



THE UNIVERSITY OF
AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND



The IT Strategic Plan 2016-2018

Endorsed by SLT (v7) | 11-02-2016

Table of Contents

TABLE OF CONTENTS	2
INTRODUCTION	3
EXECUTIVE SUMMARY	4
IT STRATEGIC DRIVERS	6
INVESTMENT	7
RESEARCH	8
LEARNING AND TEACHING	9
STUDENT EXPERIENCE	10
ORGANISATIONAL PERFORMANCE	11
PEOPLE, CULTURE, AND CAPABILITY	12
SERVICE QUALITY AND PERFORMING AND RESILIENT SYSTEMS	13
STRATEGIC ROADMAP	14
APPENDIX 1: SERVICE AREAS AND BUSINESS AREAS	15
APPENDIX 2: SERVICE AREA STRATEGIES	16
APPENDIX 3: BUSINESS AREA STRATEGIES	40

Introduction

Supporting and enabling the delivery of the University's vision is integral to University IT and partnering groups.

This document presents a framework for understanding the University of Auckland's information technology landscape and investment priorities for the next three years.

The IT Strategic Plan was developed in partnership with the University's IT governance committees, partners, and community.

Consultation started in May 2015 with a series of focused workshops, followed by both wider and deeper consultation and planning activity.

To fulfil its mission, University IT must anticipate what is coming, and identify how best to leverage current and emerging technologies and resources to support the work of students, faculty, and staff. University IT must also mitigate operational and opportunity risks while delivering services in the most efficient and effective way.

This plan describes the key drivers, service directions, and strategic investment priorities to accomplish these aims. It is presented as six priority areas that broadly allow investment decisions to be made. These are supported by the delivery strategies in the appendices that provide more detail as to how these aims will be achieved.

While the plan focuses on future initiatives, it is important to remember that the majority of the University's IT budget goes to sustaining current services.

IT plans have a short life. They are suitable for fuelling the continuing University-wide discussion of critical information technology goals and priorities. They are also living documents requiring frequent adjustment in response to emerging technologies and evolving University needs. Although this plan has a three-year horizon, it will be reviewed annually.

The value of this document is in the discussion we have engaged in during its development. Thank you to all those who have participated and contributed.

"In preparing for battle I have always found that plans are useless, but planning is indispensable." - Dwight D. Eisenhower

Executive Summary

The changes to the higher education landscape are rapid, driven in part by a rapidly changing IT landscape. It is important that University IT is responsive and able to support change in critical areas.

IT has become so pervasive that significant business change is nearly impossible without it. The consumerisation of IT has increased user expectations for instantly available, affordable, anywhere, anytime services. At the same time, organisations have to address greater compliance, security, and privacy concerns and maintain or retire existing services.

The demand for IT is relentless, so it is essential that we have a strong alignment with the University's vision and that every IT investment we make brings the greatest possible value to the University.

Our investment focus is on freeing funds from "maintaining services" through a program of standardisation and consolidation so that we can invest in transformation programs that are aligned to the University's strategic imperatives and bring the most value to the University.

We must also transform University IT to be responsive and agile, to support and enable new delivery options while maintaining the integrity of our services.

This plan is presented at a point in time. We will review and update it annually with a focus will be ensuring that we do get value for the investment made and we measure the contribution to the University's vision and we adapt to new requirements and priorities.

This plan addresses the twin objectives of quality IT services that ensure the University operates effectively, and digital transformation that enables the University to enhance our services and effectiveness in an increasingly competitive international landscape.

These services are provided in partnership, with many teams across the University, both centrally (ITS, Library, CeR) and located with the faculties and service divisions. The central service providers deliver services where scale and standardisation are the key drivers whereas the local service providers deliver discrete solutions and local services.

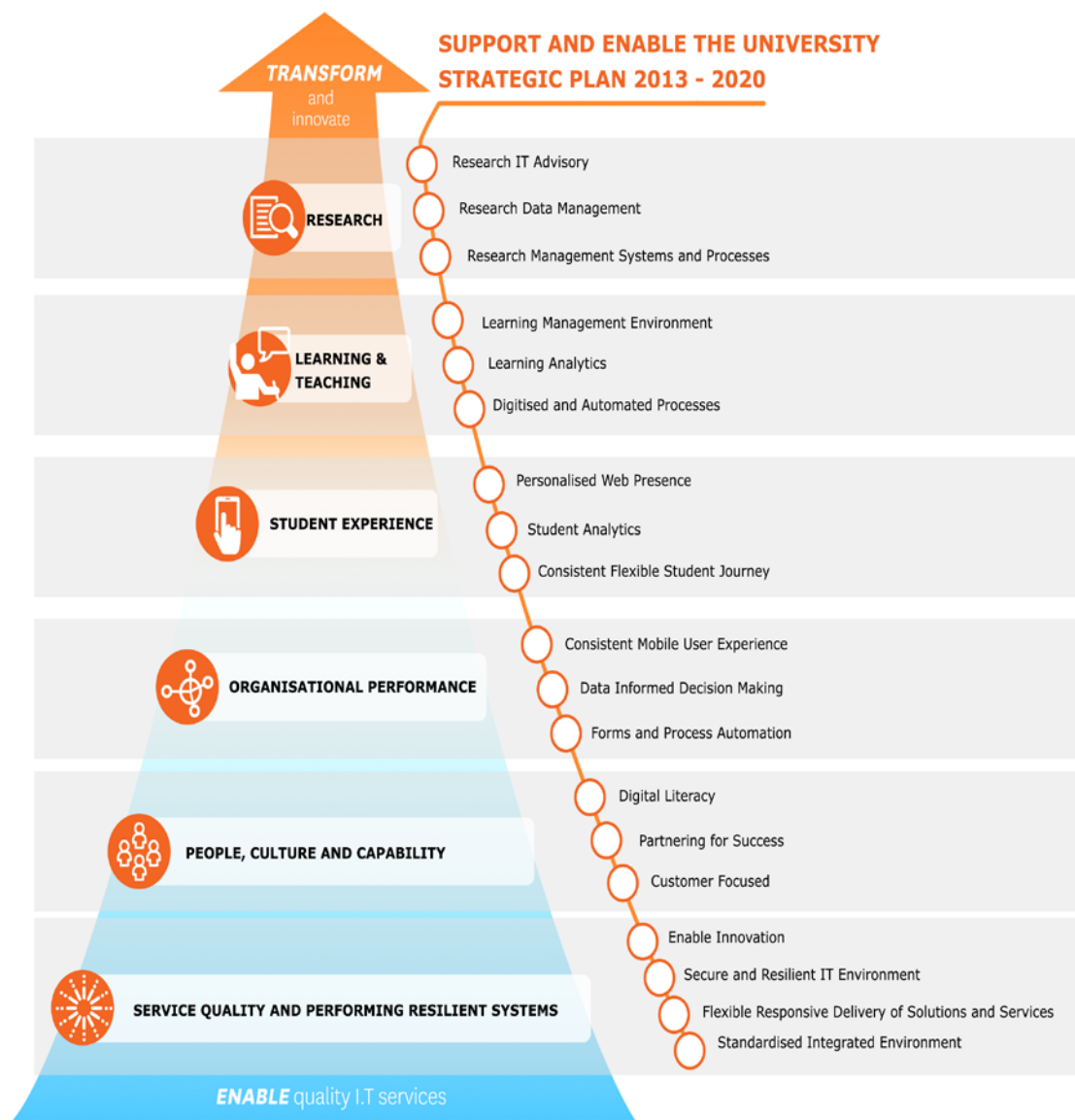
Our key objectives for 2016 - 2018 are:

Quality IT Services

- Focus on service quality and effectiveness through the provision of performing and resilient services that meet the broadest campus need
- Enhance integrated IT support using high-quality staff, knowledge sharing, partnership, and relationship building
- Sustain the IT capability that enhances innovation for research and for learning and teaching

Digital transformation

- Support our researchers to utilise and exploit technology to conduct research and innovate on a larger scale, and to partner for greater outcomes nationally and internationally. This includes provision of clear advice on the availability and opportunity of IT services for researchers
- Enhance learning and teaching practices to meet student needs, enabling the University to deliver a more interactive, personalised, and rich learning environment. This approach will also enhance the reach of our University offerings
- Understand and improve the student experience in order to enhance retention and achievement. We will grow our understanding of the student journey, and use analytics and enhanced processes to improve service effectiveness
- Improve organisational performance by optimising business processes across the University, removing paper forms and automating workflows
- Enhance the quality and accessibility of key information for decision-makers across the University



IT Strategic Drivers

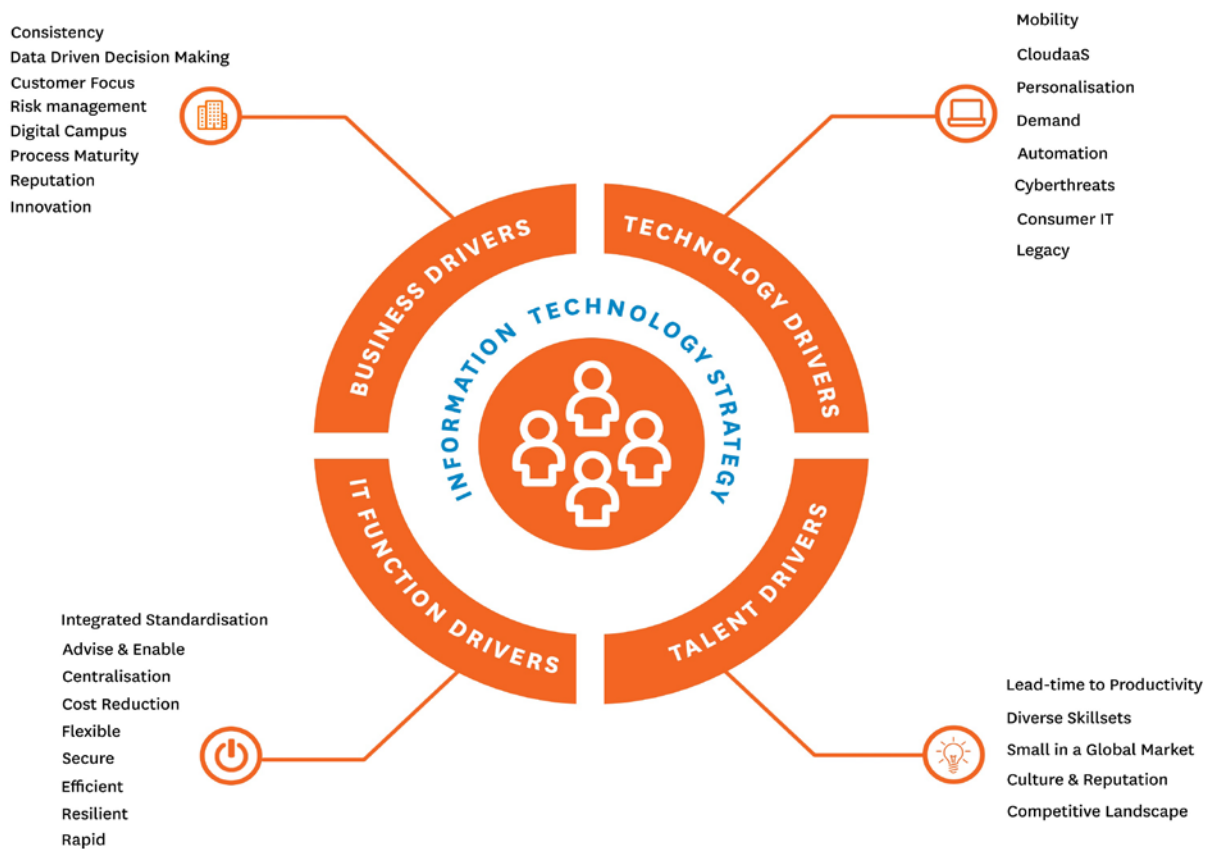
The expectations on University IT services for the next three years have never been greater.

The University's current strategy of moving to a customer-focused culture while modernising and standardising its core services and processes is highly dependent on IT for success. The desires for accurate data and reporting that support decision-making, for personalised and usable interfaces, and for the removal of paper from processes and automation can only be fulfilled with investment in IT.

The consumerisation and ubiquity of IT with readily available and continuously improving applications and services has raised the expectations staff and students have of the quality of the digital experience they receive from the University. **The experience of the University's digital campus is as important as that of the physical campus.**

The drive to centralise, consolidate, and standardise IT infrastructure and applications to manage cost and reduce risk is ongoing. At the same time, new IT service delivery models such as cloud services provide both opportunities and challenges for University IT services. Moving forward requires a balanced approach between sustaining IT services and driving and supporting innovation. To achieve this, there is a need for stronger strategy, planning, and value management skills across IT.

Sustaining a strong IT capability has become more challenging. The cost of acquiring and retaining specialised technology skills is increasing as internet and cloud companies attract the best and brightest, and the larger service-provider companies attract the capable with lucrative salary packages. The University, as one of the largest IT providers in New Zealand, has had a long culture and enviable reputation of self-sufficiency and internal capability. This culture is transforming as standardisation, best practices, and alternative delivery models are adopted.



IT Strategic Drivers

Investment

This plan addresses the twin objectives of **quality IT services** that ensure the University operates effectively, and **digital transformation** that enables the University to enhance its services and effectiveness in an increasingly competitive international landscape.

There are many forces at work that will influence IT expenditure and investment during the next 3 years. These include the adoption of cloud services, increased user mobility, rapidly improving digital literacy, an increasingly complex regulatory environment and an ever-evolving cybersecurity threatscape.

The ongoing maintenance of legacy systems and outmoded services can be expensive and can consume an ever-growing portion of the available resources if not actively managed.

To respond to these forces the university must constantly review IT services and the value they provide, and adapt accordingly.

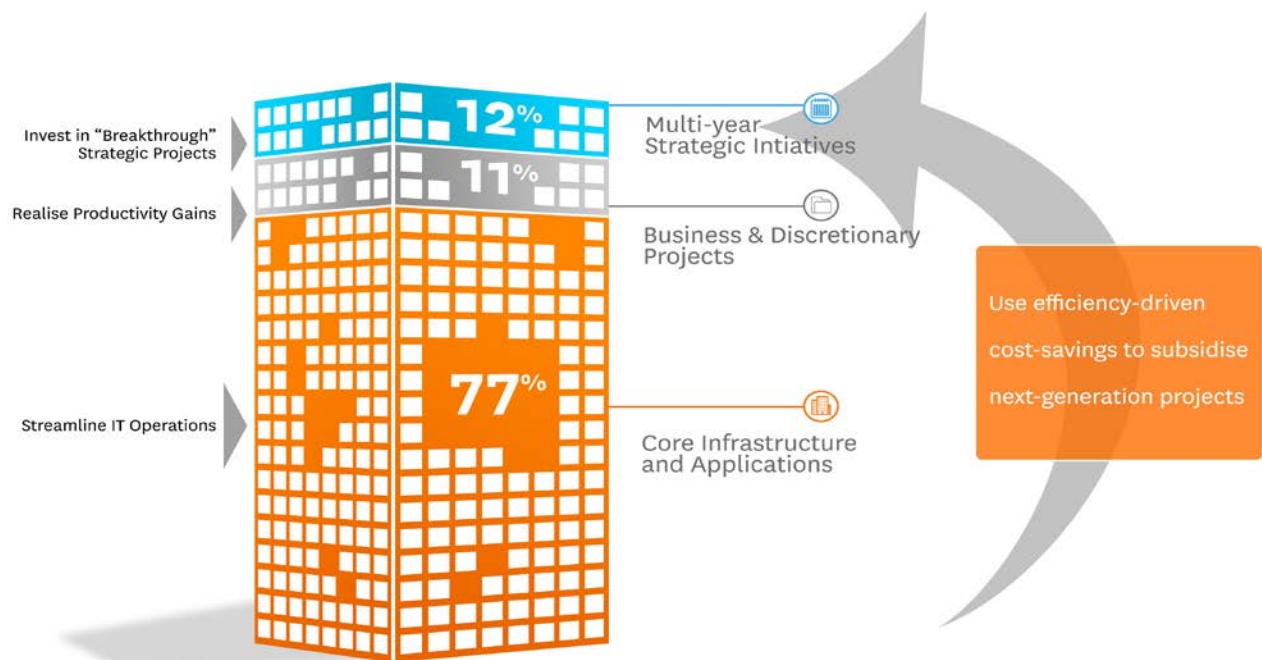
Quality IT Services

Quality IT services and infrastructure must be maintained and improved. The University will continue to centralize, standardize, simplify and automate core services with the goal of streamlining IT operations. Selective sourcing will be utilized for some core activities.

Digital Transformation

To enable digital transformation the University will invest in business process automation, system integration, data analytics, relationship management and staff development. These investments are required to build a new delivery platform capable of providing targeted customer centric services rapidly. Services will be provided from many sources and the role of University IT will include service brokering.

Over the next three years, IT operational expenditure is expected to increase before falling as we transition from an "Ownership" model to a "Consumption" model. This is because we have a large asset base that needs to be maintained during the transition.



Analysis of current IT expenditure based on University wide IT operational expenditure (2015) and forecast IT capital expenditure (2016, all funding sources).

Research

Storyline

By 2018, researchers have access to a comprehensive spectrum of IT services that are tailored to both general and specific research and collaboration needs. IT and research computing services are funded appropriately for a research-led University. Those services are discoverable, shareable, and sustainable, with digital literacy the norm across the University. Research data are managed and curated commensurate to their value, and our administrative *research management systems and processes* are streamlined and automated. Research analytics are utilised to drive research investment and strategy. All this is made possible by researchers, the Library and IT services working in close partnership, supported by clear IT service offerings, governance, and communication.

University Strategic Goals and Drivers

1. Ensure that infrastructure is appropriate for support of research (o9.5)
2. Facilitate widespread dissemination of research (o10.3)
3. Enhance systems for improving access to research outputs, including data (o10.4)
4. Invest in professional development activities that will enhance research performance across the University (o9.2)
5. Manage research equipment on a basis that allows access to all potential users within the University (o15.6)

IT Strategies

1. Provide a *research IT advisory* service that addresses all aspects of IT needs encountered by researchers and that connects researchers to the spectrum of appropriate services
2. Significantly enhance IT services and infrastructure to support *research data management*, collaboration, research computing, and visualisation
3. Optimise publication and discovery of research outputs, data, projects, citations, and grants both internally and externally
4. Enhance *research management systems and processes* to cater to the needs of researchers and administrators
5. Provide IT training and education opportunities that enable researchers to develop an appropriate level of IT skills and practices
6. Partner with Faculties to meet their specific technology needs

Key Actions

1. Create a *research IT advisory* service that is familiar to and accessible by academics, ensuring:
 - a. the *research IT advisory* is reflected in our web presence
 - b. the provision of services to researchers is aligned across the Centre for eResearch, Central IT, and Faculty IS
 - c. the provision of a suite of solutions (software, hardware, web,) that supports common research needs, and enhances the digital experience for all researchers
2. Review and enhance *research management systems and processes* focusing on usability, digitisation, and business automation
3. Continue investment in and expand the use of research IT services throughout the University including:
 - a. High Performance Computing (HPC) through NeSI computer platforms (including cloud services where appropriate)
 - b. Research Virtual Machine (RVM) farms to support local research computing needs that are not a good fit for NeSI offerings
 - c. Data Visualisation facilities, platforms, tools, and techniques
4. Develop and implement a set of *research data management* and storage solutions including archiving, curation, sharing, publication, and discoverability. These solutions must be coupled with a service to help researchers create and use appropriate Data Management Plans (DMPs), including policies, licensing, and security. Together, these will improve access to, reuse, collaboration, and impact of research data
5. Support the University-wide usage of research instruments through high-speed connectivity, appropriate data services, and the capability to share resources
6. Review and align our Research Governance and support services

Learning and Teaching

Storyline

The transition to the University's new learning and teaching platform enables enhanced pedagogical practice, while providing a consistent learning and teaching experience for the majority of students. This environment supports academics to experiment and innovate with flexible discipline-based pedagogical styles. The centralised course reading-lists system is fully utilised across the University, minimising copyright risk and reducing the need for paper-based course books. *Learning analytics* are available at the student, class, course, and institutional level, enabling early intervention and strategic planning for academic and institutional success.

Learning-space IT infrastructure across the University is consistent and modern, allowing real-time interaction and collaboration during lectures. Learning and teaching is supported by *digitised and automated processes*, reducing administrative effort and multiple paper based activities. The University is able to offer online examinations and scripts available in digital form. Students will access course software remotely from their own devices, with lectures and events across the University being recorded as required. A rich content-creation, collaboration, and learning environment exists that supports flipped classrooms, online courses, and the use of rich media. This provides the University with a modern, scalable, flexible, and resilient pedagogical environment, further supported by an effective relationship between the Director of Teaching and Learning, CLeaR and Libraries and Learning services..

University Strategic Goals and Drivers

1. Make the best use of new teaching, learning, and information technologies (o7.4)
2. Provide high-quality infrastructure and services to support outstanding teaching and learning (o15)
3. Promote and support research-informed innovation in teaching and learning (o7.3)

IT Strategies

1. Support advances in pedagogy by providing new learning and teaching information technologies
2. Support standards for minimum presence to meet student and academic expectations
3. Improve the support of both operational and experimentation needs of teachers and students
4. Support learning and teaching administrations with *digitised and automated processes*
5. Sustain and modernise learning and teaching spaces, infrastructure, and services

Key Actions

1. Implement an enhanced *learning management environment*, and support academics to utilise it effectively
2. Implement a new lecture theatre recording (LTR) system
3. Ensure the ongoing development and management of physical learning spaces is informed by pedagogical needs, *learning analytics*, relevant research, and international trends, with continued focus on high-speed, reliable and prioritised wireless connectivity
4. Enhance software delivery services and access to computing laboratories, ensuring they are fit for purpose of learning and teaching needs
5. Use analytics to analyse and optimise the automated processes and services for learning and teaching (e.g., paperless assessment)
6. Ensure that teaching staff can easily discover, access, and use relevant IT services, tools, and solutions through a *personalised web presence*
7. Pilot Digital Assessment and deploy as appropriate
8. Enable the use of Bring your own Device (BYOD) access to University services that support any time / anywhere / any device access whilst taking into consideration equity access concerns

Student Experience

Storyline

Students are attracted to the University because they can engage easily with University services through *flexible student processes* and receive a seamless experience with a *personalised web presence* wherever they are and from any type of device. The University has a comprehensive view of student progress and is able to adjust services and provide support as needed. Service divisions, faculties, and University IT work in partnership to ensure that IT is an enabler of innovative new student services. Students have simple and effective access to the support services they need.

University Strategic Goals and Drivers

1. Attract, recruit, and retain domestic and international students of high academic potential (o4.1)
2. Provide students an outstanding educational and extracurricular experience (o8.1)
3. Provide responsive processes for promotion to and enrolment of students (o4.2)

IT Strategies

1. Provide efficient and effective IT services that optimise *consistent flexible student processes*, including recruitment, enrolment, and on-campus experience
2. Providing services to support equity of access and meet our Treaty obligations
3. Enable a seamless digital experience tailored for student needs through a *personalised web presence*
4. Provide *student analytics* to improve our capability to understand the circumstances of the students we are supporting, thereby improving retention and successful completions

Key Actions

1. Enable students to track progress of their interaction with the University, supporting the development of a student journey within the University *personalised web presence*
2. Provide *student analytics* that enable a holistic understanding of the student experience across the University
3. Continue to improve the prioritised wireless network coverage and access, focusing on key aspects of student activity, such as student spaces, learning spaces, and halls of residence
4. Continue in partnership with the Library to provide improved IT services to students and to provide both general and targeted courses on digital literacy
5. Develop and implement an “access anywhere, anytime, from any device” engagement strategy for University applications, with clear priorities
6. Continue to improve student administrative processes by replacing paper forms and manual effort with digital *forms and process automation*
7. Map the student journey to understand the key touch points. Identify and act on opportunities to enhance the experience through improved delivery of services and support.

Organisational Performance

Storyline

Common business processes and services integrate seamlessly with the University's *personalised web presence*, providing easy access for staff and students through contextualised, self-service, usable interfaces. Business processes are automated and equipped with tracking and analytics, allowing monitoring of request progress, service performance and quality. Engagement with staff and students is supported by *forms and process automation*, with new University services being straightforward to create securely and cost-effectively, either locally or centrally. University data are accessible and available to be used for strategic and operational decision-making. University information is curated, accurate, and easy to access. A digital-engagement platform exists for faculties and service divisions to share knowledge and awareness, maximising the collective ability for service delivery.

Major initiatives in the University's applications strategies include implementing Career Tools for Human Resources, progressing a new web information architecture and a redesign of the University's web presence, integrating UniServices into University systems, progressing the Business Intelligence and Reporting programme, and assisting Campus Life and Property Services with their business needs.

University Strategic Goals and Drivers

1. Develop and maintain an information and communication strategy that supports access needs for learning and teaching and for research, and that enables the University to gain strategic value from information to achieve international best practice in administration and decision support (o15.4)
2. Maximise synergies between the University and UniServices (o10.9)
3. Enable continuous improvement through a systematic approach to health, safety, and well-being (o17.1)

IT Strategies

1. Support the optimisation of business processes and work practices through the use of IT
2. Provide an enterprise-wide information management strategy to manage business data and records
3. Sustain and keep current the core University applications and platforms
4. Optimise IT solution-delivery processes and practices through partnership and rightsourcing
5. Provide a strong single-identity model that is centrally managed and maintained to enable authentication and authorisation.
6. Provide governance that includes all stakeholders and nurtures innovation

Key Actions

1. Establish a unified web presence and IT service delivery capability that supports *consistent user experience* with personalisation and *forms and process automation*
2. Improve the visibility, accessibility, and ownership of organisational data, reporting, and analytics
3. Improve existing IT systems and services by understanding users' needs and behaviours through ongoing engagement and interaction
4. Develop existing IAM processes and applications to support business needs and enhance the user experience
5. Continue to provide seamless integration between applications, systems, and services including those in the cloud
6. Enhance knowledge-sharing throughout the University, for the purpose of improving our collective ability to use shared resources more efficiently and effectively
7. Establish exit strategies for legacy systems and services

People, Culture, and Capability

Storyline

Staff and students are confident in finding and using the IT services they need to achieve their goals and objectives. An effective *IT communication strategy and plan* is in place that keeps all IT professionals and staff aware of the IT capabilities, resources, changes, and opportunities across the University. Induction processes give new staff a clear overview of the IT environment and services, combined with focused learning programmes and resources that enable IT Staff, postgraduates, academics, and professional staff to enhance their knowledge and their careers. IT services are consistent across the University with integrated IT teams and communities of interest working together to provide solutions. Strong relationships are established between IT professionals and academics that enable and facilitate knowledge-sharing, internships, guest lectureships, research projects, and teaching assignments. IT staff and managers are provided with the training and development programmes they need to transform IT capability and services to meet the challenges of the changing IT environment.

University Strategic Goals and Drivers

1. Recruit and retain staff who are inspired by, motivated to contribute, and committed to the University's goals (o1.1)
2. Ensure that the work environment encourages and supports high performance (o1.5)
3. Ensure staff have clear performance expectations and career-development opportunities (o1.3)
4. Ensure staff have regular performance feedback that links to reward, recognition, and future development (o1.4)
5. Ensure that communication with staff operates on a two-way basis (o2.1)
6. Implement continuous-improvement processes across all support, service, and administrative activities (o18.8)

IT Strategies

1. Provide effective and flexible technologies and services that anticipate and support the needs of staff
2. *Embed IT skills* into the University environment to support an engaging and knowledge-sharing culture
3. Establish an Integrated IT approach that facilitates the planning, recruitment, assessment, capability enhancement, and career development of staff
4. Invest in an *IT communication strategy and plan* that reaches all staff across the University
5. Nurture an engaged and high performing culture for University IT staff
6. Develop a people and culture plan that develops and extends skills and resources, embraces diversity, and supports innovation
7. Build effective relationships and shared responsibility across IT delivery functions

Key Actions

1. Continue to build on a culture of service quality and effectiveness across Integrated IT
2. Provide appropriate physical environments, time, and resources to support staff innovation
3. Collaborate with staff and HR to evaluate and improve the design of roles, positions, structures, and people processes
4. Support a flexible work environment using online collaboration tools, including voice and video, along with training and guidance
5. Collaborate with Human Resources to develop a remuneration approach for IT staff that reflects the University's remuneration strategy, and the New Zealand market, and to present clear pathways for career-advancement opportunities within the University
6. Ensure appropriate induction and planned individual and team learning opportunities for University IT staff
7. Support the implementation of the University's People Strategy 2013 - 2020
8. Embed the IT internship programme and formalise a graduate recruitment programme

Service Quality and Performing and Resilient Systems

Storyline

The majority of IT services and resources are found and requested online, traceable, and automated. Common services are delivered consistently across the University, enabling innovation and diversity in learning and teaching and in research activities. Services are delivered economically via on-premise, nationally-shared, or cloud-based solutions that best fit the business need. Network bandwidth allows direct connection of research instruments with high-performance computing and visualisation services inside and external to the University. University data centres are delivered in partnership with commercial providers, delivering hybrid-cloud infrastructure services for Auckland and for the New Zealand tertiary sector. University networks, services, and applications are resilient, proactively monitored, and protected. Analytics are captured and utilised to drive service improvement and service strategy.

University Strategic Goals and Drivers

1. Ensure that all parts of the University meet the needs of those to whom they provide services, and that service delivery is client-focused, responsive, constructive, and helpful (o18.9)
2. Enable all parts of the University to identify relevant best practice and benchmark their own management practices and service delivery against these standards (o18.7)
3. Provide an infrastructure of the highest quality possible to support teaching, learning, research, and community engagement (o15)
4. Ensure that all existing infrastructure is maintained and used as efficiently and effectively as possible (o15.3)
5. Manage all teaching facilities and major items of research equipment to allow access to all potential users (o15.6)

IT Strategies

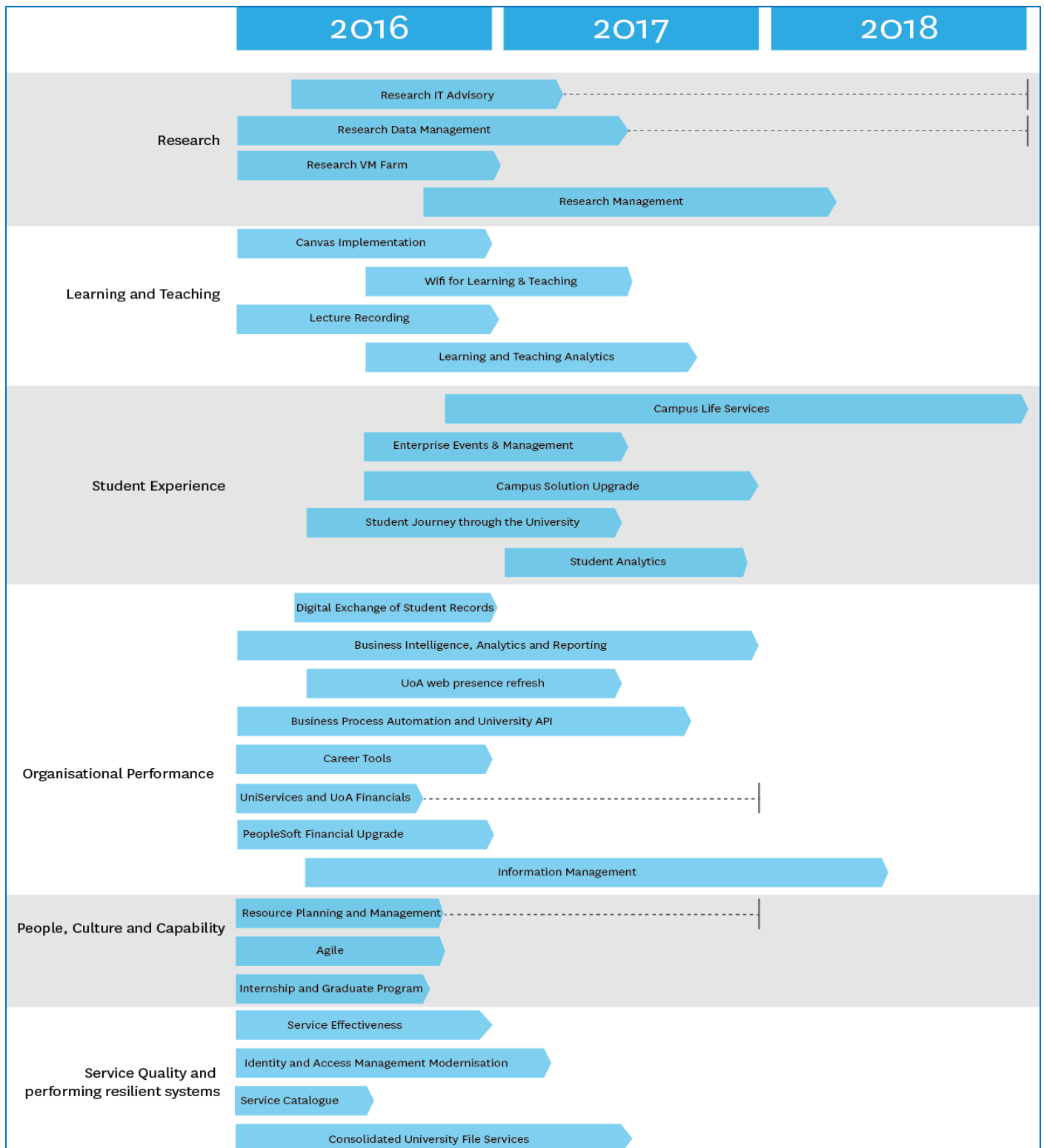
1. Provide mature service management capability (processes and practices)
2. Establish high-quality customer-focused governance and management practice
3. Use analytics to predict demand and to assist *data-informed decision making*
4. Ensure efficient capital and resource usage through reduced duplication, consolidation, and partnered service delivery
5. Build effective relationships and shared responsibility across IT delivery functions
6. Provide high-quality IT services that perform to requirements, and are stable, secure, and resilient to failure
7. Prioritise open architectures, open data, and services that enable flexibility, integration, interoperability, and innovation

Key Actions

1. Develop and implement a strategy that enables the University to migrate to cloud solutions within New Zealand
2. Continue to improve self-service and automation for the commissioning and delivery of IT services
3. Continue to advance network connectivity and audio-visual capability in a consistent standard to support learning, teaching, and research needs
4. Continue to grow the business IT service catalogue within the new *personalised web presence*
5. Develop a sustainable financial model for the consumption and delivery of University IT services
6. Establish a data-management policy and a sustainable approach to data storage and archiving
7. Enhance in-house application management delivery capability that forges strategic relationships with partners, to accelerate delivery of solutions
8. Establish a flexible business intelligence, reporting, and data analytics platform and use it to report on IT services
9. Sustain a proactive risk and security culture through an active cybersecurity programme
10. Improve the transparency of service quality and performance by disseminating the monitoring and reporting information of services
11. Ensure significant buildings are resilient to network failure
12. Continue to improve the stability and resilience of IT systems

Strategic Roadmap

The Strategic roadmap shows when major activity is planned to deliver significant improvements or new capability for the University. As with all multiyear plans it is more detailed for the near future.



Appendix 1: Service Areas and Business Areas

The Service Area Strategies and Business Area Strategies contain more detail on how the objectives will be achieved. These will be updated annually and drive the capital program.

In 2016 we will conduct intensive strategic planning for two Service Areas. These are End User Services and Infrastructure Hosting. We will utilise the Technology Roadmap (TRM) methodology to develop a three year view of how these services will be developed to meet both growth and changes in demand, utilising the appropriate technology. This process will identify what investments are required and prioritise these based on University drivers, dependencies and constraints.

The output of the TRM helps ensure investment is aligned to University need and is used to inform the annual capital planning process.

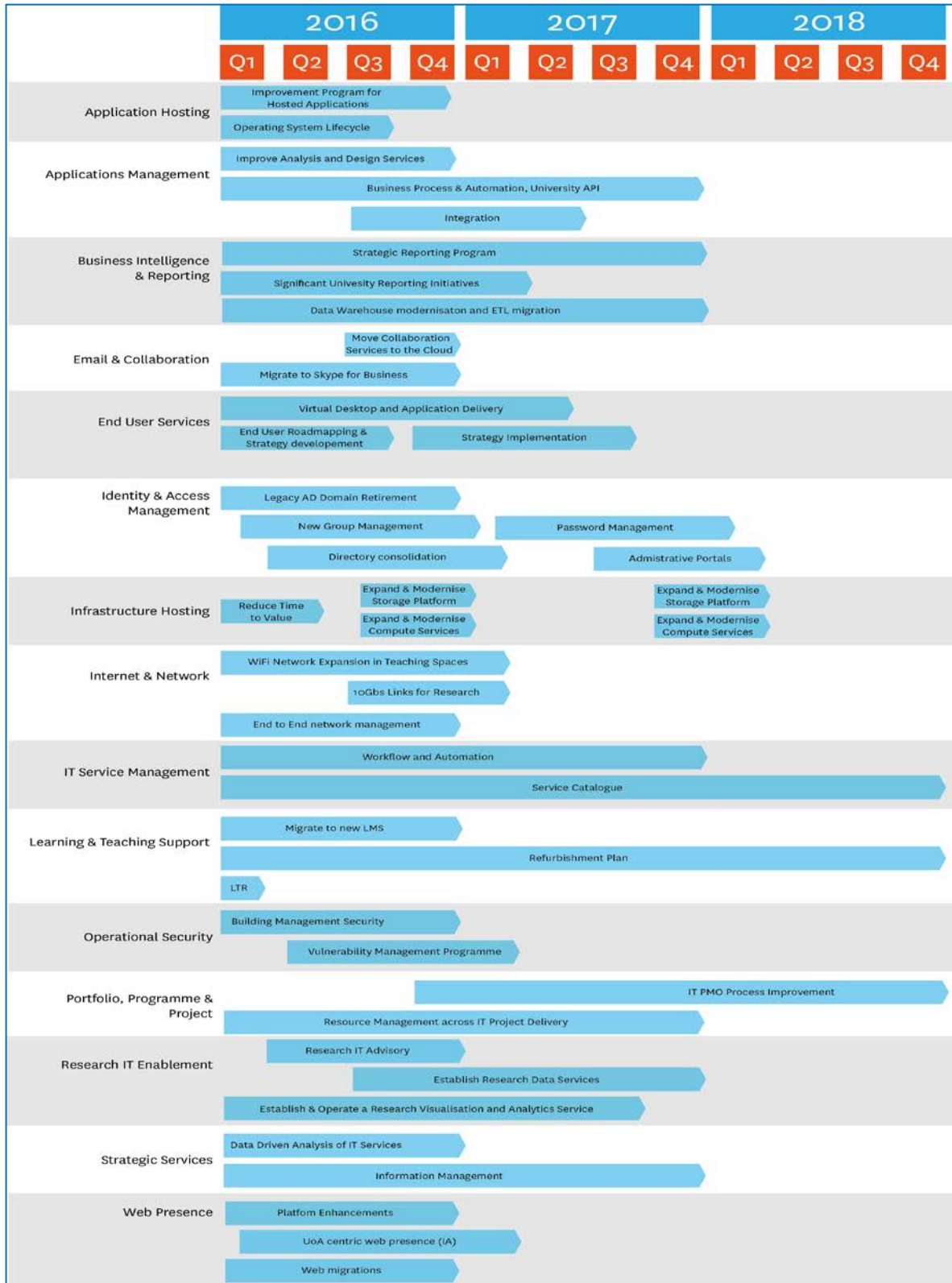
This detailed strategic planning approach will be utilised for other service areas as required.

This table shows the Service Areas and Business Areas having strategies to support the IT Strategic Plan.

Service Areas	Business Areas
Application Platform Hosting Applications Management Business Intelligence and Reporting Email and Collaboration End User Services Identity and Access Management Infrastructure Hosting Internet and Network IT Procurement Strategy IT Service Management Learning and Teaching Support Operational Security Portfolio, Programme and Project Research IT Enablement Strategic Services Web Presence	Academic Services Alumni Relations and Development Communications CRM and Marketing Finance Human Resources Learning and Teaching Library Property Services Records Management Research Management Student Experience

Appendix 2: Service Area Strategies

The Service Area Strategies document the delivery work required in order to satisfy the Priority Area Strategies. Many of these are foundational and support multiple priority areas and University objectives.



Service Area: Application Platform Hosting

Aspiration

That the University's business applications perform reliably, securely, and efficiently.

Objectives

- Ensure core University applications are supported
- Provide reusable platform services and apply them across as many University applications as appropriate
- Sustain a core capability with the expertise to support applications and the platforms upon which they depend

Service Area Strategy

Continue to maintain and grow a core technical engineering capability that is able to support the platforms (internal or external) needed to run University applications. For each technology area, measure the key performance indicators including cost. Consult and partner with stakeholders on business needs, and create technical roadmaps for underpinning platform services (e.g., databases). Consolidate common technology platforms in order to reduce support-cost overhead while rightsizing platforms and support agreements where this makes sense. Monitor the entire University's application suite to measure the quality of user experience and determine usage patterns.

Provide a graduated set of application platform services that are: fully supported at all levels of the stack, partially supported where it makes sense, minimally supported through partnership with application owners and vendors. Work with IT service management to define platform-hosting services and communicate their availability across the University.

Key Elements

Application Delivery Network

- Improve resilience by offering per-data-centre VLANs for Platinum services
- Establish the Application Delivery Network (ADN) layer as a mandatory control point for all web applications
- Implement Intrusion Detection and Intrusion Prevention at the ADN layer
- Retire server networking hosting as an ADN pattern to reduce complexity
- Expand our ADN offering to support cloud hosted applications

Application Hosting

- Standardise our hosting-platform offerings
- Gather the business requirements of our applications and platforms
- Migrate applications into our standard hosting platforms and support services based on requirements
- Implement a general-purpose hosting pattern based around lightweight containers
- Retire Javafarm as a hosting platform
- Support the Local Applications Task Force
- Ensure that the appropriate level of security patching is applied

Alignment

- Priority Area: Service Quality and Performing and Resilient Systems

Monitoring

- Implement service-level monitoring
- Improve our element monitor status by tuning thresholds
- Implement Application Performance monitoring
- Develop and implement a Logging Management Strategy
- Provide monitoring and logging tools to support first- and second-level support processes

Cloud Platforms

- Identify and resolve legislative, financial, and operational barriers to cloud engagements
- Establish a model for engaging with cloud platform providers
- Expand our platform service to include brokered cloud services

Data Hosting Management

- Standardise data hosting platform offerings
- Continue to Implement and improve high-availability coverage with fast-start fail-over on the Oracle database platform
- Implement standard data-management layer

Support

- Build Teams to support the IT Service Delivery Model

Service Area: Applications Management

Aspiration

To deliver high-quality, timely, and effective application solutions aligned to the business needs of the University.

Objectives

- To establish ourselves as a delivery partner that the University prefers to engage with
- To be solution-oriented, pragmatic, fast to deliver, cost-effective, and collaborative
- To ensure that business drivers are understood, and that our service capability and processes are able to support those future needs in a consistent and sustainable way

Service Area Strategy

Over the next three years we will transform the service to take into account the changing needs of our customers, the changes in the application environment, and the changes in technology, and we will align delivery work to these. The focus will continue to shift away from building bespoke applications and supporting monolithic enterprise solutions towards supporting the integration of solutions pieced together from multiple components, an increasing number of which we know will be acquired through as-a-service delivery modes. There will be further focus on linking technology with business requirements through developments such as Business Process Management and the University API and the delivery of this service. The three key themes of engagement, delivery, and support remain strong, with a key priority being supporting product owners to maximise their investment and own their business outcomes. The transformation will require a higher level of technical, leadership, and relationship capability, either sourced from within the team or through partnerships with other groups. Appropriate development and lifecycle environments will be established and maintained. The expectation to deliver quality solutions in a timely manner will lead to a greater adoption of Agile methodologies. Supporting the service divisions in their use of enterprise systems will remain a priority, but additionally we will engage more with Faculty IS as they develop successful local solutions.

Key Elements

Engage

- Work with the University community to understand their business needs and identify areas for new functionality, enhancement, or change
- Identify the total cost of ownership of core applications with regular review, and utilise recommendations in planning
- Define Product Owner responsibilities, establish an engagement model, and develop processes and collateral to enable the role to succeed
- Assist Product Owners to plan and manage product roadmaps
- Support local application development by faculties and service divisions as agreed
- Understand the scope of Faculty applications, and establish standard University-wide processes for application solutions
- All major applications developments and enhancements will have at least a basic scoring of benefits to establish priority
- Offer quality-control consultancy to enhance value

Deliver

- By working closely with stakeholders to understand current and future University needs we will implement application solutions that support the operations and objectives of the University
- Develop the use of Agile methodologies and delivery practices.
- Evolve our integration capability to meet changing needs including the further adoption of software-as-a-service solutions
- Adopt a modern, standards-based framework for building bespoke applications
- Optimise processes and tools to improve time to value on projects
- Assist groups across Integrated IT to establish and adopt relevant (including automated) testing processes

Support

- Ensure the Application Inventory is appreciated and used effectively by the University community
- Review the current application support models and adjust to fit the changing needs of the University
- Continue to provide customer-focused second-level support
- Improve application monitoring to ensure we can respond proactively to issues
- Ensure that our applications are maintained and supportable
- Ensure investment is allocated to both maintenance and innovation

Alignment

- Priority Area: Organisational Performance (IT Strategies 1 to 5)

Service Area: Business Intelligence and Reporting

Aspiration

To weave University data into stories that are meaningful and accurate, creating valuable insights for decision makers and analysts, and inspiring informed action.

Objectives

Overall, to provide actionable information to the University that enables informed strategic and operational decisions to be made as required to achieve the University Strategic Plan, and:

- To make University information more accessible and understandable for business users
- To provide analytics and reporting tools and solutions with the best return on investment based on measurable benefits and value
- To raise the level of reporting and analytical capabilities across the University

Service Area Strategy

Over the next three years the Business Intelligence and Reporting Service (BIRS) will modernise and upgrade the capability of the BI platform, tools, and services to enable the wider University to have access to their data for operational and management-reporting needs. BIRS will assist the Planning and Quality Office with delivery of strategic reporting needs while enabling migration from the legacy tools environment. The BI and Reporting Community of Interest will be sustained and grown, assisted by the development of an information architecture that describes University data assets and data location.

Over the next three years we will:

- Upgrade and modernise the BI platform and tools
- Build capability in the use of the BI platform and tools
- Enable migration of the services currently provided to the Planning and Quality Office to the new platform
- Enable the wider University to participate and utilise the BI platform for operational and management reporting
- Provide equitable, discoverable, ready access to these modern BI tools and to the BI service

Key Elements

BI Platform and Tools

Upgrade and modernise the BI platform and tools:

- Plan and implement the upgrade to new data warehouse, include the new version of Oracle database
- Establish the upgrade schedule for the BI Platform (including MicroStrategy and WhereScape)
- Plan for license purchases based on actual and forecast usage
- Ensure appropriate monitoring and management processes and resources are in place for the BI platform
- Continually review and enhance the technical-support model for the BI platform and tools, ensuring the right teams have the right knowledge to support the BI platform
- Enable full use of the functionality in the reporting tools (e.g., mobility, Office documents, R)

Capability

- Build capability through a training programme in the BI tools (MicroStrategy and WhereScape) including formal and informal training
- Support and promote the BI and Reporting Community of Interest
- Increase capability across reporting-analyst roles in the service divisions to develop reports and dashboards in MicroStrategy
- Extend the competency centre across the University community in partnership with the Planning and Quality Office
- Establish an iterative process of measuring BI maturity and customer satisfaction, as a baseline for plans to enhance the service
- Reduce dependencies on external third parties, and leverage their expertise appropriately

University Performance Reporting (KPIs), Strategic Reporting

- Support the Planning and Quality Office in their role as delivery lead, including:
 - Support implementation of data-warehouse architecture and solutions based on agreed principles
 - Migrate ETL from the old tool (Oracle Warehouse Builder) to the new tool (WhereScape)
 - Rebuild Hyperion IR reports and functionality in MicroStrategy
 - Offer maintenance and support based on the agreed support levels
 - Construct and maintain the University Organisation Structure (UOS) external to PeopleSoft

Management Reporting and Operational Reporting (also known as Line of Business reporting)

- Support (and provide development services to) other business areas in the delivery of prioritised information requirements using the BI platform and tools:
 - Add new datasets into the Data Warehouse
 - Build new reports and dashboards using the modern BI tools

Data Governance and Information Architecture

Support and implement data governance standards through the establishment of an enterprise data model. Align the information architecture framework with BI delivery process:

- Drive the establishment of the new information catalogue in relation to BI and reporting
- Embed the processes to update the information catalogue inside the BI and reporting delivery approach
- Establish a data modelling capability in conjunction with enterprise architecture
- Map strategic objectives to information collections to create reference framework for comparative return on interest

BI Architecture

Design and implement a logical data warehouse architecture under the guidance of the BI Solutions Architect: data marts and/or enterprise data warehouse

- Maintain and extend the database reporting layer
- Consult on, publish, and apply data-warehouse design principles and standards with delivery partners, including peer review
- Design structures that meet expectations around longitudinal reporting and meet operational needs

Data Discovery

Establish a new Data Discovery service that enables reporting teams across the University to use MicroStrategy to prototype and deliver prioritised reporting requirements:

- Encourage, support, and consult on BI and Reporting roadmaps for service divisions and faculties
- Increase capability across reporting-analyst roles to use data discovery for prototyping in MicroStrategy
- Provide appropriate level of access to reporting analysts and end users

Note: Data Discovery has three key factors, the abilities to integrate multiple data sources, analyse data easily and quickly, and to display data interactively.

Analytics

Establish the tools and support processes required by users of analytics tools on the BI platform.

Data Provisioning

- Initiate data provisioning so that analysts can access key datasets in the data warehouse
- Plan and implement migration for Hyperion IR reports to MicroStrategy

Note: Data provisioning means giving analysts immediate access to data in the data warehouse, though this data may be transformed from the data sources into data models that are under a corporate-wide governance

Alignment

Priority Area: Organisational Performance (IT Strategies 1, 2 and 4)

Service Area: Email and Collaboration

Aspiration

The University has a transparent, collaborative working environment enabled by easy-to-use collaboration technologies.

Objectives

To provide technologies that enable effective communication and collaboration between staff, students, and other stakeholders:

- Administration: To offer fit-for-purpose collaboration services that deliver cost-effective value to the University
- Teaching: To provide services that support changing pedagogical practices
- Research: To enable researchers to share and collaborate easily and securely with partners throughout the country and around the world

Service Area Strategy

Over the next three years Central IT will continue to support the primary communication and collaboration preferences of the University, including:

- Interactive communications through voice and video communication
- Message-based communication through email and voicemail
- Web-based collaboration through wikis and blogs

We will continue to modernise those services, understand and reduce the cost of delivery, and explore convergence where feasible, and where convergence suits the necessarily-diverse nature of collaborative communities.

Key Elements

Staff Collaboration

- Maintain centralised email and calendaring on Microsoft Exchange reviewing the migration path to Office365 or alternative hosted solutions
- Complete the migration from analogue phones and to unified-communication devices and desktop collaboration tools
- Monitor and develop collaboration toolsets
 - Wiki
 - Social collaboration (such as Yammer)
 - More-formal use of the @aucklanduni Google Apps for Education domain and its services for all staff
 - Review the future of SharePoint
 - Prepare a future that delivers capable document collaboration
- Use Skype for Business for local collaboration, Google Hangouts for spontaneous collaboration, and Zoom for large-scale collaboration
- Provide room-based videoconferencing within meeting spaces where needed. Provide consultancy for faculty-based meeting rooms through LESU

Student Collaboration

- Continue and further embed use of the @aucklanduni Google Apps for Education domain for official student communication and for other student-related activities
- Focus staff-and-student collaboration through the learning-management environment
- Keep a watching brief on student collaborative activities

Voice Infrastructure

- Continue converging voice, video, chat, and email offerings to University staff. Provide choice of methods of interaction with these services, acknowledging the overlap of personal and organisational access devices
- Develop use-cases for the utilisation of communication and collaboration services and replace our one-size-fits-all service with appropriate service offerings that reflect requirements such as teaching and learning and research
- Migrate services to cloud-based services where sensible
- Continue to develop the service offering around and maturity of our web-based collaboration suites

Alignment

- Priority Area: Organisational Performance (IT Strategies 1 to 4)

Service Area: End User Services

Aspiration

To provide modern end-user IT services to University staff and students that support learning and teaching, research, and organisational performance needs

Objectives

- It is easy and straightforward for University staff to find, request and use end user services
- End User Services has a service delivery model embedded through Integrated IT, with clear roles and responsibilities understood.
- End user devices and services meet university needs

Service Area Strategy

We will continue to improve the effectiveness of end user services and will focus on improving skill levels and technical knowledge, first level resolution, enabling self-resolution, providing remote support and automating activities where possible. Access channels to services for staff and students will be made clearer. Along with improved skills and capability, our staff will focus on improving customer communication and response and resolution rates. Asset and configuration management will be implemented improving reporting and analytics on device and software usage. Our virtualised application delivery capability will be developed to support 'anywhere anytime' delivery of resources and applications for learning, teaching and research.

The standard desktop environment will be enhanced through improved and standardised access to cloud and on campus storage. This will enable any student from any discipline to use labs in multiple locations, supporting multidisciplinary collaboration as well as improved resource utilisation. A clear strategy will be developed for all end user devices, aiming to streamline the processes used for equipment procurement and replacement. Improvements in the security of our devices will continue to be enhanced. Sustainable practices will be identified that can reduce printing, PC and printing power consumption, and improve disposal practices. Printing and copying services will be reviewed with a focus on developing a more reliable service, where needed, with wireless printing as an option.

The goal is for end user support staff to be seen as adding and creating value at the University.

Key Elements

Support of end User Devices

- Continue to identify and enable services to be supported through the Knowledgebase, SSC and Level 2 Service Operations
- Continue to improve on resolution within SLAs and communicating with the customer

Staff Desktops and Laptops

- Continue to support cost effective purchasing through IT Procurement and the relevant use of the all of government selection process and support
- Continue to offer standardised device configurations for windows, mac, and linux end user devices..
- Provide centralised services to manage end user devices through the use of standardised configurations (e.g. drive mappings), automation, security and procurement
- Use lease or purchase acquisition processes appropriate for computing equipment use cases and university financial management
- Ensure computing equipment configurations are available to meet all user requirements
- Consolidate remote desktop solutions
- Provide security protection to the appropriate level required for the role the device is performing for university devices used both on and off campus
- Identify and implement measures to reduce the power consumption and sustainability of end user devices.

Mobile Devices (smartphones and tablets)

- Develop a mobile device strategy & policy
- Review user usage patterns and mobile device maturity levels to develop the appropriate mobile device solution set
- Continue to deliver a set of standard devices to staff as required for their University role
- Review mobile contracts regularly to ensure the University is receiving competitive pricing
- Provide mobile device management for users where appropriate
- Monitor the transition from traditional computing devices to mobile devices and enable the University to take advantage when feasible

Computing Labs, eLecterns and Kiosks

- Continue to standardise the delivery of consistent equipment and configurations to computing labs, eLecterns and Kiosks across the University, ensuring standard drive mappings and naming conventions

- Constantly review and improve processes for requesting and delivering lab and eLectern software functionality. Develop the ability to deliver software to labs and eLecterns on-demand/remotely.
- Capture utilisation statistics for lab applications, and survey students and staff to identify required improvements. Use this information to develop a detailed strategy for offering computing lab services that support the Learning & Teaching and Property Service's needs, while feeding into procurement processes to manage licensing.
- Ensure all public computers are catalogued, managed and fully secure.

Software Delivery

- Deliver desktop software remotely wherever possible, with an objective to improve software availability, and staff and student mobility. Aim to reduce equipment and software costs in specialised computing labs.
- Retire monolithic image deployment by investigating and implementing virtualised application delivery for learning & teaching purposes, and improve accessibility to applications on mobile devices
- Continue to enable staff self-service software installs from a University applications store, with processes in place to ensure license compliance at all times
- Continue to monitor the usage of licensed software and users' software requirements and ensure appropriate licensing models are in place for campus or individual use. Ensure all software procurement is managed through the central IT Procurement software team to assist effective software license management. Manage and monitor the acquisition of mobile software packages, and monitor to identify changes from traditional desktop software.
- Negotiate licensing agreements that incorporate greater flexibility for use by staff and students on BYOD devices, and develop software delivery techniques that allow BYOD or staff and student owned devices to interact securely with University services and comply with software terms.
- Develop and implement a software versioning and security strategy including upgrades to operating system eg Windows 10, and Microsoft Office

Copying and Printing

- Continue to outsource copy and print, regularly reviewing usage and testing the market to ensure the service is cost effective to students and staff
- Work with academics, procurement and learning & teaching staff to identify ways to reduce overall printing volumes
- Enable mobile devices to print wirelessly.
- Review the copying and printing solution and simplifying its solution to remove Netaccount and to enable improved reliability

End User Storage

- Work with academics, researchers and staff to understand their local storage and data/file transfer needs
- Provide academics, researchers and staff with guidelines and services that enable them to manage their data and storage
- Provide local and central storage strategies and services that enable valuable data to be identified and protected appropriately
- Encourage important University data to be classified and stored centrally
- Assist researchers with the management and transfer of large data files
- Deliver an appropriate storage service that supports fixed and mobile devices

Specialised Equipment

- Work with Faculty IT to understand research equipment needs and provide support to patch or secure older devices
- Monitor the usage of new end user device technologies (e.g. 3D printers)
- Enable researchers to obtain network connectivity to fit their needs (e.g. 10Gbs circuits)

Flexible Working environment

- Continue to enable staff and students to bring their own devices onto campus and access University services
- Explore BYOD, CYOD, COPE strategies ensuring policies are in place that set customer expectations, with clear lines of support and risk management
- Enable users to move around the campuses and continue working either on their own or shared equipment
- Enable users to be able to work off campus securely and reliably.

Alignment

- Priority Area: Organisational Performance

Service Area: Identity and Access Management

Aspiration

The University can easily identify you, and swiftly enable access to services you are entitled to both within the University and throughout the sector

Objectives

- Provide governance in the area of Identity and Access Management through robust policies, process reviews, and active leadership
- Develop existing IAM processes and applications to support business needs and enhance the user experience
- Maintain high-quality identity data collection, maintenance, analysis, and reporting

Service Area Strategy

The University has a strong single-identity model that is centrally managed and maintained: it enables core services such as authentication and authorisation. We are aiming to continuously enhance our service delivery and end-user experience by improving the supporting applications and infrastructure which allows the delivery of the Identity and Access Management services, ensuring:

- these solutions will be reviewed continually, consolidated, and modernised when appropriate
- accurate and timely IAM services to support the business functions of the University
- IAM processes are well understood and central IAM systems are widely used
- maintain high-quality identity data
- maximise the use of identity and access information to improve ease of access through the use of self-service and automated provisioning and de-provisioning
- progressively build on existing IAM solutions and explore appropriate options to develop capabilities in our applications and processes to meet future business needs

Key Elements

Governance

- Formalise the IAM policies, standards, and guidelines; document and improve IAM processes using the six-sigma methodology; implement a Governance, Risk, and Compliance suite for IAM; investigate best-practice processes in the tertiary education sector for better benchmarking.

Identity Management

- Establish and improve where appropriate an infrastructure that can support future trends in Identity Management, such as social authentication, the internet of things, and a new ID Card management system. Invest in improving data quality and automation where possible; e.g., mobile number validation and integration with government agencies for identity validation.

Access Management

- Expand the current authentication technologies by introducing other authentication mechanisms, such as social authentication; improve the group-management systems and process to enable granular and complex access controls; and improve the visibility and accessibility of access management information for better use by the business.

Activity Monitoring

- Establish metrics and internal reports to highlight conflicts in access, monitoring for ID Number and UPI consumption; undertake regular reviews of interfaces to IAM systems to ensure they meet business needs and initiate projects for functional enhancements or application replacement based on the output of these reviews.

Capability

- In-line with our Service Area Strategy for Strategic Services; IAM attracts and recruits high-quality staff. The volume of work and the demands of multiple projects are challenging; the need to apply resources to activities from which cost can be recovered is a further challenge. We look at the opportunities provided by the University's internship program to gain access to more resources for research and development

Alignment

- Priority Area: Research (IT Strategy 3)
- Priority Area: Organisational Performance (IT Strategies 1 and 5)
- Priority Area: Service Quality and Performing and Resilient Systems (IT Strategies 1, 2, 4 and 6)

Service Area: Infrastructure Hosting

Aspiration

To be the broker and supplier of choice for all of the University of Auckland's computing and storage needs.

Objectives

- Ensure infrastructure hosting services are cost-effective, resilient and scalable, and meet research, learning and teaching and administrative requirements ahead of demand
- Provide a service that is clearly defined and easily consumed by customers
- Measure and manage the rate of service consumption, ensuring the cost of delivery is well understood
- Take advantage of commercial infrastructure services when advantageous

Service Area Strategy

The overall infrastructure service strategy is to build capacity well in advance of demand. As local cloud services mature and their cost-effectiveness improves, ITS will pilot specific workloads. Where the economic model is proven in the longer term, ITS will look to leverage commercial services. To be able to deliver this service cost-effectively and sustainably, the University will continue to own and manage its own data centres and compute and storage infrastructure for the three-year period of this strategy, while continuing to assess the internal cost of delivery versus commercial hosting opportunities (local or cloud). For general-purpose computing ITS will continue to iterate its virtualised computing and storage infrastructure on three- and five-year lease cycles respectively, aiming to reduce cost, footprint, and power consumption while increasing performance, capacity, and functionality over successive generations. ITS will partner with the Centre for eResearch to deliver high-performance computing infrastructure in support of NeSI. ITS will monitor business and technical consumption. ITS will focus on improving its service delivery model focusing on introducing self-service with automated provisioning and maintenance of server instances.

Key Elements

Computing Platforms (Virtual)

- Expand and modernise assets
- Establish automation of Virtual Machine (VM) guest provisioning and self-service provisioning (IaaS)
- Evaluate and provide a flexible VM environment for Research VM farm with ability for CeR to provision the VMs directly
- Evaluate and implement alternative virtualisation platforms and cloud providers
- Evaluate software-defined storage platforms
- Implement automated and orchestrated recovery of guest VMs for multi-tiered applications
- Enhance monitoring and dashboards for the virtual hosting platforms
- Evaluate and implement a platform to support BYOD
- Establish clusters for research purposes
- Become the broker for external IaaS providers

Storage/Data Management

- Expand and modernise assets
- Establish an Archive service utilising hierarchical storage management technologies enabling the migration of data onto the most cost-effective storage
- Establish cost-appropriate solutions to fit the needs of local and central research data
- Evaluate and deploy a customer-self-service storage abstraction layer acting as the front-end broker to on-premise and cloud storage platforms
- Continue the consolidation of file-server storage onto Windows Metro Storage Cluster or appropriate file-server technology
- Evaluate and implement alternative solutions to the current backup, recovery, and archiving platforms
- Evaluate and deliver object-based storage service
- Provision storage, including object-storage, for CeR to build research data management services on top of

Management, Reporting, and Monitoring

- Review and enhance element monitoring of infrastructure services and applications
- Implement show-back to measure consumption and total cost of ownership reporting
- Implement capacity and forecast planning process
- Implement automation of patch management for virtualisation platform
- Evaluate and deploy replacement virtual hosting management solution

Data-Centre

- Continue remediations and improvements to airflow, cooling efficiencies. and power resilience within data centres
- Improve management, monitoring, and reporting for data centre facilities
- Review options to provide data centre services and update the data centre strategy prior to any changes to the Tāmaki campus
- Expand and modernise assets
- Improve access controls for data centres
- Finalise bi-directional, active/active data-centre strategy and migrations
- Facilitate the upgrade and replacement of NeSI HPC compute and storage

Disaster Recovery

- Increase average availability of core infrastructure and applications
- Reduce number of high-consequence IT incidents
- Complete Disaster Recovery maturity review and increase capability
- Develop ITS Business Continuity Plan
- Consolidation of Disaster Recovery plans and test results with Application documentation

Alignment

- Priority Area: Service Quality and Performing and Resilient Systems (IT Strategies 2 and 6)

Service Area: Internet and Network

Aspiration

Network services that anticipate teaching, learning, research, and organisational performance needs ahead of demand.

Objectives

- Ensure internet and network services and performance meets administrative, teaching, learning, and research requirements
- Ensure all network and internet services are resilient, scalable, and cost-effective
- Provide wireless access everywhere users require it, and design for wireless connectivity as the primary connection method
- Enable cost-effective high-speed edge (to the desktop) connectivity especially for research
- Support national initiatives in networking and high-performance computing (e.g., REANNZ, NeSI, and Tuakiri)

Service Area Strategy

Our overall network strategy is to build capacity (bandwidth and reach) in advance of demand, and as far as possible to remove bandwidth as an impediment to staff and student activities. To be able to provide this bandwidth cost-effectively, ITS will continue to invest in its own network on campus instead of using managed services. To interconnect campus sites ITS will acquire dark-fibre connectivity from service providers, falling back to commercially-managed services when unavailable. For research and internet services ITS will partner with REANNZ to leverage sector-wide opportunities. For WAN services ITS will use the REANNZ national network or commercial services as appropriate. To keep the network resilient, ITS will continue to modernise its equipment by replacing it using a five-year refresh cycle. If a technological step-change occurs within this cycle ITS will evaluate the business need and migrate when appropriate. Newer technologies may be targeted at high-bandwidth users where appropriate. ITS will monitor all aspects of network capacity and, where contention is found, commission capacity increases as needed. ITS will provide a resilient core network connecting users to the data centres and external services, while providing direct circuits to REANNZ where needed for large-scale research flows.

Key Elements

Core to Edge Network

- Ensure core network capacity continues to operate at 10Gbs+
- Deploy 40-100Gbps core networking when justified
- Continue the upgrade of customer edge switches to 1Gbs prioritising research and teaching needs
- Use opportunities provided by the University building program to upgrade old network infrastructure
- Maintain a five-year maintenance refresh program for core network and, where required, for the edge network
- Enable visibility of core-to-edge network performance
- Provide resilience to sector-switch single points of failure

Wireless

- Continue the roll-out and upgrade of wireless connectivity across all campus sites to the latest standard when commercially viable with a priority given to Lecture Theatres and Learning Spaces
- Expand the use of eduroam for wireless connectivity at other institutions and locations
- Enable real-time on demand status of wireless AP condition, including self-service problem diagnosis where possible

Border

- Ensure that border network capacity stays well ahead of demand
- Instrument the border network to manage and prioritise important traffic where needed
- Investigate opportunities to provide service guarantees to enterprise cloud service offerings

Management

- Complete the rollout of IP-Address Management (IPAM)
- Support the ITS Monitoring Strategy
 - Improve monitoring and instrumentation of our network
 - Enable capability to determine network status from an end-user perspective

Research

- Maintain the partnership with REANNZ to deliver multi-Gbs research connectivity nationally and internationally

Internet

- Ensure primary internet capacity is sufficient to meet administrative, teaching, learning, and research requirements (REANNZ)
- Implement secondary vendor internet link for resilience

Data Centre

- Upgrade the data centre network firewall to multi-10Gbs capacity
- Deploy a coordinated approach to network management across virtual servers and networks
- Investigate software-defined networking to enable better data centre mobility and resilience

Transmission (Cabling)

- Continue to lay our own fibre on campus and manage our own cabling
- Run regular commercial bids for metro and wide-area connectivity upgrading capacity at the same cost regularly
 - obtaining dark fibre where feasible

Student Accommodation

- Migrate to wireless-only services for all student accommodation

Alignment

- Priority Area: Service Quality and Performing and Resilient Systems (IT Strategies 2, 6 and 7)

Service Area: IT Procurement Strategy

Aspiration

To provide the best-possible value for money from University-wide supply contracts for software, IT hardware, IT consumables, IT services, and telecommunications products and service and ensure all procurement processes are thorough, transparent, and robust.

Objectives

- Achieve best value for money and the supply of quality IT products, services, and support, through University-wide contracts that leverage all University spend on IT hardware, software, and telecommunications products
- Obtain faculty and service-division IT equipment and services requirements to ensure effective and relevant supply contracts are put in place to meet University-wide requirements
- Implement effective and efficient processes and, where appropriate, standardisation of products to achieve efficiencies and reduce costs
- Promote and ensure software license compliance, including appropriate use of software, to minimise costs and reputational risk
- IT Procurement will lead or provide guidance and support to faculties and service divisions for software, IT hardware and telecommunications products and services procurements, and be seen as a centre of excellence able to provide procurement service and support

Service Area Strategy

- Continually review University requirements and ensure appropriate supply contracts that provide quality IT products and service are in place
- Ensure all users understand how to obtain University agreed and contracted software, telecommunications, IT hardware, and IT services
- Continually streamline and improve suppliers' processes for quoting, ordering, and support of hardware and software and drive automation processes within the University
- Establish a process with Learning and Teaching to review current and future software licenses requirements in order to identify duplications, opportunities for rationalisation, and to plan for future new licensing or retirement of licenses
- Move the procurement of all software required across the University to IT Procurement to ensure appropriate licensing models are purchased, license data are recorded for reference and management of licenses and efficient license renewal and redistribution processes are in place
- Use available and appropriate license-management systems to ensure effective license management and compliant use of licensing
- Manage software, IT, and telecommunications vendors at strategic and operational levels to ensure relationships are effective and supply contracts deliver value

Key Elements

Category Management

- Establish University-wide supply arrangements for the supply of software, IT and telecommunications hardware, services, and support
- Manage vendor relationships to ensure suppliers deliver quality and value
- Ensure all IT procurement projects are conducted in a manner that enhances and protects the reputation of the University
- Ensure information is available for University staff to identify and purchase University-agreed IT and telecommunications products and services

Procurement services/consulting

- Lead, manage, and guide software, IT hardware, and telecommunications procurement projects for or with faculties and service divisions, and ensure expert procurement processes are used to deliver outcomes of value

Software delivery

- Manage the procurement of all University software, ensuring all staff and students have access to software required for teaching, learning, research, and administrative purposes

Alignment

- Priority Area: Service Quality and Performing and Resilient Systems

Service Area: IT Service Management

Aspiration

To provide responsive and effective service management that is consistent, customer-centric, and supports current and future University needs.

Objectives

- To increase resolution of requests at the first point of contact and, if not, then through the most efficient and effective channel
- To be recognised as a trusted partner with our colleagues across the University
- To improve customer experience through enhanced service quality and effectiveness
 - To have a customer-focused culture where staff communicate to our customers regularly in plain English
- To establish our reporting and KPIs on service standards and effectiveness
- To improve our services, ensuring they meet our customers' needs

Service Area Strategy

Over the next three years IT Service Management will continue to evolve and expand Integrated IT capability, focusing on understanding the needs of our staff and students in order to improve and grow the services they require. Attention will be paid to improving the overall service culture, ensuring that existing and new services are catalogued and easily engaged with. Our IT web presence will be revised and personalised for our different stakeholder groups. We will work in partnership with the Centre for eResearch in delivering a Research IT Advisory service, and we will engage in discussions to provide equivalent channels for Learning and Teaching, professional staff, and students. We will ensure that all IT staff understand our service set. We will work with key customer stakeholders, including students, to develop advocates for our services. We will continue to enhance the IT knowledge base, linking it to the University search.

We will develop a customer-focused culture and organise IT resources to operate as one group that has a shared understanding of customer needs and experience. Analytics and reporting will continue to be developed to ensure we can measure the success of our services, report back to our customers on their use and their experience, and use this information to improve services where necessary.

Key Elements

Service Management

- Continue to build on the improvements from the Service Quality and Effectiveness project
- Continue to focus on queue management
- Develop consistent queue management and ticket assignment practices across IT
- Continuously review configuration items, structures, and use of these items to enable improved problem management and reporting
- To support Faculty IT and Service Divisions in the delivery of their services
- Identify and implement process efficiencies with a focus on IT processes, and enabling research, learning and teaching, and other University services
- Advance Service Delivery maturity, particularly in the areas of incident, request, change and problem, release, and continued service improvement
- To improve the quality of service and effectiveness as perceived by the customer

Service Delivery

- Provide the consistent delivery of services through a mature service delivery model supported by robust processes, reporting and enhanced capability
- To provide a scalable service delivery function that will cater for future University needs
- To provide a consistent end to end service experience for our customers, ensuring that their needs are met through service management

Service Channels

- Ensure that IT services are documented and reflected in the University web presence
- To provide service through the most efficient and effective channel
- To promote resolution at the first point of contact by enhancing the knowledge base, self-resolution, and scripting

Automation

- To increase automation and orchestration of services improving the customer experience

Relationship Management

- To meet or exceed customer agreed Service Level Agreements (SLAs) and Technical OLAs
- The development of standard KPIs across the IT function
- The development of standard reporting and dashboards across IT to assist with:
 - Reporting against KPIs
 - Reporting against Head of Department and Principal Investigator Service Standards
 - Reporting on service quality and effectiveness
 - Measuring of improvements
 - Identification of common problems

Governance

- Review governance and management practices to ensure high quality and customer focus
- To develop the role of the Relationship Managers using a best-practice approach to business engagement

ServiceNow Improvements

- Continue to build internal capability to support and to configure the ServiceNow application
- Improve the integration of person, location, and employee information, including department information, into ServiceNow
- Continue to support and improve on the Asset and Configuration Management Database, service catalogue, automation, and the creation of forms to fulfil specific provisioning scenarios
- Enhance reporting and dashboard capabilities
- Investigate appropriate opportunities to expand functionality to improve operations and the impact on licensing costs

Alignment

- Priority Area: Service Quality and Performing and Resilient Systems (IT Strategies 2, 4, 5, 6 and 7)

Service Area: Learning and Teaching Support

Aspiration

University staff and students will have access to world-class teaching and learning technologies, media production, lecture theatres, and learning spaces.

Objectives

- To provide standardised flexible learning space technologies and services that meet the diverse needs of the University
- To optimise the use of spaces across the University
- To support the delivery of sustainable, measurable learning and teaching IT solutions and services
- To provide the University with an innovation model and associated online platform support for user-driven innovation
- To enhance the capability of University to easily capture, create, and share rich media content

Service Area Strategy

Our strategy for the next three years is to:

- focus and prioritise on core Learning and Teaching strategic needs
- be capable of producing high-quality media content
- assist University academics with content-creation tools
- improve audio-visual procurement and management across the University

Executing this strategy will provide services that are flexible and capable of rapidly responding to and supporting.

Key Elements

Learning Management

- To provide a broad range of support for managing courses, materials, collaboration, assessment, and learning and teaching
- To support faculties with flexible reporting and analytics that encompass not only the use of tools, but allow for decision support and improved faculty management of student progress
- To support technology innovation for learning and teaching
- To provide support for the development of MOOCs
- To support the University to develop a teaching continuity plan and provide the tools to support the plan

Lecture Recording

- To provide on-demand and automated lecture-recording capability in all appropriate teaching spaces
- To provide expanded editing and dissemination strategies that match changing pedagogical and technological needs

Spaces

- To ensure that all AV spaces are up-to-date with standard, high-reliability equipment
- To provide AV design and consultation services for all new builds and refurbishments to ensure type-standardisation and cost-effective inventory management
- Partner with Property Services and the Timetabling Office to ensure spaces are fit for purpose

Media Productions

- To produce media content for Faculties and the core University
- To provide capture and streaming services for significant University events
- To provide a single Media Productions infrastructure for all University media needs including media storage and distribution

Alignment

- Priority Area: Learning and Teaching (IT Strategies 1 to 5)

Service Area: Operational Security

Aspiration

To minimise the risks resulting from malicious cyber-activity and to protect the University community.

Objectives

- Maintain a best of breed security posture for the information infrastructure in the University of Auckland
- Ensure the University community has a good understanding and shared responsibility for our security posture
- Ensure the University complies with applicable security standards and legislation

Service Area Strategy

The University will continue to maintain its own security capability, partnered with applicable industry and government groups. There is a need to spread best practice in security more widely in Central IT and Faculty IS.

As a security strategy, we use the concept of an immune system in which compromise is a natural state of the system. From this perspective, good security is largely invisible and unnoticeable. We primarily aim to improve our rapid detection and response capability to deal with intrusions, and gain an improved understanding of the state and progress of cyber attacks.

The security baseline complies with relevant standards and legislation.

Key Elements

Security Architecture Patterns and Architecture Review

- All security components of new infrastructure and applications are reviewed prior to development of the actual artefact. The result of the review may lead to design changes, and actively informs the defence mechanisms that will surround this application once it is deployed in our environment. Security best practice is shared with Faculty IS and ITS. In addition to its four service lines, the team also serves as the 'go to' point for individual security questions

Security Testing / Penetration Testing

- We currently test a number of applications prior to deployment for the presence of security risk. Our aim is to increase this scope, and manage resource requirements through integration of security testing and quality assurance, so that the security posture of an application becomes one measure of its quality. In this way, security bugs can be fixed earlier in the development cycle, leading to cost savings on development. We perform responsible disclosure processes with vendors when security issues are discovered, and will consider getting external funding through bug bounties. We perform penetration testing in our environment through continuous scanning for security vulnerabilities, active penetration testing and red-teaming assignments.

Monitoring and Event Detection

- Our monitoring activity will develop further into a fully-fledged security operation centre. This allows us to 'surface' relevant security information to the rest of the organisation and have a data driven approach to risk and security posture. Business as usual security events are handled at Level 2 Service Operations. The security team performs threat-hunting in the University environment, seeking out previously undetected intrusions and dealing with them in a decisive manner

Incident Response

- Incidents are a regular occurrence and are dealt with through a defined incident response process. We are seeking continuous improvement in this area. The University is well connected to a global group of incident responders, such as REN-ISAC (and we have applied for membership of First). In addition we maintain a strong New Zealand presence through active and contributing membership of the NZITF

Capability

- The security team is currently adequately resourced. We are perceived as one of the leading teams in New Zealand at the moment. An on-going issue for the security area is the cost of training, and we anticipate difficulty in the retention of key staff in the future

Alignment

- Priority Area: Service Quality and Performing and Resilient Systems (IT Strategy 6)

Service Area: Portfolio, Programme, and Project

Aspiration

An enhanced and integrated OPCIO portfolio; within which 3P processes, practices, and capabilities optimise the strategic value delivered from investments in change. A dynamic portfolio that enables change initiatives to align with, be prioritised against, and contribute to both University strategic objectives and the realisation of our Mission. Improved and embedded processes provide senior leaders with information that supports informed and assured decisions, facilitating optimal staff and student experiences, and ensuring resource prudence.

Objectives

The University of Auckland seeks to strengthen its commitment to acting as a strong and autonomous university by reviewing and advancing its practice of enterprise portfolio management. By better coordinating investment in initiatives, encouraging integrated collaborative working, and ensuring all resources are used in ways which will most aid the pursuit of the University's strategic goals we will:

- Increase the portfolio's level of contribution to strategy
- Increase the portfolio's pace of contribution to strategy
- Increase the portfolio's return on investment

The ultimate goal of the service that OPCIO offers with regards to this Service Area should be an enhanced and fit-for-purpose facility within which a balanced portfolio of optimal initiatives are defined, set up for delivery, and where benefits realisation is maximised. Moreover, an informed and shared understanding of mature 3P practices will form the basis of an agreed, suitable, and integrated service delivery approach. The potential benefits of establishing an enhanced and fit-for-purpose framework within which this service can be offered are real and significant. Effective 3P will lead to processes and behaviours that enable successful delivery across OPCIO's change investment, ensuring that:

- Initiatives address and achieve strategic objectives
- Maximum business value is realised at the earliest possible stage
- The risks inherently associated with projects and programmes are managed
- The totality of OPCIO's capital investment is coherent, prioritised, and scrutinised
- The broad allocation of resources is optimised
- Consistent, holistic quality-assurance activities are embedded within the initiative delivery cycle
- Benefits realisation and return on investment is increased
- Governance bodies are provided with accurate and relevant information (fostering informed decision making)
- Communication between senior leaders, staff, stakeholders, and customers is improved
- Practices, processes, and roles are consistently adopted, with the ability to flex to meet departmental needs

Service Area Strategy

As previously outlined, the drivers for this Service Area strategy are the opportunities mature portfolio, programme, and project management offers to all University stakeholders through contribution to the realisation of the University's strategic vision and objectives. In a large organisation in which significant decision-making is devolved to staff at various levels, it is important that portfolio planning and review processes ensure a focus of resource and effort on the University's strategic objectives.

Key Elements

The following seven key elements are the critical environmental factors and 3P principles that are most likely to enable successful maturity improvement and deliver better business results:

- Executive leadership, objective governance, and an environment conducive to effective strategy execution
- Project prioritisation and portfolio composition capability
- Programme and Project Governance and Sponsorship
- 3P planning, delivery, and centre-of-excellence service function
- Robust business cases
- Value-focus and end-to-end benefits management process
- 3P as a strategic competence

Alignment

- Priority Area: Service Quality and Performing and Resilient Systems

Service Area: Research IT Enablement

Aspiration

Supporting our researchers to utilise technology to better effect, to conduct computationally-enabled research at both a small and large scale, and to partner for greater outcomes nationally and internationally. This includes provision of clear advice on the availability and opportunity of IT services for researchers.

Objectives

- Provide researchers with timely and relevant IT advice and access to the appropriate IT resources they need to support their research, and for successful bids to funding agencies.
- Develop IT infrastructure and services to address established and emerging research computing needs across the university and to provide platform and configuration flexibility to researchers.
- Provide a comprehensive set of services to manage, publish, archive and share research data. Provide support for researchers in creating and operating a suitable Data Management Plan.
- Enable researchers to communicate, collaborate and share information with colleagues within New Zealand and overseas.
- Establish and operate an information visualisation and analytics service, to foster discovery, and to increase the impact and communication of our research.

Service Area Strategy

- Provide researchers with environments which supports the broad range of research undertaken at the university including aspirational computational facilities, collaboration sites, backup and data management services, ability to 'publish' data, a catalog of research profiles and skills supporting collaborative research activities at the university, nationally and internationally.
- Develop operational governance by creating a eResearch Reference Group reporting to the eResearch Advisory Board.
- Continue to grow research support services and infrastructure in line with demand and in partnership with the Centre for eResearch, NeSI, Faculties, Library, Central IT and government. This includes the development and provision of an 'OpenStack' research computing infrastructure similar to the NECTAR project underway in Australia.
- Ensure that FTE numbers supporting researchers grow where needed to provide this support.
- Ensure that clear roles and responsibilities for research IT support and service provision are established between NeSI, CeR, Library, Research Office and the University's Central IT and Faculty IS groups, providing clear lines of responsibility and better collective planning and delivery of IT services for researchers.
- Continue to expand the University computing capability and knowledge via our educational and outreach efforts to staff and research students.
- Provide support for research computing tasks that do not fit into current HPC templates.
- Champion and support fast data network connections between collaborating researchers and their equipment.
- Provide solution design and implementation services across the university. Provide a research consultancy service that brokers solutions on behalf of academics and research projects
- Work with eResearch, Central IT and the Library to provide research data services that are geared towards research needs including data-led research computing, management of massive data, sharing and publishing of data and research data archiving.
- Assist researchers with open data and open science initiatives.
- Provide a suite of visualisation capabilities and platforms appropriate to the stages of the research cycle—from data exploration to final presentation.

Key Elements

Research Advisory

- Working with the BPMP, develop a research advisory/enablement service delivery model with clear roles and responsibilities. This will include identification of roles and FTE.
- Develop a proactive research IT enablement service that connects researchers with services when they need them.
- Create a research IT support portal that directs staff and research students to appropriate resources and information, with clear guidance, clear support structure, clear and agreed entitlements.
- Develop skills across CeR, Faculty, Library and Central IT to support researchers in jointly addressing their needs

Research Data Management Services

- Provide all researchers with services that are suitable for their storage and data management needs. This includes support for backing up data, for assuring confidentiality, for sharing 'working data' and finally 'publishing' data. Data includes text, numerical files, programs, video archives and images.
- Promote the use of the data lifecycle services, data management plans (DMPs) and related analytics tools

Researcher Collaboration

- Provide services to researchers that enable collaboration and the sharing of research ideas within the university, nationally and internationally. This includes web services such as WordPress and videoconferencing facilities.
- Complete the development of the WordPress research services and complete the migration to the new WordPress environment.

Research Computing Platforms

- Create standard service for researchers which includes clearly articulated IT service and infrastructure entitlements based on a researcher's profile.
- Providing a range of computing platforms and services to researchers including, IaaS, NeSI HPC facilities, a Research VM farm, Docker Containers and a Nectar-like OpenStack service
- Develop research enablement services that support self-service, automation and orchestration of technologies.
- Continue to work with researchers to optimise strategically-important high performance computing codes and applications.

Visualisation

- Expand the visualisation service by introducing two new visualisation platforms and a (small) visualisation support service.
- Increased communication and education of researchers on the use of this service

High Speed Networking

- Identify researchers with high bandwidth needs and enable sharing by prioritising upgrades of edge switches to these researchers, enabling transfer through the Science DMZ.

Alignment

- Priority Area: Research (IT Strategies 1 to 5)

Service Area: Strategic Services

Aspiration

That the IT function delivers value to the University.

Objectives

- To ensure University strategy, mission, and values are enabled by effective IT governance, strategy, and services
- To provide effective planning, policy, and governance for the use of IT across the University

Service Area Strategy

Continue focus on improving strategy and planning processes, enabling University business areas and IT service areas to better formulate their strategies and plans in support of University strategic goals. Introduce strategic analysis to quantify change opportunities, enabling robust business cases and more successful projects. Fine-tune governance activities across Enterprise Architecture, IT Procurement, and IT Risk partnered with portfolio and programme management to improve support of change projects.

Key Elements

IT Strategy

- Provide strategic IT leadership across the University
- Develop, publish, and monitor implementation of a three-year IT Strategic Plan and annual refresh, in consultation with stakeholders
- Enable and support University IT governance
- Coordinate and engage with the University community on strategic IT requirements
- Partner with the Director IT Services on the integration of IT Strategy with IT service area and application strategies

Planning

- Planning and reporting including the IT Annual Plan and Annual Report; Strategy Map, OEA and Performance Story; strategy and operating plan progress reports
- Oversight of IT KPI development and maintenance

IT Risk

- Mature the University wide IT Risk Management capability and enable oversight of the University IT Risk profile, and monitor progress and maturity of practice
- Promote IT Risk management practices throughout the University and across operations, projects, and opportunities
- To provide oversight of the Cyber Security program of work

IT Policy

- Develop and maintain relevant, appropriate and accessible IT policies, standards, and guidelines

Information Management

- Implement the Information Management Strategy
- Establish an Information Management (IM) function that operates according to the IM Service Delivery Model
- Support the effective creation, maintenance, and disposal of University records in compliance with University requirements and relevant legislation such as the Public Records Act
- Manage University archives and physical record stores

IT Procurement

- Identify and profile software and IT suppliers whose goods and services meet University's requirements and establish supply agreements that deliver best-value products and services
- Manage IT supplier relationships to ensure suppliers meet or exceed contract terms and support commitments
- Work with University stakeholders to identify appropriate common and standardised IT equipment in order to reduce the total cost of ownership through unnecessary variety
- Promote the benefits and value of coordinated and managed IT procurement
- Promote the availability and use of University-wide software licenses and promote compliant use of software to minimise risk, cost, and reputational damage
- Establish access to contract-review capability with adequate legal expertise to protect the University
- Contribute procurement input and expertise to a Desktop Strategy that includes (but is not limited to) review and consideration of future requirements for standard desktop equipment, thin client, VDI, AOG-managed desktop services, lease or purchase options

Enterprise Architecture

- Establish clear architectural governance for business and technology IT change
- Mature the enterprise architecture service and focus it upon business outcome value
- Engage early with all change initiatives and to provide them with architecture consultancy, solution-identification, and guidance
- Maintain specialised technical capability to simplify complex problems and establish sustainable delivery patterns
- Establish and manage an effective architecture information repository
- Establish a clear engagement model, roles, and responsibilities for the architecture function and establish architectural discipline throughout Integrated IT

Alignment

- Priority Area: Service Quality and Performing and Resilient Systems (IT Strategies 2, 4, 5, 6 and 7)

Service Area: Web Presence

Aspiration

For the University of Auckland to have a world-class leading higher-education online presence.

Objectives

- To provide a central unified web environment that supports and delivers the University's online presence
- To provide a rich personalised environment that enables users to find information and services quickly
- To embrace the requirements of our users and deliver relevant services through a continuous improvement loop

Service Area Strategy

Our strategy for the next three years is to continue to provide a unified University web presence. We will continue the process of centralisation while continuously improving the tools and information available to University stakeholders. The Digital Experience team will centrally manage, provide, and coordinate website management on behalf of the University. The University website information architecture will be revised to be user-centric with support for personalisation, mobility, and improved search. The web team's service-set will be enhanced to enable targeted digital-marketing campaigns using a variety of tools. The University web presence will be optimised to attract international students.

Key Elements

Online Presence

- Provide a unified web presence across University applications and information providing, where possible, seamless look and feel
- Enable University staff and students to interact with the University online presence with the device of their choice
- Continue to enhance multimedia showcasing and marketing
- Improve the performance of the University presence for international and overseas customers by using global content-delivery networks
- Provide a digital publishing service for direct publishing to mobile devices (University Calendar, Ebooks, Marketing collateral, etc)
- Provide personalised experience for customers

Search

- Widen the scope of website content covered by enterprise search
- Optimise public searching of University content
- Expand search capability to include dynamic content
- Ensure the user-friendly search experience across our web sites
- Provide search as-a-service for University content providers
- Create content policies and strategies and optimise for searchability

Analytics

- Enable University stakeholders to evaluate the success of their web presence by providing an analytics and digital-marketing campaign centre of excellence
- Expand the scope of analytics across the University web presence by increasing the number of University websites and applications that are monitored

Digital Campaigns

- Provide disruptive technologies to enable direct multi-channel campaigns to be undertaken and tracked effectively by University Marketing and Communications teams

Web Collaboration

- Establish community requirements and provide appropriate solutions
- Consolidate existing technologies

Capability

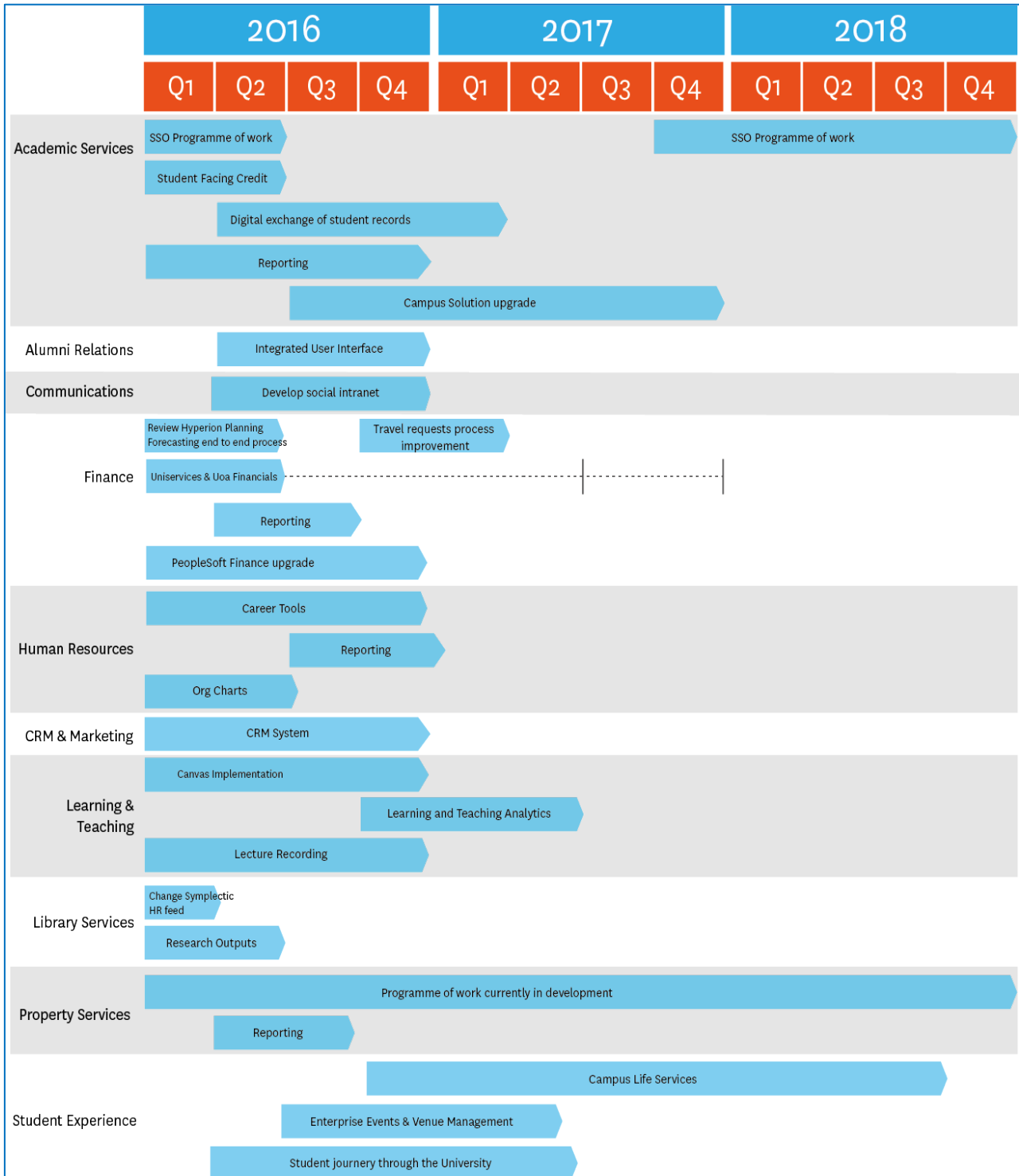
- Continue to sustain and grow the University web community

Alignment

- Priority Area: Student Experience (IT Strategies 1 to 3)

Appendix 3: Business Area Strategies

The Business Area Strategies document the delivery work required in order to support the operation and improvement of University services.



Business Area: Academic Services

Aspiration

To provide leadership and excellence in academic administrative services through exceptional people delivering exceptional service to our students and staff.

Objectives

Academic Services' objectives are to develop and maintain effective application and enrolment processes and systems in order to deliver exceptional service to students and staff.

Working in partnership with faculties and other service divisions, Academic Services delivers the administrative processes that support the student journey from application, admission, and enrolment through to examinations and graduation. Academic Services is also responsible for student records and fees, managing scholarships, and the regulatory framework for academic programmes, and academic timetabling and room bookings. The goal is to improve the student experience by providing excellent service to students and staff through efficient, responsive, and integrated administrative services, supported by accurate and accessible information and advice. The focus is on developing a strong professional service culture and on the pursuit of continuous-improvement activities. These initiatives have led to measurable results in process- and service-enhancement and contributed to improved staff engagement levels. Other achievements have included improved operational reporting, support for faculties after the Faculty Administrative Review, assistance with the implementation of University-wide initiatives to attract and support students, and successful efforts to coordinate cross-University groups to identify and deliver service improvements.

Current State

Our primary focus is to support recruitment objectives through the effective implementation of delegated authorities to admit applicants to programmes. In order to achieve recruitment targets we still need to deliver efficiencies in assessing applications and admitting and enrolling students, in addition to the case-management of strategic groups, in particular for Māori, Pacific, and postgraduate applicants. Improving the quality and accessibility of information for students on how they gain entry to our programmes will also be a priority that will include reviewing our published selection criteria to ensure they are clear and easily understood. Academic Services will also increase the discoverability and transparency of other information students might need to inform their decisions, such as the provision of better information about credit they might be eligible for in recognition of prior academic study. The Application for Admission is on a continuous-improvement strategy as part of the Student Services Online programme of work. Future improvements are expected around usability and the student experience, but should be subjected to cost-benefit analysis.

Future State

Academic Services' future priorities are clearly aligned with University strategies; a continued focus on achieving recruitment targets, ongoing process and service improvements, maximising the benefits to be gained from system enhancements, and working in partnership with others in the University to implement strategic initiatives to attract and support students.

Achieving recruitment targets remains a priority for Academic Services as we focus on reviewing and extending delegations to admit applicants to programmes, while challenging and simplifying our application-assessment approach. Ensuring that programme regulations and other information about entry to our programmes are transparent and accessible will be a major initiative. We are working to achieve improved timeliness and efficiency in assessing applications and in admitting and enrolling students, and in the case-management of strategic groups, including Māori, Pacific, and postgraduate applicants to support successful enrolment.

Academic Services focuses on reducing the need for manual, high-volume processing, which in turn will free up staff resource across the University to progress more strategic activities. This is aligned with priorities for developing online services, which, along with other initiatives we are pursuing, is expected to improve the overall experience for students and for staff as they engage with our processes, systems, and services.

Several enterprise systems are vital to the provision of our services, and Academic Services plays a leading role in coordinating improvements to these. The recent introduction of Timetable Planner highlights the crucial role technology plays in the development of services, and identifying opportunities to improve functionality across systems is essential to achieving our goals.

We also seek opportunities to build on and develop further our relationships with faculties and other service divisions, so that we can work in collaboration to achieve University objectives. The provision of high-quality targeted operational reporting is crucial to achieving this as we partner to deliver positive outcomes for student recruitment, retention, and achievement.

The core centralised system will remain PeopleSoft Campus Solutions, supplemented by integrated niche solutions such as Community Force and Syllabus Plus.

Business Area: Alumni Relations and Development

Aspiration

Alumni Relations and Development (ARD) aims to build long-term mutually-beneficial relationships with alumni and donors. These relationships will lead to contributions of expertise, advocacy, and philanthropic funds that will help the University of Auckland to play its part in the developing knowledge and people for the good of Auckland, New Zealand, and the global community.

We will be recognised by our alumni and donors as a significant and a permanent part of the New Zealand philanthropic landscape, highly regarded for our high standards of integrity, commitment to achieving impact, engagement (including our communications, events, and services), our responsiveness, and our expertise.

Within the University, we will be recognised as the undisputed experts in fundraising and alumni relations; for our high ethical standards; our creativity; our knowledge-sharing; and our dynamic, well-structured, customer-oriented organisation.

Objectives

Our activity falls under three main work streams:

- Finalise alumni engagement strategy and implement (including alumni services; events; digital channels; and alumni communications)
- Develop organisational capacity to support our fundraisers, faculties, and stakeholders (including staff recruitment, induction, retention, and development; data integrity and strategic usage; Foundation operation; and internal communications)
- Increase funds (including campaign) (including planning for the campaign; Giving to Auckland website; staff development for academic leaders and KPIs for faculties; collateral; communications; research; and donor relations and stewardship)

Current State

ARD is currently preparing for the launch of the next University-wide fundraising campaign in 2016 and recognises that it lacks appropriate technology to deliver data to a) inform strategic actions, b) identify sufficient donor prospects to meet philanthropic targets, and c) develop relevant programmes to engage key segments such as influential alumni.

Future State

In three years, ARD will be 75% towards the University campaign target, and be comprehensively using the latest methodologies and technologies to measurably increase alumni and donor engagement, fundraising performance, and high-quality business decision-making.

Business Area: **Communications**

Aspiration

To be the University's storytellers of our people; our place; our contribution

Objectives

- Develop the staff intranet to be the number one communication channel and go to place for staff
- Provide an accessible, enjoyable and successful experience
- Increase self-service and efficiency for content creators and users
- Implement the recommendations of the draft PwC Digital Engagement Strategy, engaging with our community through social media and significantly enhancing the University's web presence
- Enhance our Content Management capability to ensure a modern and mobile experience is available to our community

Current State

Communications works effectively with a variety of media to raise the profile of the University and build awareness of our distinctive contribution to New Zealand.

The department is actively involved in:

- Media Relations (reputation management, publicity and issues management)
- Internal Communications (VC's Update, Staff Intranet News)
- Digital Engagement Planning
- Publications (Annual Report, Profile, Ingenio, UniNews)

All the work the department undertakes supports the University's strategic objectives. We strive to inform and influence how the University, its academics and research are perceived and positioned in the media. We do this by interacting constructively with the media, meeting their news and current affairs media agendas, and at times setting the agenda by producing engaging and informative content.

The work also involves upholding the University's reputation through careful handling of issues and situations.

Future State

Communications will be known, internally and externally, as the University's storytellers, the brand ambassadors who through innovative use of technology and new media shine a light on the University's excellence, its research and achievements and many contributions to New Zealand. For example we are already producing the Annual Report as an e-Book and have plans to upgrade technology for the delivery of Ingenio.

Business Area: **Customer Relationship Management**

Aspiration

To provide recognised leadership that supports positive relationships with employers and staff through the provision of accurate and consistent student information and marketing services.

Objectives

Enable relationships with prospective and current students, staff, donors, and alumni, and other relationships including international recruitment agents:

- To establish effective University-wide CRM governance
- To raise the maturity of the insights capability (in terms of completeness and consistency) across the University in yielding actionable customer insights
- To generate measurable improvements in the maturity of the University's CRM practice from low/medium to medium/high across the University as a whole and reduce variance in CRM maturity between areas
- End-to-end customer journeys
- Customer engagement

Current State

Currently, there are multiple groups across the organisation using independent systems for CRM-related business, including Oracle Service Cloud, Salesforce, and The Raiser's Edge. CRM is of strategic interest to the University as it is a key enabler to helping the organisation improve what a customer experiences at any given point in time, and how that same customer can be kept engaged, or re-engaged, over time.

Future State

CRM improvements will be concerned with the way the University collects, deploys, and interprets its customer data arising through multiple interactions across the University. Improving the effectiveness of its CRM practice, including establishing an appropriate governance structure across the University with clear policies and guidelines, will provide the University with valuable insights and analyses to better inform operational and strategic decisions and raise the maturity of CRM. Actions may include identifying a development path for each area based upon its current maturity and future requirements, setting a roadmap for the overall shift in CRM practice by the University, improving the customer journey for priority customer groups.

Business Area: **Finance**

Aspiration

To protect the long term viability of the University by providing our stakeholders with financial leadership and support for informed decision-making.

Objective

- Finance objectives to deliver sustainable environmental practices optimising the use of technology and systems to:
- Develop best practice and maintain clear and consistent policies, processes and procedures for key finance functions
- Shift internal focus to value adding and driving performance capabilities and be fiscally responsible
- Provide leadership and governance for the University's Finance community
- Comply with financial reporting standards and framework
- Provide quality training and support to the University's wider Finance community
- Identify, assess and report financial risk
- Increase operational efficiency across the Finance community and the Planning Office to provide an integrated planning system in which actual and forecast EFTS and FTE information can be combined with financial information for a comprehensive view that increases visibility and transparency of budget data

Current State

Significant investments have seen the PeopleSoft application maintained to current versions including its underpinning toolsets, supplemented by business-layer investment. Finance is sufficiently supported from a transnational perspective but is reliant on a number of manual processes to meet business requirements. Work is underway with UniServices to understand their future system requirements and how best to meet these needs.

Currently there is an upgrade to Hyperion Planning underway as the first step towards fixing the performance and usability issues. If current performance and usability issues cannot be addressed alternative solutions may be considered.

Future State

Continue working to a more streamlined and integrated system that aligns with business processes, is compliant with best practice and University policies, and enhances the current internal control environment. The core Peoplesoft System will continue to be upgraded every 18 months to 2 years as per the Application Strategic Plan, with emphasis on utilising the application for process improvement, innovation, and risk reduction. As part of the maturity of BI within the University, appropriate financial data will be available for reporting purposes through the data warehouse. A watching brief on alternative financial-management solutions such as Software-as-a-Service, community-source initiatives will be maintained.

A stable, usable and efficient forecasting and planning system that saves time and effort for both faculty and central finance teams. Reduced reliance on external support and increased internal capability to support and configure the solution. Enhanced reporting through use of Smartview and extract to the data warehouse. Reduced planning times are achieved and better planning information delivered. Potential new subject areas to implement include Research revenue, Balance sheet/cash flow, Occupancy, Capex/lease Ten-year plan, Donations, FTE forecasting. UniServices will have access as required.

Business Area: **Human Resources**

Aspiration

People are the key to the achieving our aspirations, so this will require a systematic and integrated approach in how we plan, attract, develop, enable achievement, support, and engage our people across the University. The People Strategy is a way of aligning our strategic focus on people across the University and comprises six key goals. Each goal has a number of associated components with desired outcomes that form an integrated approach to organisational development and retention of our talented people.

Objectives

- Goal 01: PLAN -To design, evaluate and improve roles, structures, and people processes that maximise individual, team and University success
- Goal 02: ATTRACT -To use innovative employment practices that attract and retain talented people
- Goal 03: DEVELOP -To provide development opportunities that support individual aspirations, potential, and capability and so achieve University objectives
- Goal 04: ACHIEVE - To ensure that all staff have clear role expectations and are inspired to achieve high levels of performance
- Goal 05: SUPPORT -To create a working environment that values and supports diverse people to connect and contribute
- Goal 06: ENGAGE -To encourage workplace relationships and communications that provide an outstanding staff experience and high levels of engagement

Current State

- An up-to-date PeopleSoft HRMS environment with a well-managed programme of work
- Current project focus is incorporating UniServices job and payroll data and processes into PeopleSoft
- Implementing a new Career Tools capability based around the CornerStone on Demand application, which will be rolled out progressively over coming months
- HR are establishing capability to manage reporting requirements and delivery
- Looking at opportunities to expand and enhance the use of onboarding (RedCarpet)

Future State

Continue to apply feature-packs to PeopleSoft HRMS on an up-to-date basis. PeopleSoft will continue to be the core application focused on payroll and core HR, supplemented by niche products such as CornerStone on Demand and RedCarpet to provide a full solution.

Focus will be on:

- Continuous improvement of processes and automation of high-volume transactional tasks, enabling the HR team to focus on higher-value services
- Improving the usability and user experience of all systems, with a priority to review the recruitment functionality
- Quality-assured HR data for the purpose of University-wide reporting
- Performance, learning, and talent solutions for professional and academic staff incorporated into career tools functionality

Maintain watch on ongoing suitability of PeopleSoft HRMS for core functionality.

Business Area: Learning and Teaching

Aspiration

To provide state-of-the-art learning spaces and technologies that support all students to realise their academic potential.

Objectives

Our objectives are to provide:

- Physical and virtual learning spaces that respond to the changing needs and expectations of our teaching staff students
- Technologies, tools, and solutions that support teachers
- Flexible modes of learning that enhance access to our educational resources
- Sustainable and resilient programmes and courses

Current State

The University has invested in a new Learning Management System (Canvas), an integrated technology suite, and is positioned well to embrace these objectives in the upcoming years. Several existing applications are integrated with the system, including Turnitin, Piazza, Talis, QuestionMark, and Google Apps for Education. Further investment in complementary tools and infrastructure will support teachers and students to benefit from a well-supported teaching environment.

Future State

In coming years the University will have developed capabilities for flexible course delivery, utilising a wide array of tools and infrastructure to enhance student outcomes and the user experience. Further procurement will be required to support the Canvas environment, including the use of LTI integrations and reporting tools. Increasingly, students will encounter blended and online forms of instruction in their courses, these new pedagogical approaches will broaden and enhance their on-campus experiences.

Business Area: **Library**

Aspiration

Libraries and Learning Services (LLS) is committed to providing quality services to support the teaching, learning, research, creative work, and administration of the University. LLS is committed to continuously improving the student learning environment, whilst in parallel enhancing services for researchers. Of high importance is providing world-class access to electronic resources whilst continuing to improve physical spaces for housing of print collections and special collections. In addition, making best use of tools and software to further streamline services to users, including the implementation of industry-acknowledged applications, such as Talis Aspire for reading-list management, to supplement existing systems including the Alma Library Management System, is paramount.

Objectives

LLS objectives relate directly to the overarching University objectives and are documented in a separate LLS annual plan that details down to the level of objectives set for each team within LLS.

Work schedules are prioritised within each Library team based on the objectives set in the Library annual plan for the coming year. In the instance where new items are added and existing objectives put on hold due to a critical business need, Library Senior managers work with team managers to reprioritise existing work.

An annual report is made available on the Library website detailing the objectives achieved in the previous calendar year.

Current State

LLS manages a number of University-wide enterprise systems that are integrated closely with the institution. The Alma Library Management System is a cloud-based application implemented in 2014 in conjunction with several ITS teams and includes a locally-installed web front-end, 'library search' which is the Library online catalogue. The Library is also the business owner of the Research Outputs publications-management system used by University academics to record their publications. Furthermore, the Library contributes and is recognised internationally for the institutional repository and related services it operates, which provide a single place for theses, journal articles, and research reports authored by University staff and postgraduate students. LLS also provide access to large and diverse number of digital collections that include unique New Zealand content using a mix of propriety and in-house-developed solutions.

Future State

As technology continues to develop exponentially, LLS remains agile to ensure that existing systems are upgraded to provide the best quality of service and functionality to users. LLS technical staff liaise closely with the vendors Ex Libris (Alma, Primo, Digitool, SFX / UResolver) and Symplectic (Research Outputs) to ensure an awareness of application roadmaps, new functionalities and any dependencies that need to be taken in account for future work. LLS technical teams also work closely with Central IT to ensure locally-hosted servers are maintained and upgraded as required.

The Talis Aspire Reading List software is currently being implemented with the intention that all online reading lists will be created using Talis Aspire.

The Ex Libris application Digitool, which LLS use to curate and provide access to a number of digital collections, including the high-use past exam papers, is nearing end of life. LLS are currently researching options for replacing this application and considering whether another Digital Asset Management (DAMS) application would be suitable or if a system that also includes Digital Preservation functionality should be implemented.

Business Area: **Marketing**

Aspiration

Closely aligned to the University's overall aspirations while nuanced to best reflect Marketing's function and reach, our marketing aspirations are:

- To best attract high-potential students and highly-talented staff
- Connection and engagement with an outstanding university experience, one where highly-talented people can flourish
- Leveraging our research, teaching, and learning – for greatest impact
- Treaty of Waitangi – Te Tiriti o Waitangi partnerships for mutual benefit
- Strong partnerships and effective fundraising
- Highly-effective brand governance

Objectives

Market-leading preference

- Increase content-rich communications delivered across highly-user-friendly digital platforms.

Recruit school leavers of the highest academic potential

- Development of content-creation capabilities (such as the first-year-student blogging initiative) to best take advantage of the website and content-management system improvements
- Strategic sub-brand website architecture review and alignment that better helps audiences navigate and make sense of a vast range of content and messaging
- Developing capabilities to better capture and disseminate figures that quantify career outcomes and relative income gains post-graduation

Increased recruitment of postgraduate taught and postgraduate research students of the highest possible potential

- Developing capabilities to better capture and disseminate figures that quantify career outcomes and relative income gains post-graduation
- Development and documentation of an international brand proposition
- Better communication of approximate length of study time

Seamless enrolment, a successful transition to University life

- First-year communication strategies including Student Portal and involvement of lecturing staff
- Formalisation of traditions and icons, from student-initiated to physical landmarks that most define the unique culture and flavour of the University – building on the likes of the History videos

Connection through an inspiring and enabling university experience.

- Development of campus as a canvas. Digital or fixed billboard space for University and faculty 'recognition' messaging

Engaging with the wider Auckland community

- Explore new channels to celebrate staff and student success

Current State

Our current state focus is to create a picture of the student's journey through the University from the moment they engage with us and identify the student touchpoints with people and technology across to ascertain and monitor "what happens next".

Future State

Our future state will be to analyse the "what happens next" to achieve some of our long - term objectives. Linking web and social media interactions is important for marketing in order to be able to use a seamless system between the CRM, social content publishing, email marketing, content marketing and all of this interacts with our advertising. A single view of our customers (future students, current students and alumni) that combine all views from different data sources.

Business Area: Property Services

Aspiration

To create and sustain the capability to meet the needs of Property Services and the wider University through technology alignment of Property Services to University objectives and strategies.

Objectives

- Improve and maintain critical service areas such as building-management services, reducing health and safety risks through University-aligned governance, process, and strategies.
- Create, manage, and grow sustainable system lifecycles upon which current and future University and Property Services initiatives can be implemented and operated
- Create accessible business-intelligence capability through improved reporting, tools, and metrics
- Implement business improvements to agreed priorities and dependencies utilising local and central resources as applicable, aligning with University objectives and strategies

Business Area Strategy

In the past, Property Services has had some large gaps in maturity regarding its IT operating model. However, in the last two years Property Services has matured its approach extensively. Using the outcomes of the new model as a platform, the next logical steps increase focus on delivering visible business value through implementation aligned with business process. In particular, business intelligence, application maintenance, new technologies and trends, and the assessment of centralisation, consolidation, and integration opportunities will be a focus. During this next phase we must:

- Maintain alignment to University and Property Services objectives, strategies, and architectures
- Maintain or improve upon existing standards of quality
- Focus on practical methodology and optimise processes to appropriate scope for each task or project
- Create sustainable environments, of appropriate size, supported in the appropriate place

Key Elements

Building Management Service

- Promote, investigate, and implement BMS improvement opportunities in the areas of health and life safety, security and access control, monitoring, and lighting control

Reporting

- Provide accessible, timely, and relevant business-intelligence capability through enhanced reporting aligned with strategic University BI initiatives and strategy

Maintenance and Support

- Create planned application-maintenance cycles including financial-maintenance forecasting, IT support agreements and amendments, and knowledge-centered support

Capability

- Identify and resolve business-process gaps to enable alignment with IT and systems, integration, and automation. Continued utilisation, retention, and upskilling of appropriate resource and skillsets internally, centrally, and externally as required.

Capital Asset Management

Property Services IS has historically driven the CAM programme. The creation of a new Asset Management team has been proposed and is currently pending executive approval. If this team is approved, responsibility for the CAM programme will transfer to it. PSIS would provide input to assist as required. For this reason, CAM initiatives do not feature in the Property Services IS strategy, although various initiatives that are featured are expected to contribute to our CAM maturity.

Alignment

- Priority Area: Organisational Performance
- Priority Area: People, Culture, and Capability
- Priority Area: Service Quality and Performing and Resilient Systems
-

Business Area: Records Management

Aspiration

Records management is concerned with University's records from their creation to their eventual destruction or storage as archival records.

The Records Management Programme aims to ensure the University has in place the policies, tools, training, and infrastructure to manage its business records in accordance with good practice and compliance requirements.

This will help provide the University with confidence that its records are complete, reliable, and accessible in order that it might meet its strategic goals, external accountabilities, and retain its corporate memory.

Objectives

- Implementation of best practice, procedures, and guidance for the management of the University's records, in all formats, so that they may serve as reliable evidence of University activities
- Guidance and training are provided for efficient solutions for creating, maintaining, and disposing of records
- Mechanisms and procedures are in place for ensuring physical and digital storage and intellectual control of records
- Policies and processes are in place for reviewing records management and ensuring compliance with University policies, procedures, guidelines, and external requirements
- Contributing to the preservation of the corporate and cultural memory of the University, and facilitating access to that memory

Current State

The Records Management Programme is currently addressing records-management issues and options for University records in digital formats. Both the practices and needs of records in the form of structured data in business information systems and unstructured data in a variety of information repositories are being considered. There is currently no University-wide preferred solution for the management and archival storage of electronic University records outside business systems. Pilots have been trialed in a number of areas using the combination of SharePoint and RecordPoint as a solution.

Future State

The University has an approved strategy, sustainable and cost-effective infrastructure, and a recommended repository for the medium- and long-term management of its business records in electronic format (EDRMS) which meets its business needs and statutory requirements and is adopted fully across the University.

Business Area: Research Management

Note: this section is currently a placeholder. Further development of future direction will take place through the remainder of 2015. Any planned initiatives will link directly to the wider programme to enhance the current research support model.

Aspiration

Increase the odds of winning external research income and expedite the grant management process cognisant of all legal, financial, ethical, contractual, and reputational risks to support researchers to win more money to do more research.

Objectives

To be determined following outcomes from the Analysis of Current Research Support.

Placeholder - Improve services and electronic research management capability.

Current State

InfoEd does not adequately meet needs. Manual processes and resources are employed to work around challenges. Existing issues with performance and usability of InfoEd are being addressed through upgrade process. The current Research Systems enhancement project, an initiative of the Research Office and ITS SAS to improve targeted parts of the InfoEd experience will continue into 2016.

Future State

Enhanced *research management systems and processes* focusing on usability, effective reporting, digitisation, and business automation.

Business Area: Student Experience

Aspiration

Campus Life's vision is of a student experience that by reputation attracts high-potential students who have a choice of top universities to attend. When they are here, personal barriers to success are dealt with easily and the co-curricular experience contributes to their personal development in line with the academic and non-academic characteristics of the Graduate Profile. They leave the University placed well for life-long success and with a level of loyalty to the University that will enhance our reputation and capability. The vision for Campus Life is to develop a vibrant and supportive campus environment.

Objectives

Campus Life's objectives are to develop a vibrant and supportive campus environment that:

- Offers a range of wellbeing services including accommodation, health, and counselling
- Helps students overcome personal barriers to success
- Provides a range of engagement services including club support, sport and recreation, leadership and volunteering programmes that:
 - provide social structures that support academic engagement and retention
 - complement academic activities and contribute to the achievement of the broader characteristics of the graduate profile

Current State

IT systems, tools, and resources are in place to support business process, but have generally been procured, designed, customised, or put in place without strategic alignment to future operational requirements.

Future State

IT systems, tools, and resources with an overall high level of maturity are in place and support the ability to improve and optimise operational performance. The attributes of the IT function across all Campus Life include innovative, integrated, agile solutions with well-resourced capability with reliable support.
