2016 – Q4 2016	Upgrade complete. Testing underway.

SE10. Studylink Enhancements

Project Sponsor	Business Owner	Project Manager
DVC (Academic)	Director (Student Recruitment and Admissions)	Helen Duke (ITS)

Project Description:

The StudyLink review program of work was identified as integral to the resolution of the following business problems, these include:

- Difficulty for prospective students applying via the StudyLink portal – confusing, clunky and administratively burdensome form processes.
- Manual and administratively cumbersome upload and download of student information using FTP of CSV files between StudyLink and the Student Administration System.
- Management reporting capability limited by poor data availability and quality negatively impacting on organisational decision making capability.

Colleges were consulted between Dec 2015 and Jan 2016 to gather input that informed an initial scope of the proposed changes to the form and the data that is collected from the form. This project will deliver the priority StudyLink related improvements identified from this process.

Key Objectives:

- Improve the look and feel of the applicant portal for direct applicants to the University:
    - Improved functionality.
    - Improved process and application time.
    - Improved user experience and ability to submit complete applications.
- Develop a new 'Mega-form' that is based on smart form technology for applicants applying to the University:
    - Remove existing cumbersome and non-standardised application forms.
    - Unify the base of information collected on all applicants to the institution.
    - Remove those specified forms that did not adhere to collection requirements.
    - Introduce data validation into forms for data quality improvement.
    - Reduce confusion and management around the number of specialised forms, integration into the megaform/smartform process.
- Provide improved data management, governance and quality.
- Utilisation of expanded and improved data sources as a part of the admissions reporting project for strategic planning and decision making.

- Provide improved ability to support Colleges and central assessment of potential candidates.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q3 2016 – Q4 2016	Completed. Project Closure Report submitted to 1/2017 UICT.

SE11. Studylink Phase 2 – College Enhancements

Project Sponsor	Business Owner	Project Manager
DVC (Academic)	Director (Student Recruitment and Admissions)	John Mostovoy

Project Description:

Phase 2 of the Studylink Project will implement the College specific items that were not able to be delivered under the *SE10. Studylink* project.

Key Objectives:

- Implement College specific enhancements to Studylink.
- A comprehensive review of the Manual Data Upload (OLA) process producing a cost benefit analysis of various integration methods between StudyLink and Campus solutions to improve this process.

Dependencies:

- SE10. Studylink Enhancements project

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q2 2017 – Q4 2017	In progress

SE12. Student Experience Analysis and Architecture

Project Sponsor	Business Owner	Project Manager
DVC (Academic) / Executive Director (Administration and Planning)	Director (Student Recruitment and Admissions) / Director (Information Technology Services Division)	Helen Duke (ITS)

Project Description:

This Project contains three separate, but interrelated, pieces of work.

1. Student Experience Analysis (SEA) to focus on the admissions process of attract and engage phase of the overall lifecycle, specifically identifying opportunities to improve ATAR focused admissions process and produce a roadmap to support a new admissions process. This is following on from the Vice Chancellor's announcement relating to a changed admissions process for the University.

2. Engage an Information Architecture (IA) resource to lead analysis and design of an Information Framework, including mapping of current data flows, across the diverse range of student-related systems. This will directly assist the Data Integration Project.

3. Engagement of an Enterprise Architect (EA) to define the University's EA Framework, governance model, standards, principles and proposed architecture tools. This is to address concerns and feedback from audit findings and the Risk and Audit Committee of Council.

Key Objectives:

Student Experience Analysis

- Document the new admission process, highlighting key information flows and user interactions.
- Define the longer term target for the new admissions process.
- Review the existing documentation, data metrics on the current process and those that relate to the new process.
- Map the existing process and new process to existing technology/solution set.
- Capture and identify any pain points and opportunities with the existing process and identify any that relate to the new process.
- Define/agree what can/should be done with the existing technology/solution to resolve pain points and realise opportunities.
- Produce roadmap of technology/solution set changes to meet target in the medium and longer term.

Student Information Architecture

- Document the current state of data integrations and data flows between the University's student and related systems.
- Propose areas of rationalisation across the student and related systems and projects that would provide potential benefits for the University.
- Propose suitable projects where integration will deliver improved value for the University.
- Summary report of findings and recommendations for the delivery of quick wins.
- Executive presentation of findings and proposed way forward.

Enterprise Architecture

- EA Vision and Framework including governance model, standards and principles.
- EA Strategy including proposed projects to enhance the University's EA capability and maturity, with particular reference to addressing the audit items.
- Executive presentation of the Framework and Strategy with reference to improving the maturity of the University's EA capability.

UICT Status:	Delivery Timeframe:	Delivery Status:
Project Proposal approved	Q3 2016 – Q4 2016	Completed.

SE13. Admissions, Scholarships and Accommodation (ASA)

Project Sponsor	Business Owner	Project Manager
DVC (Academic)	DVC (Academic)	TBC

Project Description:

To align with the ANU Strategic Plan 2017-2021, the University is seeking to provide prospective domestic undergraduate applicants with the ability to apply for admission to the University, using pre ATAR, equity and a points-based co-curriculum schedule, through an ANU branded and integrated Admissions, Scholarships and Accommodation (ASA) process.

The ASA process will allow the University to package outcomes to the applicant that may include an offer of admission, scholarship and accommodation, subject to eligibility, much earlier in the year. This will enable the University to make offers to a more diverse range of prospective students, provide a more meaningful way of early engagement with applicants and streamline processes.

Key Objectives:

In order to gain an understanding of the scope, timeframe and costs, as well as the capability and availability of vendors, an approach to the open market is required.

Dependencies:

- SE12. Student Experience Analysis and Architecture project

- SE14. StarRez consolidation
- Scholarships consolidation

UICT Status:	Delivery Timeframe:	Delivery Status:
Initial funding approved by UICT 1/2017.	Phase 1 Q4 2016 – Q4 2017 Phase 2 2018	In progress

SE14. StarRez

Project Sponsor DVC (Academic)	Business Owner Registrar (Division of Student Life)	Project Manager TBC

Project Description:

Use of StarRez for commercial leases by Facilities and Services.

Key Objectives:

- Implement management of commercial leases by Facilities and Services using StarRez.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q2 2017	Delivery due 30/4/17.

SE15. ANU Online - Moodle Upgrade 3.3

Project Sponsor DVC (Academic)	Business Owner ANU Online Lead	Project Manager TBC

Project Description:

The ANU Moodle 3.3 upgrade project is part of the product lifecycle management of the University's Moodle based Learning Management System (WATTLE). The University undergoes regular upgrades of Moodle to include the latest Moodle features, eliminate bugs and defects from previous versions, and improve security.

Key Objectives:

- Upgrade the University's current Moodle environment supporting its Learning Management System from Moodle 3.1 to 3.3.

Dependencies:

- Moodle Upgrade 3.1 project

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved as part of SE0. ANU Online Program.	Q3 - Q4 2017	Not started

SE16. ANU Online – Learning Analytics

Project Sponsor	Business Owner	Project Manager
DVC (Academic)	ANU Online Lead	TBC

Project Description:

In conjunction with the Student Administration and Planning and Performance Measurement Divisions, this project will provide students and staff with dashboard feedback on key, agreed education technology indicators (for example student non-engagement; average hours of student engagement, lecture downloads), for courses to help them to baseline and improve their efforts on the basis of evidence.

Additionally, the University wishes to extend its knowledge both of student success in study and staff impact in teaching, beyond the usual measure of student perception. The work will shift the focus to a range of measures that will help staff and students to hone and further develop their skills.

Key Objectives:

- Analytics is an un-scoped project in the ANU Online Program. In 2018, phase one of this project will commence which aims to elicit user and business requirements related to the discovery and notification of student activities relating to online learning and propose implementation of activities a future program of work.

UICT Status:	Delivery Timeframe:	Delivery Status:
Subject to final UICT approval	Q1 - Q4 2018	Not started

SE17. ANU Online – Adobe Connect Upgrade and Enhancements

Project Sponsor	Business Owner	Project Manager
DVC (Academic)	ANU Online Lead	TBC

Project Description:

Deliver the Adobe Connect upgrade and enhancements.

Key Objectives:

- Adobe upgrade – version 9.x
  - Adobe Connect enhancements including Phone Bridge and Review Integration/plugin

Dependencies:

- **Zoom implementation**

UICT Status:	Delivery Timeframe:	Delivery Status:
Subject to final UICT approval	Q2 2017 Q1 2018	Not started

SE18. ANU Online – Moodle Enhancements

Project Sponsor	Business Owner	Project Manager
DVC (Academic)	ANU Online Lead	TBC

Project Description:

The project proposes a number of activities to maintain and enhance Moodle to improve the student and staff experience.

Key Objectives:

- Moodle Theme
- Integration review
- Authentication review
- Course lifecycle review
- LMS review
- Grade Sync with ISIS

Dependencies:

- CS4. Data Integration project

UICT Status:	Delivery Timeframe:	Delivery Status:
Subject to final UICT approval	Q1 2017 – Q4 2018	Not started

SE19. ANU Online – Echo 360 Enhancements

Project Sponsor DVC (Academic)	Business Owner ANU Online Lead	Project Manager TBC

Project Description:

Echo 360 Enhancements (whiteboard and video capture, AV integration, live streaming).

Key Objectives:

- Deliver Echo 360 Enhancements (whiteboard and video capture, AV integration, live streaming)

Dependencies:

- SE1. ANU Online – Lecture Recording (Echo 360) Upgrade project

UICT Status:	Delivery Timeframe:	Delivery Status:
Subject to final UICT approval	Q2 2017 – Q2 2018	Not started

SE20. ANU Online - Moodle Upgrade 3.5

Project Sponsor DVC (Academic)	Business Owner ANU Online Lead	Project Manager TBC (ITS)

Project Description:

The ANU Moodle 3.5 upgrade project is part of the product lifecycle management of the University's Moodle based Learning Management System (WATTLE). The University undergoes regular upgrades of Moodle to include the latest Moodle features, eliminate bugs and defects from previous versions, and improve security.

Key Objectives:

- Upgrade the University's current Moodle environment supporting its Learning Management System from Moodle 3.3 to 3.5.

Dependencies:

- Moodle Upgrade 3.3 project

UICT Status:	Delivery Timeframe:	Delivery Status:
Subject to final UICT approval	Q3 - Q4 2018	Not started

SE21. Customer Relationship Management (CRM)

Project Sponsor	Business Owner	Project Manager
DVC (Academic)	Director (Marketing Office)	John Mostovoy (ITS)

Project Description:

The Customer Relationship Management (CRM) initiative aims to support, coordinate and enhance the delivery of services to current and prospective students, staff, alumni, strategic partners, government organisations and other institutions, community groups with effective physical and digital interactions. This will enable the University to establish long term meaningful customer relationships, capture and manage enquiries in a timely, coordinated and consistent manner, eliminate duplication, and enable data analysis and metrics to support customer needs and better decision making.

Key Objectives:

- Gain competitive advantage through effective methods of communication to prevent community disengagement from the University.
- Effective organisation through greater efficiency and effectiveness of service delivery.
- Improve accessibility of information to enable informed decision making.
- Procure and implement a suitable CRM solution.

UICT Status	Delivery Timeframe:	Delivery Status:
Approved funding for Business Case development. Business Case not approved at UICT 1/2017.	Business Case Q2 2016 – Q1 2017 Implementation (pending approval of Business Case) Q2 2017 – Q1 2018	Business Case not approved at this stage due to funding and resource constraints. May be resubmitted at a future date.

SE22. Curriculum Management

Project Sponsor	Business Owner	Project Manager
DVC (Academic)	Registrar (Division of Student Administration)	TBC

Project Description:

The current administration of curriculum development (from idea inception to accreditation) is manual, inconsistent between Colleges and does not provide us with data to inform decisions regarding new/amendments/cessation of programs, sub-plans and courses.

The University requires a system to manage its course information – particularly including its mapping of learning outcomes against internal (graduate outcomes) and external (professional competencies) objectives sets. The benefits to the University are:
- Conformance with ANU policy regarding production of course outlines to the ANU Course Outline template
- Accuracy checks on information disseminated to students via Programs and Courses and course pages
- Substantially reduced load in collating past course information for accreditation procedures
- Ability for Associate Deans and Directors (Education) to track changes in course details longitudinally as well as viewing aggregate school/college course information on, e.g., assessment clumping, program-level professional competency coverage, etc.

Key Objectives:

- Create a dynamic repository of College course information serving as a single source of truth for feed-in to other systems such as Programs and Courses.
- Simplify production of course outlines, accreditation documents (e.g., competency mappings) and ANU-internal course creation and alteration paperwork.

UICT Status:	Delivery Timeframe:	Delivery Status:
Project proposal approved UICT 1/2017.	Q1 2018 – Q4 2017	In progress.

Research Projects (R)

R1. Research Information Management System (RIMS)

Project Sponsor	Business Owner	Program Manager
DVC (Research)	Director (Research Services Division)	KPMG (interim)

Project Description:

The existing research management system, ANU Research Information Enterprise Systems (ARIES), is a bespoke solution from a boutique supplier rolled out to users at a time of significant devolution with no supporting business process and change management activities. This has resulted in poor data control and reliability. The system has severe limitations around capabilities and functional efficiency, has little in-built work-flow and cannot be easily redesigned to adapt to changes in business activities and needs, including the inability to capture data and generate required outputs for legislative compliance. Significant inefficiencies have been remedied by labour intensive manual workarounds. The system has limited capacity to integrate with other ANU systems without extensive redevelopment and is unable to provide effective and reliable corporate reporting in its own right. It does not provide value to the management needs of ANU researchers.

The ANU has four key strategic objectives for research. In order to deliver against any of these objectives there needs to be speed, efficiency, accuracy and confidence in the University's research management data, collection, analysis and distribution. This project will result in major transformational change including significant business reform for administration and for the first time providing ANU researchers with a portal of individualised research management data at their fingertips.

Key Objectives:

Researchers

1. Supporting researchers in the administration of their research, including access to their own management information.

2. Provision of a single portal to relevant research management processes.

3. Enhance publications visibility and reporting, including open and closed access with future-proofing for research data requirements.

4. Improve Project oversight, including pre and post award activities.

Administration

5. Enabling reusability and integration capability with other ANU systems.

6. Establishing a systematic process to capture relevant research data for informing future research management and compliance requirements.

7. Improved workflow to support agile and optimised business processes.

8. Manage evolving reporting requirements, such as HERDC/ERA submissions, and legislation compliance, such as the Define Controls Act.

9. Provision of effective management information.

Strategy

10. Improve support for recruitment of HDR students and ANU Researcher profiles.

11. Enabling academic strategic decision making on individual disciplines alongside university strategy in real time.

12. Increasing access to non-ANU data, e.g. citation information within the system.

13. Utilise business analytics to identify and leverage international and national Researcher collaboration to improve ANU's strengths and quality of research.

14. Provide more capability to leverage philanthropy and commercialisation/innovation through partnerships and relationships that enhance research activities, profile, and capability.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q3 2016 – Q4 2018	In progress

R2. Higher Degree Research (HDR) Admissions

Project Sponsor DVC (Research)	Business Owner Director (Student Recruitment and Admissions)	Project Manager Karen Cameron (SIG)

Project Description:

The HDR Admissions project is designed to streamline and standardise the business processes involved in application processing, assessment and acceptance for prospective HDR students. HDR admissions is a large program of work. The initial scope will focus on those areas of the lifecycle that are higher in value and lower in complexity, which is defined as the Core Applications processing and Acceptance (domestic and international students) processes, with the second priority to consider the pre-application stage of the student lifecycle.

Key Objectives:

- Transparent, standardised and simplified process enterprise wide.
- Accessible information of high quality available for staff and students.
- Improved reputation and student experience in the Admissions process.
- Implementation of the core process across all ANU Colleges and Schools.

Dependencies:

- SE6. Student Administration Upgrade
- SE11. Studylink Phase 2
- Admissions dashboard reporting

UICT Status:	Delivery Timeframe:	Delivery Status:
Scope and priorities have been endorsed by the HDR Administrative Support Steering Committee and detailed delivery planning is in progress. A Project Brief will be provided to UICT.	Q1 2017 – Q2 2018	In progress

R3. Costing and Pricing (Phase 3)

Project Sponsor DVC (Research)	Business Owner Director (Research Services Division)	Project Manager Kathrin Kulhanek (RSD)

Project Description:

In April 2015, the ANU released the Costing and Pricing Allocation (CPA) tool achieving many of the original project objectives. The roll out to production was a major milestone for the ANU as this project delivered a product that has enabled the implementation of the costing and pricing policy.

Immediate improvements post phase 1 and 2 were commenced under a phase 2B. These were halted before deployment and the agreed improvements that were supported by College representatives (the roundtable working party), will be addressed in this new project titled Phase 3.

Key Objectives:

The Project will deliver on the 6 key business requirements identified by the Colleges:

- **Complete Workflow Corrections (Phase 2B).** Reduction to business as usual support required by ITS.

- **Single Screen Data Entry.** The system is designed to support Researchers to complete the costing tab. Currently the system uses multiple screens for cost entry of budget items. The move to single screen data entry for each cost category reduces clicks and simplifies data entry.

- **Fixed Price Projects.** Current practice at the ANU is that projects are considered as fixed price by researchers regardless of their ability to negotiate on products delivered. This enhancement will assist the ANU to overcome legacy behavioural issues in costing and pricing research activities. This change is critical to the enforcement of the policy, more so than to the tool itself.

- **Waiver Approvals.** This change allows for greater flexibility in the timing and recording of waiver approvals while providing suitable checks to ensure that staff are aware of their responsibilities in ensuring appropriate business practice is followed.

- **Projects exempt from the Policy (e.g. Cat 1).** Colleges of Science are experiencing significant issues in supporting Chief Investigators and their Delegates in utilising the certification workflow for Projects that are exempt from the policy. This change offers significant value for money and will support the cultural journey around both policy and tool.

- **Cross College Collaboration.** College Research Officers will be provided with an automatic "heads up" notification improving the seamless administration of projects that cross College boundaries.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q2 2016 – Q4 2016	Completed. Project Closure Report due to UICT.

R4. ERA 2018

Project Sponsor DVC (Research)	Business Owner Director (Research Services Division)	Project Manager TBC

Project Description:

The next ERA round is due in 2018. Indications from the ARC are that ERA 2018 will be run much the same as ERA 2015, with some known changes likely to occur (e.g. ORCID collection, Open Access information, etc.). The timing of the various submissions stages, the consultation on guidelines and the staff census date are expected to be the same timing as ERA 2015.

ANU has commenced the RIMS project to replace the existing research management system, ARIES. The timing of the RIMS project is crucial to the choice of system to use for the next ERA submission. RIMS would be the preferred system to use for collecting publications with the harvesting feature reducing the manual data entry workload as well as producing better quality data. However, the RIMS publication module would need to be fully functional by March 2017 and have all existing publication data migrated if it was to be used for the ERA 2018 submission.

As such, it is proposed that ARIES and ERA system be used again for ERA 2018 as RIMS is unlikely to be delivered in time for the ERA 2018 submission. In addition, utilising the new research management system for ERA will require significant development work, which would further delay delivery. So the existing systems and processes will need to be used for the ERA 2018 submission. This also impacts on the RIMS project as it sets a timeline for migration of publications from ARIES to RIMS, which can only happen after the ERA 2018 publication collection process has been completed and data entry and verification completed.

Key Objectives:

- Reusing the systems and processes used in ERA 2015, undertake development work to the ERA system to accommodate the ERA 2018 submission and any rule changes that are implemented by the ARC in the ERA 2018 guidelines.
- Scoping and scheduling of development support with the system vendor to ensure timely delivery (it is recommended that this development work be undertaken under the existing support arrangements with Readify).

UICT Status:	Delivery Timeframe:	Delivery Status:
Mandatory project.	Q2 2017 - Q2 2018	ITS delivery not started

R5. HDR Exam and Thesis Submission		
Project Sponsor DVC (Research)	**Business Owner** Registrar (Division of Student Administration)	**Project Manager** Megan Easton (SIG)

Project Description:

Implementation of digitalised and automated thesis submission and examination form.

Key Objectives:

An efficient and effective process for managing thesis submission and examination reducing examination times and improved tracking and reporting.

UICT Status:	Delivery Timeframe:	Delivery Status:
Project brief has been approved by the HDR Administrative Support Steering Committee and will be provided to UICT.	Q1 2017 – Q4 2017	In progress

Corporate Support Projects (CS)

CS1. ES Financials

Project Sponsor	Business Owner	Project Manager
Executive Director (Administration and Planning)	Director (Finance and Business Services)	Colin Faith (ITS)

Project Description:

This project will upgrade the Enterprise Finance System from PeopleSoft v9.1 to PeopleSoft v9.2.

Key Objectives:

Implement a current version of the platform underpinning the University's Enterprise Finance System.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q1 2016 – Q4 2016	Completed

CS2. ANU Workspace Program

Project Sponsor	Business Owner	Project Manager
Executive Director (Administration and Planning)	Director (Information Technology Services Division)	Michelle Mousdale (ITS) Andrew Soesman (ITS)

Project Description:

This program, through a series of interconnected projects, aims to provide the underpinning infrastructure and services for the managed personal computing requirements of the University's staff, and within the Information Commons. Infrastructure and services encompass the full end user computing lifecycle via the following core functions:

- Procurement via a self-service portal (Software)
- Asset management
- Deployment services (physical and software)
- Financial lifecycle operations
- Remote support services
- Refresh/replacement services
- Implement System Centre Configuration Manager (SCCM) to provide remote control, patch management, software distribution, operating system deployment and hardware/software inventory.

Key Objectives:

Provide a robust, cost-effective managed personal computing experience for ANU staff and students.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q1 2014 – Q1 2017	In progress

CS3. Collaboration Toolset – Alliance Replacement

Project Sponsor	Business Owner	Project Manager
Executive Director (Administration and Planning)	Director (Scholarly Information Services Division)	John Mostovoy (ITS)

Project Description:

ANU has numerous collaboration toolsets, some legacy, and some contemporary, as a result of associated IT service developments. This proliferation of toolsets has resulted in a lack of clarity around preferred solutions and integration capabilities with existing research, teaching and learning, and administrative services. This has led to many areas implementing localised toolsets or selected components of one toolset. As a result, broader application and leverage of enterprise collaboration services, such as instant messaging, desktop video conferencing, has not been realised.

Alliance has been the University's primary collaboration tool for the past seven years. It is used by Staff, Students and a multitude of external guests. Alliance has provided the University's communities and external stakeholders with a shared platform for collaborating and information sharing within a virtual space.

Alliance is delivered on an open source Sakai software (Java based) platform. It has been hosted on premise by ITS since 2004. It is supported on ageing physical infrastructure, which is now approximately six to seven years old.

Despite being the most used collaboration tool currently across the University, Alliance has significant limitations in its ability to meet the demands of users for a modern sophisticated collaborative environment with state of the art toolsets that can enable efficient and effective use of their time. It is an ageing and inadequate technology that is not fully supported and has reached its end of life.

It is proposed that the University replace Alliance through a Request for Proposal (RFP) process to assess the various enterprise collaboration tools or platforms available from the marketplace. The Alliance replacement should enable users to select functionality that has been introduced since Alliance was developed, and also additional collaboration features which provide the ability to collaborate anywhere, on any device, across any type of content.

Key Objectives:

Seed funding was sought to enable provision of a project manager and business analyst to:

- Develop an RFP to approach the market based on the requirements outlined in the *ANU Collaboration Toolset – Staff Productivity Requirements Analysis* document;
- Develop Business Case for UICT approval;
- Commence data analysis on the existing Alliance application to determine what information should be migrated to a new platform, deleted and/or moved to another existing tool (e.g., ERMS). This work will continue into the next phase of the project, should it be approved, which will progress decommissioning of Alliance and replacement with an alternative collaboration tool(s).

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved – seed funding	Q3 2016 – Q3 2017	Scoping and initial analysis underway.

CS4. Data Integration Phase 1 ('Flagship' project)

Project Sponsor	Business Owner	Project Manager
Executive Director (Administration and Planning)	Director (Information Technology Services Division)	Nick Hanson (SIG)

Project Description:

The Data Integration project was initiated to integrate the University's complex IT systems to make critical business information more accessible. The Project supports the University's strategic plans to improve effectiveness of the organisation by moving towards an integrated suite of administrative systems.

Phase 1a - Design, installation and configuration of the integration platform

This includes establishing a central integration platform comprising of IBM Integration Bus (IIB) and IBM Message Queue (MQ), IBM API Connect (APIC) and IBM Application Performance Management (APM). The purpose of this stage is to enable ANU to build integrations through a central integration layer rather than using point to point.

Phase 1b - Integration Services Team

The project aims to establish an Integration Services team. A shared services team to support integration activities across the ANU. Integration Services will consist of a team of integration specialists positioned to solve, recommend and support a wide range of system and data integration scenarios. They will establish standards and guidelines to ensure acceptable level of quality across all new integrations is maintained.

Key Objectives:

- Establish a centralised integration platform to deliver integrations more efficiently and reliably.
- Establish an internal integration team to support integration activities across the ANU.
- Establish the initial integrations towards streamlining administrative business processes delivering services to staff and students more quickly and more cost effectively, whilst creating a positive user experience.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved – 'Flagship' project	Q1 2016 – Q4 2016 (Phase 1)	Completed

CS5. Data Integration Phase 2 ('Flagship' project)

Project Sponsor Executive Director (Administration and Planning)	**Business Owner** Director (Information Technology Services Division)	**Project Manager** Nick Hanson (SIG)

Project Description:

The Data Integration project was initiated to integrate the University's complex IT systems to make critical business information more accessible. The Project supports the University's strategic plans to improve effectiveness of the organisation by moving towards an integrated suite of administrative systems.

The quick win project aims to introduce efficiencies between a subset of the University's student related systems. The purpose of the quick win project is to test the capabilities of the technology, establish baselines for time and cost whilst delivering tangible benefits to the impacted business areas. The nominated systems for the quick win project include, PeopleSoft Students, Syllabus Plus, Wattle and Echo 360 ALP.

Key Objectives:

- Successful deployment of integrations in scope for the quick win project
- Establish the central integration platform
- Establish an Integration Services Team with sufficient skills and expertise to manage the integration platform and support future integration initiatives
- Implement associated processes and techniques to build and manage integrations more efficiently. Note, second phase of the project is expected to commence in 2018.

UICT Status:	Delivery Timeframe:	Delivery Status:
'Flagship' project	Q1 2017 – Q4 2017	Quick Win Project in progress.

Chemical Management System

Project Sponsor	Business Owner	Project Manager
Executive Director (Administration and Planning)	Director (Human Resources Division)	John Mostovoy (ITS)

Project Description:

The procurement of a Chemical Management System (CMS) will provide a safe and reliable way of managing chemicals and address the weaknesses in the current application. The existing system is highly tailored and complex with no available support and is faced with an increasing gap between product functionality and evolving business, risk and compliance requirements.

Key Objectives:

- To deliver a product that will enable strong processes in chemical control and monitoring, and mitigate risks of accidents from hazardous chemicals.
- To ensure the safe storage and management of chemicals on campus.
- To enable compliance with legislative and regulatory requirements.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q1 2015 – Q4 2016	System has transitioned to operations. One remaining customisation to be delivered.

Infrastructure Projects (I)

I1.P1. Wireless Enhancement Project (Ongoing Upgrades)

Project Sponsor Executive Director (Administration and Planning)	Business Owner Director (Information Technology Services Division)	Project Manager Joe Milsom (ITS)

Project Description:

The project is designed to enhance wireless capability, and thereby improve student and staff mobility in key areas across the campus. One of the seven key projects identified within the Data Network Transformation (DNT) program of work is improving wireless connectivity in areas that are currently poorly serviced. These include:

- Graduate House;
- University House;
- 26 Teaching and Learning spaces; and
- Student Residences.

The original project as scoped has been completed, however, this is now an ongoing upgrade.

Key Objectives:

- Upgrade the wireless infrastructure in the above areas to enable network connectivity/mobility for staff and students.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q1 2015 – Q2 2016 Phase 1 2017 Phase 2 (Teaching and Learning Spaces; lifecycle upgrade of original equipment; investigate outdoor public spaces)	Completed original project. Wireless enhancement is an ongoing requirement.

I1.P2. Internet Gateway Refresh

Project Sponsor Executive Director (Administration and Planning)	Business Owner Director (Information Technology Services Division)	Project Manager Joe Milsom (ITS)

Project Description:

This project will refresh the end of life network traffic shaping equipment as well as the current border routers which are also approaching their end of life date. The campus internet links will also be upgraded to the latest AARNet4 service with both the primary and secondary internet links being provisioned as 10Gbps services. These three work packages will ensure the delivery of high performing and reliable access to Internet services to customers on campus.

Key Objectives:

- Refresh the end of life network traffic shaping equipment as well as the current border routers.
- Upgrade Campus internet links.
- Provision primary and secondary links as 10Gbps services.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q1 2015 – Q3 2016	Completed

I1.P3. Network Policy Enforcement Project

Project Sponsor	Business Owner	Project Manager
Executive Director (Administration and Planning)	Director (Information Technology Services Division)	Darren Alexander (ITS)

Project Description:

The purpose of the Network Policy Enforcement Project is to address three current problems faced within the Australian National University (ANU) network environment:

1) Replace several components of the University's firewall infrastructure that have reached, or are approaching end-of-life;
2) Implement an efficient and manageable intrusion protection system; and
3) Replace our ageing authentication services. This will provide the ANU with a solution that is capable of handling the increasing authentication load, is scalable, reliable and secure enough to meet current and future University needs.

Key Objectives:

- Work with the integration partner to determine the best technology solution to meet the University's policy enforcement needs now and into the future.
- Design a policy enforcement layer that will work seamlessly with the current campus network as well as the future campus network.
- Deploy a new redundant firewall solution, split geographically between the two campus Data Centres.
- Deploy a new redundant Intrusion Prevention System (IPS) split geographically between the two campus Data Centres.
- Replace current ageing authentication systems with one that is sufficiently sized to cope with the additional authentication requests due to the expansion of the wireless network.
- Deploy an authentication solution that provides greater flexibility when providing access to ANU resources, to the wider community.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q1 2015 – Q2 2017	In progress

I1.P4. Campus Network Refresh (Campus Core)

Project Sponsor	Business Owner	Project Manager
Executive Director (Administration and Planning)	Director (Information Technology Services Division)	Darren Alexander (ITS)

Project Description:

Projects I1.P4, P5, P6 and P8 will refresh and renew the three key layers of the University's data network: core, distribution and access, as well as refreshing the Data Centre switching environment.

The projects will standardise the components of the network with our strategic technology partner, Cisco, and replace several components of the University's core network environment that have reached, or are approaching, end-of-life. Additionally, the future network as designed, will allow for significant reduction in management overhead and provide a scalable platform for future network growth.

Key Objectives:

- Completely replace current Core network devices.
  - Note that this is primarily complete and now awaiting the remainder of the I1.P5 Campus Network refresh to complete before decommissioning the old Core network.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q1 2015 - Q2 2018	Primarily complete – awaiting completion of I1.P5 before final activity can commence.

I1.P5. Campus Network Refresh (Distribution and Access Layers)

Project Sponsor Executive Director (Administration and Planning)	Business Owner Director (Information Technology Services Division)	Project Manager Darren Alexander (ITS)

Project Description:

See I1.P4

Key Objectives:

- Replace and refresh all distribution and access layer switches across campus.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q1 2015 – Q1 2018	In progress

I1.P6. Data Centre Switching Refresh

Project Sponsor Executive Director (Administration and Planning)	Business Owner Director (Information Technology Services Division)	Project Manager Darren Alexander (ITS)

Project Description:

See I1.P4

Key Objectives:

- Refresh the current Data Centre switching environment (complete).
- Refresh the Data Centre load balancing infrastructure (in progress).

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q1 2015 – Q2 2017	Switching environment complete. Load balancing in progress.

I1.P7. IP Address Management (IPAM) Refresh Project

Project Sponsor Executive Director (Administration and Planning)	Business Owner Director (Information Technology Services Division)	Project Manager Joe Milsom (ITS)

Project Description:

Refresh and redesign the University's end of life IPAM solution.

Key Objectives:

- Refresh and redesign the University's end of life IPAM solution.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q1 2015 – Q1 2017	Completed

I1.P8. Data Centre Strategy and Refresh

Project Sponsor	Business Owner	Project Manager
Executive Director (Administration and Planning)	Director (Information Technology Services Division)	Darren Alexander (ITS)

Project Description:

This project will provide a Data Centre Strategy for the University and upgrade existing end of life equipment that is not capable of delivering the speed required for our server and storage infrastructure. The refresh will also allow increased resource capacity, performance and on-demand scaling needed as ITS increases multi-tenant architecture services to other areas of the University in the Data Centre environment.

Dependencies:

- I20. Data Centre (Upgrade) is a placeholder project for implementation of the data centre changes resulting from the I1.P8 Business Case.

Key Objectives:

- Review the current Data Centre facilities including the physical facilities, the supporting infrastructure, equipment within the facilities and the operations of them (complete).
- Capture the future requirements of the Data Centre environment (complete);
- Develop the University's Data Centre Strategy for the next five years (complete);
- Develop a full cost analysis of the preferred options (complete);
- Present the business case to UICT for funding approval; and
- Relocation of Data Centre services.

UICT Status:	Delivery Timeframe:	Delivery Status:
Business Case to be presented to UICT for approval.	Q1 2016 – Q4 2018 (Implementation)	Strategy completed

I10. Identity and Access Management (IdAM) (Phase 2)

Project Sponsor	Business Owner	Project Manager
Executive Director (Administration and Planning)	Director (Information Technology Services Division)	Luke Marks (ITS)

Project Description:

This first phase of the project was completed in April 2014 but fell short of delivering the robust and single identity management solution promised. The next phase, Core Services, will primarily focus on:

- Completing outstanding deliverables from the initial infrastructure alignment phase, while improving the current identity environment.
  - Rebuild the OIM and Oracle Database servers.
  - Increased communication performance between Peoplesoft and OIM.
  - Decommission OLAMS.
- Delivering identified key service improvements;
- Identifying a number of ANU Enterprise Roles and Attributes;
- Developing the framework that details the identity life-cycle, including developing detailed

business requirements for permissions, roles, groups and configuration rules;

- Addressing key relevant outstanding audit requirements;
- Outlining an informed IdAM strategy and process for the University;
- Establishing an initial subset of roles based identity management practice; and
- Implement improvements to connectors for Exchange/Office365, Active Directory and Lightweight Directory Access Protocol (LDAP).

Key Objectives:

- Achieve product currency through an upgrade of the existing platform to the latest stable version.
- Decommission OLAMS.
- Realisation of ANU enterprise Roles (and Attributes).
- Address relevant priority IdAM Audit findings to increase compliance.
- Increase access for external Alumni users for the University's Library eResources to improve external relationships with the wider University community.
- Review and update and/or create IdAM documentation, including but not limited to: system, lifecycle, policies and procedures.
- Improve the OIM service based on current identified limitations, issues and business pain points.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q2 2016 – Q2 2017	In progress

I12. Managed Print Service

Project Sponsor	Business Owner	Project Manager
Executive Director (Administration and Planning)	Director (Information Technology Services Division)	TBC (ITS)

Project Description:

This project will implement, through a phased approach, a Managed Print Environment across the University. The Managed Print Environment will be developed and executed by ITS initially to accommodate the ITS managed devices and will be made available to the whole of the University in future, including Service Divisions and Colleges.

Information Commons Refresh

A large number of devices that will reach end of life in 2016 have been identified. This means that the vendor will no longer provide support or carry replacement components for maintenance requirements. These devices are ITS and TLCSS managed devices that are located within Service Divisions, Libraries and Teaching and Learning Spaces. The support and maintenance of these out of contract devices is costly and the devices are regularly failing due to their age. The impact of these outages is significant as it impacts on the teaching and learning and core business activities of the University.

Key Objectives:

- Rationalise the existing print fleet by 30%.
- Reduce the number of single function high-cost printers.
- Utilise the existing MOMs panel to ensure best value for money.
- Develop a product catalogue and portal to procure approved and supported devices.
- Implement a Print Management solution to enable:
  - Enterprise functionality including follow me print;
  - Quota management; and
  - Financials management and recharge capability.

UICT Status:	Delivery Timeframe:	Delivery Status:
Business Case to be provided	Q3 2017 – Q4 2018	On hold

I14. Audio Visual Refresh

Project Sponsor	Business Owner	Project Manager
Executive Director (Administration and Planning)	Director (Information Technology Services Division)	April Weiss (ITS)

Project Description:

ITS directly maintain over 150 and support over 330 AV rooms in Teaching and Learning Commons (TLC) and other venues. AV systems in the TLC needs to be refreshed periodically to replace end of life equipment, and align the systems to the latest ANU AV technology standard. If left unaddressed, these systems will become increasingly unreliable, and connectivity options will be superseded by emerging technology – such as later model laptops which will not be able to be connected.

This project aims to uplift core university teaching venues to the latest ANU Audio Visual (AV) technology standard. These AV upgrades will enable more capable, reliable and supportable teaching presentation systems, better placed to support the critical lecture recording requirements and further enhance the student experience.

Key Objectives:

- Digital transmission end-to-end resulting in a higher quality presentation and recordings.
- Connections by late model end-user devices will be supported (e.g. HDMI).
- Systems will be connected to the network to enable remote monitoring and support.
- Laser projector technology will result in lower maintenance, TCO and support resources.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q3 2016 – Q4 2017	In progress

I15. Legacy Server

Project Sponsor	Business Owner	Project Manager
Executive Director (Administration and Planning)	Director (Information Technology Services Division)	Siobhan Muir-Williams (ITS)

Project Description:

It was identified through internal audit and internal reviews that the University was hosting at least 93 servers which are running legacy unsupported Operating Systems with a significant number of these supporting the Tier 1 Enterprise applications. These Operating Systems are:

- Microsoft Windows Server 2000 (Extended Support ended 13 July 2010); and
- Microsoft Windows Server 2003 (Extended Support ended 15 July 2015)

There was also no documented standard nor consistent approach to server lifecycle management within ANU.

The project was initiated to both remediate the current risk exposure of running servers with end of support Operating Systems and to develop a server lifecycle management policy and process to ensure the issue is not repeated.

Key Objectives:

- The original objective of the Legacy Server remediation Project was to upgrade 93 legacy servers still using Windows OS 2003/2000 to either Win OS 2012r2 or 2008, where it was not possible to

upgrade to 2012r2. Following approval of Variation #1, the number of servers to be upgraded was reduced to 85.
- Develop a process to manage server replacement at end of life so the above situation does not occur again.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q3 2015 – Q4 2017	In progress

I16. Enterprise Storage and Cloud Enablement

Project Sponsor Executive Director (Administration and Planning)	Business Owner Director (Information Technology Services Division)	Project Manager Luke Marks (ITS)

Project Description:

Enterprise storage and data protection services for the University's Corporate, Research and Teaching and Learning services have evolved in an ad-hoc manner over time. In the absence of a plan aligned to the University's long term strategic goals, the current infrastructure will become inefficient, more expensive to maintain, and will not be able to meet the University's future strategic requirements.

Through this project, the University will upgrade its enterprise storage infrastructure to provide capacity for current and future requirements, and to enable ITS to provide suitable capacity for research, corporate data and support any development opportunities for mid-range High Performance Computing and Virtual Desktop Infrastructure. The infrastructure will also add long term backup and archive functionality including retrieval via tape and potentially cloud services.

Key Objectives:

- Secure business critical services with guaranteed uptime.
- Reduce the duplication of staff and infrastructure.
- Mitigate risk with offsite data holdings.
- Enable cloud cost comparisons.
- Faster problem resolution and reduced support costs.
- Enhance infrastructure service delivery.
- Published Service Level Agreements.
- Decommission aged infrastructure to reduce risk.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q3 2016 – Q4 2017	In progress. Commissioning of new environment expected mid-2017.

Pebble Decommissioning

Project Sponsor Executive Director (Administration and Planning)	Business Owner Director (Information Technology Services Division)	Project Manager Alan Boyce (ITS)

Project Description:

Replacing the obsolete Pebble personal storage was one of the deliverables of the Enterprise Storage and Data Protection project in 2015. (Note, this was not a standalone project)

Key Objectives:

- Initiate a replacement of the legacy Pebble infrastructure that provides personal storage and group

share drives for staff and students onto a new Dell NAS FS8600 platform to ensure a reliable and scalable storage service in the near term.
- Personal storage allowances increased from 250mb to 4.5Gb.

UICT Status:	Delivery Timeframe:	Delivery Status:
Approved	Q4 2015 – Q3 2016	Completed

I17. Telephony Upgrade

Project Sponsor Executive Director (Administration and Planning)	Business Owner Director (Information Technology Services Division)	Project Manager TBC (ITS)

Project Description:

Telephony services within the ANU are hosted on the Avaya Telecommunications platform. These systems are responsible for the delivery of several critical functions including:

- Inbound/outbound telephone calls.
- Telephone handsets (older analogue and Voice over IP VoIP).
- Back-end PABX infrastructure (and links out to the public telephone network).
- Call centre functionality for the ANU switch and other internal service functions (IT and Financial Shared Services for instance).
- IVR (recorded messages) for notification and call routing.

Portions of the hardware that supply these services are beyond end of life, and no longer supported by the vendor. Many of these components are only supported on a best efforts basis, leaving the ANU vulnerable to extended service disruption in the event of hardware failure. In addition, due to the age of this equipment, ongoing support and maintenance is becoming prohibitively expensive in comparison to the likely ongoing cost of upgraded (newer) systems.

Key Objectives:

This project has a number of options for the upgrade including undertaking critical updates only, standardising to a VoIP solution and a complete technology refresh. The final objectives will depend on the option chosen and will include:

- Complete business analysis to detail Campus requirements (in progress);
- Develop a Business Case for the preferred option; and
- Implementation.

UICT Status:	Delivery Timeframe:	Delivery Status:
Pending approval	Q4 2016 – Q3 2018 (TBC)	Not started

I18. Web Server Upgrade

Project Sponsor Executive Director (Administration and Planning)	Business Owner Director (Information Technology Services Division)	Project Manager TBC (ITS)

Project Description:

Web delivery at the ANU is accomplished across a number of levels:

1. There is a primary web tier that delivers core external websites (anu.edu.au and other high profile websites), this has recently seen an upgrade of technology to the Drupal platform as part of the ANU Online Project.
2. The secondary tier (Intranet) that delivers internally facing content to ANU staff.

3. The third tier of web delivery that serves numerous (several hundred) smaller websites on behalf of many ANU business units. These are often staff profile sites, joint venture websites, and numerous other college/school based web presences.

This project will focus on the third tier of web delivery. These services are running on obsolete Sun based server hardware that is end of life, expensive to support, and likely to become unreliable over coming years.

Key Objectives:

- Move the identified websites from the older Sun based hardware, to the ANU enterprise compute space, utilising our VMware virtualised servers, and standard Linux based operating system.
- Reduce the risk of hardware failure (externally visible service outage) and streamline the ability to administer these services by housing them within the standard ANU hardware/software platforms.

Note that this project is not aimed at 're-vamping' the current content, this is purely aimed at a 'like for like' migration of current content, plus the current 'look and feel' to a new server platform.

UICT Status:	Delivery Timeframe:	Delivery Status:
Pending approval	Q3 2017 – Q4 2017	Not started

I19. Oracle Hardware Upgrade

Project Sponsor Executive Director (Administration and Planning)	Business Owner Director (Information Technology Services Division)	Project Manager TBC (ITS)

Project Description:

Oracle servers run the underlying Database to some of the University's most critical applications. These include ERMS, Identity and many other core Infrastructure Databases. Oracle servers are not able to be run within the University's traditional compute space (VMware servers) due to strict licensing requirements.

The server Hardware currently running Oracle is approaching end of life, and given they fall outside of the traditional VMware compute space, will not be included within the Enterprise Storage and Compute project. Failure to upgrade these servers will see increasing instability within these critical systems as the hardware continues to degrade, this will in turn lead to outages and a severe productivity impact across the University.

Key Objectives:

- Procure, install and transition critical Oracle database servers from the current, end of life Dell based Blade servers, to a pair of Oracle based ODA Appliances that are specifically designed for Database workloads.

- Ensure there is cross replication and Disaster Recovery across our two Data Centres.

UICT Status:	Delivery Timeframe:	Delivery Status:
Pending approval	Q 2017 – Q4 2017	Not started

I20. Data Centre Upgrade

Project Sponsor Executive Director (Administration and Planning)	Business Owner Director (Information Technology Services Division)	Project Manager TBC (ITS)

Project Description:

Data Centre services are provided to the ANU through two Data Centres located in the Huxley and Crisp buildings. These Data Centres house a large proportion of key ICT equipment so their reliable operation is critical to the University.

As with all mechanical and electrical equipment, increased demand in the form of natural capacity growth, in addition to supplementary growth through centralisation initiatives such as Service Delivery Reform, requires the Data Centre to keep pace from an electrical and cooling capacity perspective.

In addition to growth concerns, the electrical and mechanical systems within the Data Centre, like any other electrical and mechanical equipment, have an expected life. After this point, they need to be replaced/refurbished before becoming unreliable. This project will undertake work that is required to maintain these critical Data Centre services.

Expected timeline: Business Case due early 2017, early planning late 2017, commencing 2018, finish late 2018.

Dependencies:

- I8. Data Centre Strategy and Refresh project is providing the strategy and business case to support the I20 project.

Key Objectives:

- Conduct work required to maintain critical Data Centre services including upgrade/replacement of the Uninterrupted Power Supply (UPS), generators for the plant and main building and required electrical works.

UICT Status:	Delivery Timeframe:	Delivery Status:
Pending approval	Q3 2017 – Q4 2018	Strategy completed. Business Case due early 2017.

Other Projects/Work Underway

In addition to the UICT and Infrastructure funded Programs, there are a number of discrete projects which have been resourced via other University funds or as part of Business as Usual (BAU). The list below provides an indication of some of the key projects underway which may impact ITS, in terms of requiring infrastructure or staffing resources, to either integrate, support or implement components of the projects.

Project Name	Business Owner	New Capability	Product Lifecycle	Status
Cardax Upgrade	Director (Facilities and Services Division)		X	Upgrade released February 2017. Work continues to upgrade controllers. 25 of 69 upgrades completed as of 10/4/17.
CareerHub	Director (Division of Student Life)	X		Business analysis and investigation of options prior to submission of proposal to UICT.
Claims Management / Workers' Compensation Self Insurance	Director (Human Resources Division)	X		Estimated delivery date and move to BAU is 1/6/17.
ERMS Upgrade	Director (Information Technology Services)		X	Upgrade to ERMS planned for second half of 2017.
Mobile Device Management (MDM)	Director (Information Technology Services Division)	X		Analysis activity underway. Workshops have been conducted and we are aiming to go to market 28/4/17.
MSL Pilot	ANUSA	X		ANUSA and PARSA are progressing outstanding MSL tasks when they can. No further requirement of ITS at this stage.
Multi Factor Authentication	Director (Information Technology Services)	X		A discussion paper has been developed and workshops have been conducted. The initial proposal is to conduct a pilot implementation for authentication of privileged system administration users across a number of ANU systems and to then evaluate the benefits and the costs before making further recommendations.
Purchase cards / Travel Expense project	Director (Finance and Business Services Division)	X		On track to achieve April 2017 release.
Service Delivery Reform/One ANU IT	Director (Information	X	X	Amalgamation of commodity ICT functions from

Project Name	Business Owner	New Capability	Product Lifecycle	Status
	Technology Services Division)			Colleges/Schools/Service Divisions into ITS.
Student Management System	Centre for Continuing Education	X		Aim is for go live before Semester 2. Work is underway to prepare for second stage testing of the environment.
Technical Workshops Project	Business Owner TBC SIG Project Manager	X		Business Case approved through Service Improvement Steering Committee 22/3/17. Will need to come to UICT if ITS resourcing and/or funding is required.
Union Court Redevelopment	Director (Facilities and Services Division)	X		Provision of ICT infrastructure and resources to support the redevelopment of Union Court.