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Foreword

This section provides an overview of key strategic issues facing the University and the strategic use of IT to enable differentiation of the University in order to gain competitive advantage.

Introduction

Worldwide trends of particular importance to the University include an accelerating pace of change in the tertiary sector, driven by an explosion in the rate and means of knowledge acquisition, and a revolution in information and communications technology.

Our major aim in the period 2005 to 2012 is to improve the University's international standing through the enhancement of the quality of our teaching and learning, our research, and the support systems that underpin these activities.

UoA Strategic Plan, 2005-2012¹ p. 3

While information technology (IT) is often regarded as an enabler or support function, it is important to also recognise its potential role as a strategic differentiator for the University. IT can be a source of competitive advantage in what is an increasingly competitive tertiary sector, both nationally and internationally. The University's Strategic Plan hints at some of this potential when it mentions the need to:

Develop and maintain an information and communications strategy that supports access needs for teaching, learning and research, and that enables the University to gain strategic value from information to achieve international best practice in administration and decision support.²

The IT strategic plan emphasises this role and focuses on the potential for IT to be a differentiator. This is a significantly different approach from that adopted for the University’s first IT strategy. Rather than develop a broad, wide ranging strategy that attempts to address every aspect of IT, this document proposes a much more targeted plan that focuses on three areas of key strategic importance to the University. These have been identified as:

- Student engagement over the whole life-cycle (e.g. from recruitment to alumni relations)
- Research
- Managing knowledge

This much more targeted approach to IT strategic planning does not mean that other important IT implications of the University’s strategy have been or will be overlooked; rather, that they will be addressed in the operational plans of IT Services and other central service groups as well as the Faculty IT functions. The intention of this approach is to focus effort and resources on the areas of greatest strategic importance to the University.

A note about terminology and timeframe

In a field renowned for its use of jargon, it is important to be clear about terms. The use of the acronym IT (information technology) in this paper reflects not only the strategic use of technology, but also the deployment and management of technology as a series of services to effectively support and enable the University’s strategies.

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² UoA Strategic Plan 2005-2012, p. 20
This updated IT strategic plan continues to have a three-year focus (2009-2011), rather than the remaining five year span of the University’s plan. Given the rapid rate of change in the field of information and communications technology referred to earlier, a three-year timeframe is more appropriate. This allows for sufficient time to implement the strategies from this plan, and for the development of a completely new plan for the last three years of the University’s 2005-2012 strategy.

Overview of the Key Issues

Student Engagement
The University has a stated objective of achieving “a high quality student body with an annual growth rate of equivalent full-time students of 1%”\(^3\). The changing demographics of the student population and the rapid emergence of new technology-based tools for teaching and learning are both threats and opportunities as the University strives to meet this objective. Given the emphasis in the University Strategy in improving Post-Graduate ratios, provision of infrastructure and service to postgraduate students is also a key student engagement aspect.

Key strategic questions to be answered in this area include:

- How should the University develop a more student (or customer) centric approach in order to market to, attract and retain students of the calibre required to meet the quality goals of the strategic plan?
- How might the University use newer delivery methods to improve the provision of service, information and courses that have historically been delivered in more traditional ways? How should the University interact with students who are used to collaborating or interacting with online communities and social networks?\(^4\)
- Given the time constraints many students face due to travel and part-time work, how can the University provide more flexibility in delivery of services across timeframes that suit students?
- How does the University identify the academic programmes that are most likely to benefit from particular new technologies? Should the UoA consider making courses more widely available to schools and other potential students?

[Student Engagement links to the following objectives in the University Strategic Plan:

- Objective 2 – a distinctive international educational experience for our students
- Objective 7 – a high quality student body
- Objective 9 – an outstanding teaching & learning environment
- Objective 13 – recruit & retain a high quality staff and student body
- Objective 14 – a student environment that is welcoming, stimulating and enjoyable
- Objective 18 – an infrastructure that supports teaching, learning, research & community engagement]

Research
"Research is increasingly computational and data-intensive. Ever larger sets of data are being collected and shared across larger and more geographically dispersed teams of researchers from diverse disciplines."\(^5\)

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\(^3\) Ibid p. 10
\(^4\) Young adults who are used to a high degree of online interaction and social collaboration are often called Generation X or Y, or the Net Generation
\(^5\) “IT Engagement in Research: Key Findings.” EDUCAUSE Center for Applied Research (ECAR), July 2006. p. 1
Researchers are seeking access to national and international networks, across which a wide range of innovative collaboration tools and technologies are being deployed. The University needs to be able to provide flexible, high-performance infrastructure together with leading-edge collaboration tools if it is to attract and retain quality academic staff and postgraduate students. If the University is to double its external research income by 2012, then some of that additional funding will have to come from offshore. Information technology and communications has a strategic role to play in overcoming the barrier of geographic isolation.

eResearch seeks to improve access to remote researchers, equipment, computational power and data for collaborative purposes in order to enable outcomes researchers could not achieve individually.

Key strategic questions to be answered in this area include:

- How can the University use the new KAREN network to improve capability to produce innovative collaborative research that creates new revenue streams?
- How should the University specifically support collaboration between researchers, both internal and external to the University?

[Research links to the following objectives in the University Strategic Plan:]

- Objective 1 – premier research university, as a peer of leading autonomous universities through association and collaboration
- Objective 3 – PBRF ratio through the development of a high quality research environment
- Objective 4 – development of an international quality graduate programme
- Objective 5 – enhanced support for research activities through doubling research income
- Objective 6 – large scale research institutes of excellence
- Objective 17 – increase and diversify the University’s revenue

Managing knowledge
This key strategic area underpins everything the University does. The UoA capabilities and performance in the fields of research, teaching and learning, and administration are all critically dependent on the ability to effectively manage the knowledge that is created, consumed, disseminated throughout the University and the global community. The challenges of enterprise information management (best regarded as a sub-set of knowledge management) in a university environment have been described as follows:

“One is that information has historically been kept in silos. Administrative data is handled separately from research data, teaching material, or library resources. This separation inhibits users from finding and linking related pieces of information. A second challenge is that most information is handled in a laissez-faire manner. Ninety percent of all information is unstructured, maintained in documents or other formats. While a great deal of attention has been paid to administrative data [...], little thinking has gone into systematically assessing the various types of information an institution uses and how to manage that information to provide an integrated, central point of access to both structured and unstructured information.”

While the figure of 90% may be debated, it is not difficult to relate the substance of these two information management issues to the University of Auckland, and to see the need for a strategic, enterprise approach to address them. A start has been made on developing such an approach, but there remains much to be done. Given the mission-critical nature of effectively

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6 See UoA Strategic Plan 2005-2012, p. 6: “...it is likely that our ambitions as a research institution will increasingly outstrip financial support available in New Zealand and require us to seek partnerships overseas.”
managing knowledge at the University, it is appropriate that it be the third of three strategic
issues to be addressed.

Not only does the UoA need to enhance the utilisation of information internally, but it also
needs to be prepared to consider emerging changes in the scholarly communication process,
such as open access publishing and improved access to University of Auckland research
publications within the context of the University’s own branded web environment.

Key strategic questions to be answered in this area include:

- How should the University improve its management of records and documents within
  the context of the Public Records Act?
- How might the University progress the enhancement and implementation of an overall
  Information Management Strategy?
- How can the University improve access to research publications authored by staff?

[Managing Knowledge links to the following objectives in the University Strategic
Plan:

- Objective 8 – a curriculum meeting the highest standards of excellence
- Objective 9 – an outstanding teaching & learning environment
- Objective 13 – recruit & retain a high quality staff and student body
- Objective 14 – a student environment that is welcoming, stimulating and
  enjoyable
- Objective 15 – a culture that encourages staff to reach their full potential
- Objective 16 – resourcing and organising for quality
- Objective 18 – provide an infrastructure that supports teaching, learning,
  research and community engagement of the highest quality
- Objective 19 – promote governance and management practices consistent
  with the mission and values of the University of Auckland]

Other Key Issues

The above strategic areas are initiatives to align IT with the University’s strategic direction. It
is also vital to the success of this strategy to improve existing applications, infrastructure and
services. This document incorporates specific projects to improve the University’s applications
and processes, and its overall capability to deliver information services.

In this examination of the current state of IT, it has been concluded that the University is
generally well served by its infrastructure capability (although this now has reached a point in
2009 where further investment is required), but faces considerable challenges in improving the
delivery of applications and in defining and changing business processes and practices. This
area is covered later in this document, and the programme arising from this strategy
incorporates a mix of enhancing what the UoA already has combined with adding new services
to meet the University of Auckland’s strategic goals.

2009 Revision

The revision of this document for 2009 maintains a similar course as outlined above, with
Student Experience, Research and Managing Knowledge key themes continuing into this year.

While the last few years has seen a smaller investment in core infrastructure than previous,
2009 and 2010 sees a significant reversal as the threshold of risk profile and required growth
patterns have been reached. An increased percentage of total spend is oriented towards
increases in storage, network and replacement of aging technologies. In addition to this
increased expenditure in infrastructure, two large multi year initiatives focused on improving
the student experience and improving our research management commence in 2009. These items show through as a significant funding ‘hump’ in the models within this strategy.

**Strategic Plan - Introduction**

**Preamble**

This paper details the University’s Information Technology Strategic Plan. The strategy and plan described in this document provides the foundation for the portfolio of tactical projects, contained in the companion document *Programmes and Projects* that are required to implement it over the coming years.

Information systems, information management, information technology and access to knowledge are fundamental to the core teaching & learning, research and administration activities of the University. It is essential that the University leverages its considerable existing and planned investment in people, systems and technology to improve access to and management of information.

**Documents**

The Information Technology strategic plan is set out over three separate documents:

The companion paper, *Executive Overview*, provides a high level overview of IT strategic priorities for the University of Auckland.

This document, *Information Technology, Strategy and Plan* is for the reader seeking an expanded discussion of driving forces and a detailed explanation of the information technology strategy and plan.

*Programme and Projects* describes the planned programme of work and the projects needed to progressively implement the strategic plan.
Part 1: IT Strategic Capability

Current IT Capability State

In order to develop the IT Strategy, and equally develop the operational and tactical plans around that strategy in the future, it is essential to understand the base from which the strategy is being built upon, i.e. the current state. This enables the roadmap to the vision to be defined and structured in a way to ensure that it is ‘built for success’. All too often, strategies are written without consideration for the capability of the organisation to actually deliver upon the strategy, leading to poor execution, and slower uptake of benefit realisation within the organisation.

This Current State section of the Strategy focuses on the five key areas of IT capability [Governance, Applications, Processes, Technology & Infrastructure, and Support] which all need to be assessed and positioned for strategy execution;

Later sections of the document will review the future state, and outline strategic initiatives to be taken to deliver the change outcomes required.

External Factors influencing IT within the UoA.

These forces reflect some of the key demands being placed upon the University, and more importantly in the context of a Information Technology Strategy, reflect the demands being placed upon the IT community as a whole to innovate, deliver and support a variety of systems and services.

While many of these driving forces may be static from one year to the next, over a longer time scale they change to reflect societal, technological and other influencing factorial changes.

Technology has changed the nature and operation of the university. Digital technology alters how and where information about students, faculty, staff, the university and its activities is collected, stored and accessed. The same forces are also bringing pressure on the existing governance, organisation, management and administrative structures and people.
External Factors

a) Costs and benefits: Increasing costs in many areas of IT means that there is a clear need to realise and demonstrate the business benefits and value from existing IT capacity and investments. Few verifiable measurements exist and sparse firm evidence is available on the costs and benefits of IT in the University at present.

Despite the overall rising cost of the investment in information technology, some individual technology costs are falling in relative terms. End user expectations around lower cost for services and information needs to be balanced against the cost of the associated infrastructure and ‘end-user’ support systems that are required to support increased usage and demand patterns.

The UoA has a significant investment in IT, and has significant potential to extract untapped benefits from its existing systems. Consideration of benefit realisation should also be placed around identifying and utilising these areas within the existing portfolio over the next few years, as investment profiling of benefits comes under increasing scrutiny.

The importance of improving benefit realisation through measuring and reporting will be critical, as the focus of the UoA strategy has a significant effect on the IT strategy by means of applying limited resources across a variety of competing IT areas.

Alternatives such as Software as a Service and Cloud Computing are emerging as strong contenders to consider as Total Cost of Ownership is more rigorously focused upon.

- UoA has limited ability to measure and report benefits of projects and initiatives.
- Highlights need to also focus on existing systems and derive further benefits, both from existing and new sources within the application suite.
- Increasing costs of service as demand for service increases.
- Software as a Service and Cloud Computing

b) Resources/Staffing. Fragmentation in the coordination and harnessing of available resources often results in duplication of effort and failure to leverage off economies of scale made possible by the size of the University. Attention is also required around the development and retention of quality IT staff to ensure continued success. This also implies processes and support frameworks will need to be made more efficient to derive quality.

2009 sees high demands on resources and resource skills which flow on from work in 2008 and are likely to extend for the next two years. The costs of these resources has somewhat levelled off due the economic situation, and retention is less of an issue than perhaps it was 6 months ago. Focus to retain key staff continues to be critical due to the capital program to be accomplished.

- Duplication of roles/responsibilities across the group
- Identification and retention of key staff required
c) **Increased Reliance and Dependence on IT.** The University is heavily dependent on IT for all its administration and management activities. Research depends on IT infrastructure in the form of high-speed computing facilities, networks to link collaborators and colleagues, and digital libraries to provide access to knowledge resources. The dependency has spread to teaching and learning with the wide-spread use of e-learning technologies such as new e-Lecture Theatres, Learning Management System (LMS), and the adoption of both on-campus and remote access to computing and knowledge resources for students.

An increasing range of services and systems are available 24 hours a day, 7 days a week, in response to user demands. 24x7 service is mandatory for core and mission-critical applications such as the LMS, Library systems, Internet access and email. However providing 24 x 7 services is expensive and requires cross-organisational effort. There is an increasing dependence on internal IT processes, service and personnel. There is also demand for 24/7 IT help desk support.

Staff and student requirements are increasingly specialised with diverse and often specialist IT needs and the University needs to offer reciprocal 24 x 7 availability of IT facilities and services in order to support partnerships, collaboration, flexible and distance learning, etc.

More noticeable is an increased demand for 24/7 access to non-core and non-mission critical systems as the expectation exists that all systems should be available on-demand.

Students and staff now also have the expectation of wireless access across all areas of the campus as a standard service.

There is also a wider expectation that specific functionality can be delivered on a variety of platforms, eg: Desktop and Mobile devices in particular.

- There is strong reliance and dependence on IT within UoA
- Disaster Recovery, Backup, Service, Support are vital components and investment is mandatory to support these services.
- 24x7 availability, with 100% uptime is expected and demanded, placing high demand on the ability to deliver this service.
- Demand for 24/7 IT help desk support
- Proliferation of wireless technologies and connectivity to the UoA systems and services via these connection channels.
- Increasing expectation of delivery via different platforms, eg mobile devices

**d) Digital Information, both “born digital” and digitised information.** The majority of information is “born digital”. There continues to be focus on digitising older information resources as information in digital form is more readily accessed anywhere, anytime unlike its analogue equivalent. The University of Auckland is seeing a growing user awareness of the concept of digitisation and the follow-on demand for digitisation services and digital storage. It continues to be important to focus on the development of metadata systems to enable effective retrieval of digitised information and to ensure that digitisation happens within a preservation quality context.

Over the last ten to fifteen years information technology has fundamentally changed the nature and function of the traditional library as well. Libraries have had to balance the demands of being a physical repository with the continually-increasing demands for provision of access to off-site digital information resources as well as the development of digital repositories for locally-created information. Libraries have also focused on ensuring that their clients develop the information skills required to be able to effectively access and evaluate the wide range of available information resources.
There is increased demand for digitisation, storage and effective retrieval and this continues to accelerate.

The Library will continue to increase its footprint in information management and the associated technologies, as well as teaching information literacy skills.

e) Data Management. Research data volumes are expected to rise exponentially. Research is increasingly data-centric, and large sets of data are being collected and shared across geographically dispersed teams of researchers from diverse disciplines.

The University needs to continue to develop infrastructure and expertise that supports not only the management of the research data it generates, but also the data it consumes from external institutions. Furthermore, this management should be broadly based on "not losing data" through to "reusing or repurposing data".

Specifically, the management of research data needs to focus on accessibility issues, preservation issues and curation issues (that is provide technical, descriptive, structural and provenance descriptors). Other issues surround the formats and long-term accessibility and preservation of the data through to national guidelines and requirements for the management of the data.

- There is increased demand for storage, retrieval and sharing of research datasets and this will accelerate exponentially.
- The management of the research data will require coordination of IT Services, Library and domain experts.

f) Ubiquitous Computing. With the widespread adoption of mobile and wireless computing devices, the need for continuous physical connection is no longer as relevant as it once was. Data charges from the mobile carriers remain a barrier for many, although these will drop over time. The presumption that all students have some form of access to computing facilities and to the Internet is now on a par with the long-standing assumption of access to textbooks, library resources and laboratory facilities. Similarly students and faculty automatically assume communication via electronic channels such as email, the web and increasingly via devices such as mobile phones, mp3 players and video-on-demand services.

- Strong demand for wireless, anytime, anywhere access.
- New mobile devices (e.g. iPhone) are now strong channel targets
- New distribution channels of content are emerging

g) Removal of Time and Distance Constraints. The advent of reliable, cheaper high-speed communication and broadband networks permits ready access to international information resources, and facilitates collaboration and cooperation among dispersed people and organisations. At the same time information technology brings new threats to the University because it relaxes the constraints of geographic location, distance to travel, time and monopoly.

- High speed access channels are opening up new and innovative means of communication and collaboration, particularly around Teaching & Learning and Research.
- Barriers of entry for competition are dropping rapidly.

h) Information Security and Risk Management. The University's information assets (hardware, data, software, IP etc.) continue to be at risk from an ever changing set of attack vectors. They have become increasingly attractive targets as the opportunities and means to commit information crimes increase. The current University environment is reliant upon on-line systems for the conducting of core functions, the integration of
internal systems with external systems, and collaboration across wide networks of physically separated people – heightening the consequences of system failure or security breaches.

The rate of information and physical security issues is rising in greater proportion than increases in the deployment of IT. Significant business and institutional risks (note – not just IT risks) flow from embedding IT in education if the technology fails or does not work as expected.

External contacts, partnering, outsourcing, intellectual property theft and global access to information all present major threats. The costs of protection are also high. Expenditure on information security is recurring and non-discretionary; risks are frequently latent and uninsurable.

The ultimate restraining factor on the availability of digital materials is the challenge of managing copyright and intellectual property rights.

- Information Security and Risk Management continues to be an area of continuous evolution as external and internal threats become more challenging.
- Intellectual property, identify protection and copyright require significant monitoring and protection.

**i) Inter system compatibility and interoperability.** Inter-system compatibility and interoperability continue to be key challenges, although some inroads have taken place which has started to see a convergence of some information, albeit early stages.

Significant changes in the way systems exchange information are still required to improve the interoperability of systems. This needs to be addressed in the architecture and design of the systems up front.

Reuse of information through the development of new frameworks and architectures, (e.g. Service Oriented Architecture or SOA) will allow previously difficult-to-connect systems to share data more readily. The adoption of reusable components will provide more cost effective means to deliver solutions for the University which will go some way towards harnessing a limited resource pool, remove duplication of effort and enable the leveraging of previously-built functionality. These frameworks also underpin the recently released eLearning strategy.

- Development of framework and architecture for inter-system compatibility is vital.
- Reusable system components will allow more efficient and effective use of data, systems and human capital.

For 2009, SOA will continue to play a major role in the connection of systems. A good set of foundations and capabilities has been developed during 2008, and this will enable end-user services to be developed in line with enabling several of the key strategies around mobility, interoperability, service and ubiquitous computing.

**j) Collaboration.** Across the world Universities are consciously deciding to avoid “re-inventing the wheel” with respect to the provision of services, and are collaborating together on developing software solutions tailored for the Tertiary Education sector’s requirements.

The development of Service Oriented Architectures (SOA) for applications means that it is possible to bring together individual components of functionality that have been developed by different universities. This means that for education specific software there are significant opportunities for universities to enhance or replace current software at considerably lower cost than for vendor supplied applications. Initiatives
initially funded in the USA from Mellon grants are SAKAI, covering collaboration and learning functionality, KUALI, covering a number of areas including research administration, and DSpace and Fedora for digital repository initiatives.

- The cost of maintaining individual niche in-house enterprise applications is becoming less sustainable.
- The use of ‘community’ source application functionality, whereby different organisations contribute to obtain economies of scale for application development, is becoming increasingly prevalent in the university sector.

In summary, what is evident from these main current external factors is the strong linkage to both the Technology & Infrastructure, and Applications components of the IT Strategy and Roadmap. The implications of this places further strong emphasis to continue to strengthen and invest in these areas as key elements as part of the future strategy.

**Main linkages between External Factors and IT**
This model links the Current State External Factor key points outlined previously, to a set of objectives and strategic directives which are then summarised later in this document.

**External Factor**

**Costs and Benefits**
- UoA has limited ability to measure and report benefits of projects and initiatives.
- There is an increasing cost of service as demand also increases.

**Resources**
- Identification and Retention of Key Staff
- Duplication of Roles and Responsibilities across the group.

**Inter system compatibility and interoperability**
- Development of framework and architecture for inter-system compatibility is vital.
- Reuseable system components will allow more efficient and effective use of data, systems and human capital.

**Data Management**
- The management of the research data will require coordination of ITIL, Library and domain experts.
- There is increased demand for storage, retrieval and sharing of research datasets and this will accelerate exponentially.

**Collaboration**
- The use of 'community' source application functionality is becoming increasingly prevalent in the university sector.

**Increased Reliance and Dependence on IT**
- Disaster Recovery, Backup, Service, Support are vital components and investment is mandatory to support these services.
- 24x7 availability; with 100% uptime is expected and demanded, placing high demand on the ability to deliver this service.

**Digital Information, both "born digital" and digitised information**
- Proliferation of new technologies (eg: mobile devices) and an increasing expectation of delivery of content via these new channels.
- There is increased demand for digitalisation, storage and retrieval and this continues to accelerate.

**Ubiquitous Computing**
- Strong demand for wireless, anytime, anywhere access.
- High speed access channels are opening up new and innovative means of communication and collaboration, particularly around T&L and Research.

**Removal of Time and Distance Constraints**
- Barriers of entry for competition are dropping rapidly.

**Information Security.**
- Security continues to be an area of continuous evolution as external and internal threats become more challenging.
- Intellectual property, identity protection and copyright require significant monitoring and protection.

**External Factor Key Points**

**Objective**
- To use IT to satisfy stakeholder demands and expectations.
- To manage IT resources effectively and efficiently.
- To provide an architectural platform to enable interconnectivity and enhanced access to information across disparate systems.
- To provide reliable, economic, effective IT infrastructure and services.
- To provide secure IT infrastructure and policies adhering to regulatory and statutory requirements.

**Strategy**
- Capture and exploit benefits and value from IT investments.
- Manage resources effectively across a prioritised investment profile.
- Implement an enterprise architecture supporting long term objectives of interconnectivity.
- Expand access to computing and information resources.
- Proactively improve IT security across the University.
- Proactively improve IT security across the University.
Information Technology

Infrastructure and Technology

Over the years of 2004 through to 2007, the UoA transformed its Network, Storage and Computing Capacity infrastructure. The primary focus was to build a scalable utility model for infrastructure resources, which resulted in the Infrastructure, data repositories and skills being engineered towards Enterprise Level Applications.

With the advent of niche applications (i.e. non-enterprise) becoming more common, this gearing will need to be evaluated to establish both a common and distributed service layer equilibrium point, with further assessment on infrastructure and skills to support them as part of the future model.

Storage capacity has been remodelled around virtualisation, and is well positioned to scale upwards. The computing capacity and network can all scale as demand requires, although significant advances in Cloud Computing and Software as a Service concepts are beginning to challenge the paradigm of the traditional data centre model and the centralised provision of core services such as storage. Significant reductions in cost structures and associated risk profiles will necessitate the need to review long term strategies in this area as it matures.

The telephony infrastructure however is at significant risk. Outdated, and mostly out of support, there is a clear need to address this urgently. Driving factors in this area include the use of VOIP and the opportunities this now presents to the University.

- Infrastructure is well positioned to scale for future growth
- Network and wireless expansion continues to evolve
- Telephony infrastructure at significant risk and migration to VOIP is required.
- Advances in Cloud Computing and Software as a Service

Applications

The Diagram below shows the major applications in the University's portfolio, and plots the relative position of each in terms of value to the University and risks presented.

Application Overview

This diagram also indicates that the University of Auckland is not currently receiving high value from a number of its applications, and that some, such as PeopleSoft nDeva (PeopleSoft Student Administration) are old versions of the software that are not supported by the vendor.
The University has established a Process Office to improve the effectiveness of process change – historically there has been a tendency to customise software to meet current practice rather than determining and implementing best practice. The University of Auckland is starting to experience the benefits of this office, but has major challenges to come, particularly Student and Research Administration areas.

Investment continues to be high within the PeopleSoft area; primarily due to the size, complexity and centralisation of data these systems hold for the University. The years of 2009/10 sees significant investment in the upgrading of our Student Administration System along with an extraction of customised and bolt-on functionality out of the core system.

Enterprise-style applications are typically implemented and managed from within IT Services with the exception of Library enterprise systems applications support; however, more niche or faculty/service division specific applications are either implemented by this group, implemented from within the respective Faculty/Service Division IT group, or a combination of the two.

The University overall tends to have a buy versus build approach (ie: The primary business functional delivery mechanism is through implementation of packages which are then integrated into the University applications environment), as it does not have a full capability to build and support a myriad of applications.

Most ‘enterprise’ application development is centralised around ITS Group Applications, however, as more and more applications are added to the pool, this continues to place increased pressure on ITS support groups.

Increasingly, functionality delivered via browser is becoming a cornerstone of development and design, and is now one of the key delivery channels both to staff and students. Application technologies such as Microsoft SharePoint offer attractive business propositions due to their ease of deployment, quick customisation and functionality fit to several key areas of demand, although this continues to come at a relatively high infrastructure cost.

The architectural principal to support integration of data from one or more systems into a series of reusable ‘services’ (Service Oriented Architecture), has started to be implemented across ITS Group Applications. This is a key strategic step towards enabling many of the longer term objectives within IT.

The implementation of third party applications (including bespoke, custom build) remains significantly important and the current approach to focus on requirements and the solutions to address them are still very much part of the approach the University takes.

The ability to provide application workflow has been identified as a limiting factor in the past as historically the data models and business & organisational processes (such as position management and an enterprise organisation structure) did not exist to support this; however with the implementation of the new HR system, opportunities supporting items such as workflow can now be seen as viable future opportunities for future systems.

- The UoA has a number of key applications that are being given priority for replacement (PeopleSoft SA, including Identity Management, RIMS, Timetabling)
- PeopleSoft remains cornerstone of centralised administrative data
- Group Applications remains the core in-house development shop, although demands continue to increase on this team.
- The Web is a primary delivery channel of content and information.
- Workflow is seen as a strong future opportunity which remains untapped.
Governance

The University IT environment is federated, meaning that central policies and strategies are mandated, but the faculties and service divisions retain the ability to manage many aspects of their own environments, including the ability to develop, deploy and implement systems and services.

Within the University, a number of governance frameworks exist to balance the functions required to support, endorse and regulate activity, however, the processes around governance, specifically programme and portfolio governance need to be equally as strong.

The topic of IT Governance was raised during the IT Function Review in 2006 and subsequently within the completion of the IT Roles & Responsibilities report. It is expected that the Roles and Responsibilities report, combined with a review of IT Governance in 2009 will see a number of changes made to overall IT governance within the University.

Few faculties, departments and service divisions have the capacity to programme/project manage large initiatives themselves without a level of input from IT Services, especially if integration to other enterprise systems is required. This interaction may range from consultative processes with the faculty/service division through to project management and technical implementation.

Management of various enterprise initiatives is primarily centralised through IT Services with larger initiatives and projects managed from the PMO group for applications and managed from within Operations for infrastructure or network related activities. Occasionally, external project management is sought.

Providing a centralised enterprise view of all projects and programmes is often difficult to achieve and therefore the ability to have all information required to make well informed decisions can be compromised. Without this enterprise perspective of Capability and Capacity (relevant for both supply and demand) it makes the various IT teams and departments ability to forecast demand and proactively adjust, difficult.

- Accountabilities and ownership are unclear in some cases
- Significant focus on IT Governance in 2009
- Information sharing is improving as much project and programme documentation becomes centralised for ITS based application projects.
Support

The University has in excess of 300 FTE IT support staff (of which just over half belong to the central IT service division, IT Services.) The organisation and strength of staff within faculties and service divisions varies considerably.

- The ability to fully leverage the technical strengths across the university remains a challenge, as does the ability within areas to provide effective prioritisation to more effectively manage and funnel resources into areas of most strategic value.

Processes

Within the context of IT and the faculties/service divisions, the ability of these groups to fully understand and document their current business processes to assist new implementations is mixed. This poses future challenges on the successful implementation of key systems. The ability to implement change within some faculties and service divisions also remains challenging, due to the federated model and resourcing issues.

The University a Business Process Management Office but the University’s ability to document and introduce new processes is still evolving. The introduction of Business Process Modelling software is expected to assist this area considerably, although it is still early to assess the long term aspects of this.

- Change management, and the ability of the university to absorb change is mixed across faculties and departments
- Documentation of business processes remains challenging, and is vital to successful adoption of key initiatives across the university.
- Focus on process modelling toolset.
This model links the Current State key points on IT Factors outlined previously, to a set of objectives and strategic directives which are then summarised later in this document.

<table>
<thead>
<tr>
<th>IT Factor</th>
<th>Key Points</th>
<th>Objective</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure and Technology</td>
<td>Infrastructure is well positioned to scale for future growth</td>
<td>To provide reliable, economic, effective IT infrastructure and services</td>
<td>Expand access to computing and information resources</td>
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<tr>
<td></td>
<td>Network and wireless expansion continues to evolve</td>
<td></td>
<td>Proactively manage infrastructure for growth</td>
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<td></td>
<td>Telephony is at significant risk – Migration to VOIP is required</td>
<td></td>
<td>Provide capabilities to explore and exploit new technologies</td>
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<td></td>
<td>Advances in Cloud Computing and Software as a Service</td>
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<tr>
<td>Applications</td>
<td>There are a number of applications that require urgent enhancement or</td>
<td>To maintain and develop a modern application stable capable of supporting</td>
<td>Maintain enterprise application investment to improve value</td>
</tr>
<tr>
<td></td>
<td>replacement</td>
<td>current and next generation technologies</td>
<td>Provide capabilities to explore and exploit new applications and cost</td>
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<td></td>
<td>Peoplesoft remains cornerstone of centralised core-data, although risk is</td>
<td></td>
<td>structures</td>
</tr>
<tr>
<td></td>
<td>rising due to the age of the applications.</td>
<td></td>
<td>Manage resources effectively across a prioritised investment profile.</td>
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<td></td>
<td>Group Applications remains the core in-house development shop, although</td>
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<td></td>
<td>demands continue to increase on this team.</td>
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<td></td>
<td>The Web will be a primary delivery channel of content and information in</td>
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<tr>
<td></td>
<td>the future.</td>
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<tr>
<td></td>
<td>Workflow is seen as a strong future opportunity which remains untapped.</td>
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<td></td>
</tr>
<tr>
<td>Processes</td>
<td>Change management, and the ability of the university to absorb change is</td>
<td>To document and enhance business processes</td>
<td>Improve UoA processes and change management practices</td>
</tr>
<tr>
<td></td>
<td>mixed across faculties and departments</td>
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<td>Documentation of business processes remains challenging, and is vital to</td>
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<tr>
<td></td>
<td>successful adoption of key initiatives across the university.</td>
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</tr>
<tr>
<td>Governance</td>
<td>Significant focus from Senior Management on this area</td>
<td>To provide robust governance processes and methodologies to enable effective governance of IS Projects</td>
<td>Implement an enterprise level portfolio management tool.</td>
</tr>
<tr>
<td></td>
<td>Accountabilities and ownership are unclear in some cases</td>
<td></td>
<td>Implement workflow around IT investment management</td>
</tr>
<tr>
<td></td>
<td>Information sharing is improving as more information is centralised</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>The ability to fully leverage the technical strengths across the university</td>
<td>To manage IT resources effectively and efficiently</td>
<td>Manage resources effectively across a prioritised investment profile.</td>
</tr>
</tbody>
</table>
PART 2: Future State and vision

Future State

Overview

In determining the future state, the vision horizon has been set at five years. Beyond this, it becomes too difficult to assess future technological, organisational and social patterns. This strategy will focus on a target time point of three years out, again acknowledging that changes in technology and adoption patterns are changing at a rapid pace, and that defining initiatives that extend beyond this mark is too difficult to accurately commit to within an IT Strategy.

The key themes of the future state continue to be *Agility*, *Availability/Accessibility/Speed* and *Relevance*.

**Agility**: The ability to create and implement Information Technology faster. Information Technology is becoming more and more driven by a consumer base that has less appetite for delay and has more choice for service. IT must create the processes and foundation elements to support a concept of an agile service model.

With a mature set of core applications, flexible applications should be able to be created which sit on this layer and present the information in a personalised fashion. Support layers must also adjust to provide the services required to respond to an increasingly complex technology infrastructure.

**Availability/Accessibility/Speed**: A robust infrastructure and application layer to support an anytime anywhere connection at speed, to the right device.

**Relevance**: This is about securely providing the right information, which has been accurately derived from single source of the truth, into a view that can be personalised for the role(s) of the service consumer.

With an increasing rate of change, whether the business can sustain and absorb the technological and process changes at the same pace, remains an issue which will need to be monitored and assessed as the IT Strategies are delivered, and which could act as a potential barrier to the success of the overall strategy.
Information Technology

Applications

Applications are key to providing the interface between information and the user, with trends in this area highlighting significant changes in the way the user will interact with technology. Traditional methods of application development and delivery need to shift in order to meet the expectations and service layers requested and expected.

Delivery channels and form factors will continue to develop, as will the demands for the way the user interacts with the applications available to them. Applications and the skills required to deploy them need to be agile to respond.

The amount and type of information presented to the user will change towards more image and audio content specifically around research, teaching and learning capabilities.

Mobile technologies have become a significant means of communication and information transfer to students and staff and have potential widespread application use which remains largely untapped from a teaching & learning, or administrative perspective.

The internet, applications based on the web, and web principles will be the main means of application delivery and interaction with staff and students. Technologies and concepts supporting Web 2.0 are increasingly part of our strategy with many examples appearing on University web sites now. As such, the focus must accelerate on delivering 'Web 2.0 style' features and functionality to the end user. The focus must also shift to providing enhanced collaborative workspaces and towards understanding how these may be effectively harnessed.

2009 will see the introduction of a new intranet and new external web presence which will be delivered through a new Content Management System and new Information Architecture with consideration given to including Web 2.0 functionality.

Moving beyond Web 2.0, over the next few years (colloquially considered Web 3.0), there will be a shift towards web functionality that considers the context of what the user is trying to achieve within each website (Personalisation and Contextualisation)

As demands for information and new services increase year on year the ability to provide that service is continually challenged. The future state needs to focus on agility i.e. the ability to quickly respond and deliver functionality.

A major thrust is in the development and deployment of foundation (building block) information services which will allow more rapid deployment of systems and a greater ability to link traditionally disparate systems. Technologies are now coming on stream which can enable information to be seen as a consumable service to other applications, e.g. the ability to reuse web service gadgets in a range of different information contexts.

Applications which enable collaboration and sharing will take a significant position on the application ladder and continuing demands on sharing documents, information and knowledge will require investment to ensure an integrated approach delivers an effective outcome.

Trends show that users will desire and demand more personalisation of their computing experience. The ability to piece together a variety of information and storage 'building blocks' and co-locate these within a central point will become a key part of interaction, particularly with students. The ability to 'brand' themselves and their technology, not only as an expression of individuality, but also to tailor the overwhelming amount of information to their own prescriptive needs will ensure improved usage of the knowledge repositories.
One key question that needs answering is around the extent that the University of Auckland invests in the collaborative application and technologies space. Many organisations such as Google, and Microsoft are investing significantly in this area, and many applications and services which were once the domain of ‘packaged and licensed’ software are now either free as a corporate model, or are provided free directly to the consumer (student and staff) base. This is a significant shift which needs to be monitored, as it has the potential to change the investment and support dynamics of the University quite considerably over the next few years.

Core Enterprise Applications supporting the HR, Finance and Student Administration functions will continue to exist. Continued investment in product customisation will be reviewed in the context of new architectures and frameworks built into newer versions of these products which enable different access channels to be taken advantage of, delivering rich content via consumable services.

Community source applications are beginning to make headway within the University application context, providing a supportable and cost effective alternative to more traditional approaches to software and applications. These will further perpetuate (subject to experiences) over the next few years into a wider usage base.

- Applications and development frameworks will need to target form factors such as mobile devices and collaborative devices/applications.
- Smarter and faster development with the ability to reuse, share and transfer information and knowledge.
- Convergence of technologies, specifically focusing on knowledge and information convergence.
- Personalisation/Contextualisation of applications will evolve further.
- Community source, freeware all starting to mature as viable offerings to the University.
- Web 2.0, 3.0 are key future elements to be considered, with immediate focus on Web 2.0, and the commencement of planning for Web 3.0.
Infrastructure and Technology

Overall, the technological environment needs to be flexible and quick to respond to either additional requests or performance issues.

The network will need to continue to accommodate a number of access channels, not too dissimilar to today’s channels (Ethernet, WiFi, and 3G), however bandwidth requirements will increase dramatically as demand for richer content continues to rise.

The network is adequately positioned to scale accordingly, however positioning for multi-point to multi-point distribution of high quality audio/visual content needs to be strongly supported, enabling both Research, and Teaching & Learning opportunities to be explored and implemented with particular emphasis on collaborative activities.

Digitised content development needs to keep ahead of demand requirements, ensuring rich sources of knowledge are able to be delivered to a variety of form factors quickly and reliably.

With the development of digital content, either “born digital” content or digitised content, expected to increase exponentially, the volume of storage required for data, content and documentation will be significantly higher than today’s requirements. Rapid changes in storage technologies will allow more capacity without necessarily taking significantly more footprint. The ability to add seamlessly to the storage network is standard practice today, and therefore unlikely to require significant deviations from existing practices. There is also a significant shift towards datacentric research, requiring significant storage, and strong archival and retrieval processes to support it.

Much like storage, the continuing investment in technology and computing capacity is standard practice today, and is designed to incrementally scale as demand increases. The virtual environment will continue to be the mainstay of the processing power delivered to the user community over the next several years.

The service aspect of IT needs to reflect a move towards a consumable approach, where services such as storage, archiving, processing etc are more accessible for selection and consumption by end users. Certainly some service components may become totally self service over the longer term.

- Positioning for high quality digital content storage and delivery
- Improve ease of use of IT services and adoption of subscription-like service models, where services can be selected and enabled with minimal effort and cost.
- Maintain accessibility and continue to develop/invest in new channels
- Creation of an agile and flexible environment leading to more ‘customer friendly’ service model

Governance

Governance capabilities should be structured to allow consistent and transparent processes to be implemented - providing stronger control and function across the portfolios of work. The University plans to improve the link between University wide planning and activities in a Faculty or Service Division.

In order to support the governance functions, strong internal processes pertaining to project and programme management also should be in place.
Strategic planning, capacity planning, and resource planning should be interwoven into the activities to allow work to be scheduled, and executed with confidence and in alignment with the organisational goals.

Centrality and consistency of information form two key themes which underpin the Governance and Management future state, and can be encapsulated across the nine different areas of the future governance and management state as presented above.

- Centrality of information is essential for the ability of managers to view the enterprise initiatives, plan capacity, schedule work, and most importantly, allow executive transparency into Portfolios, Programmes and Projects easily. This will also enable documentation to be rapidly shared, reviewed and critiqued.

- Consistency of both information and process is required to apply standard governance and management processes across all portfolios, programmes and projects, irrespective of manager, owner or sponsor of the project.

Governance also incorporates the management of risk. The University has established a very strong information security framework, based on ISO standards. Despite this foundation, the University is currently not yet at an acceptable level of compliance in some areas of IT risk management and further work is essential to enhance understanding of risk ownership and compliance within the University.

The University is striving to improve its overall Business Continuity Management and information security compliance. There has been considerable progress with respect to central infrastructure planning, and the majority of areas have now completed business continuity plans. A greater emphasis on IT security and risk management is required in order to more effectively manage IT risk.
Support

The demands on the support teams continue to increase. As technologies change, the skillsets and capabilities of the workforce need to stay aligned to the changes. Alignment of skills to future technologies is also key to developing the agility required to react to future demands.

The way in which IT is provisioned within the University will be more oriented around Service Management, with the ability to have strong frameworks and processes to support a consistent and measurable approach to service delivery, including service levels.

More flexible support models need to be in place around areas where there is a lack of support, or where other options now exist, where previously they had not. External options such as vendor support from Oracle, or offshore opportunities such as those from India are all possible alternatives that should be reviewed on an ongoing basis.

- Introduce more effective workforce planning and utilisation
- Embed an IT Service Management ethos across the University.
- Continued investment and development in support people.
- Seek alternatives where practical for supplementing support.

Processes

To improve the effectiveness and realisation of benefits from IT, it is important that any introduction of IT where it impacts faculty or service division processes is more closely assessed and mapped during the early stages of any IT initiative. This will require more robust tools to manage and map business processes, and for these processes to be appropriately curated as a long term business asset. The University must also acknowledge that it is often in the long term interests of the IT roadmap and strategic direction that customisation of processes to align with systems is more preferable to customisation of software and application to align to business process due to the medium and long term costs associated with ongoing modernisation of the application portfolio.

Toolsets are now available which manage the curation, and re-composition of processes, and process building blocks which enable the modelling and remodelling of processes.

- Key business processes are documented and well understood
- New processes are captured and incorporated into process repositories.
- Toolsets now capable of facilitating more effective Business Process Re-engineering.
This model links the Future State key points outlined previously, to a set of objectives and strategic directives which are then summarised later in this document.

<table>
<thead>
<tr>
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<th>Key Points</th>
<th>Objective</th>
<th>Strategy</th>
</tr>
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<tbody>
<tr>
<td>Infrastructure and Technology</td>
<td>Improve ease of use of IS services and adoption of subscription-like models, where services can be selected and enabled with minimal effort and cost.</td>
<td>To provide reliable, economic, effective IT infrastructure and services</td>
<td>Expand access to computing and information resources</td>
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<td></td>
<td>Maintain accessibility and continue to develop/invest in new channels</td>
<td>Proactively manage infrastructure for growth</td>
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<tr>
<td></td>
<td>Creation of an agile and flexible environment leading to more ‘customer friendly’ service model</td>
<td>Provide capabilities to explore and exploit new technologies</td>
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<td></td>
<td>Position for high quality audio/visual content and digitalisation support</td>
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</tr>
<tr>
<td>Applications</td>
<td>Applications will need to target form factors such as mobile devices and collaborative devices/applications.</td>
<td>To maintain and develop a modern application stable capable of supporting current and next generation technologies</td>
<td>Maintain enterprise application investment to remain current</td>
</tr>
<tr>
<td></td>
<td>Smarter, faster development, with the ability to reuse, share and transfer information and knowledge.</td>
<td></td>
<td>Provide capabilities to explore and exploit new applications and cost structures</td>
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<tr>
<td></td>
<td>Personalisation/Contextualisation of applications will evolve</td>
<td></td>
<td>Manage resources effectively across a prioritised investment profile.</td>
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<tr>
<td></td>
<td>Web 2.0 and Web 3.0 key future elements to be considered</td>
<td></td>
<td>Implement an enterprise architecture supporting long term objectives of interconnectivity</td>
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<td></td>
<td>Convergence of technologies, specifically focusing on knowledge and information convergence.</td>
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<td></td>
<td>Community source, freeware all starting to mature as viable offerings to the University</td>
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</tr>
<tr>
<td>Processes</td>
<td>Key business processes are documented and well understood</td>
<td>To document and enhance business processes</td>
<td>Improve UoA processes and change management practices</td>
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<td></td>
<td>New processes are captured and incorporated into process repositories.</td>
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<td>Support</td>
<td>Introduce more effective workforce planning and utilisation</td>
<td>To manage IT resources effectively and efficiently</td>
<td>Manage resources effectively across a prioritised investment profile.</td>
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<tr>
<td></td>
<td>Embed an IS Service Management ethos across the University.</td>
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<td></td>
<td>Continued investment and development in our support people, and seek alternatives where practical for supplementing support</td>
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Part 3: BUILDING CAPABILITY

Building capability

To support the IT Strategy, it is essential the approach to managing capability is also addressed. This section outlines how the management of capability should be addressed, and defines the mechanisms by which it should be done.

The term Service Management in this section refers to the principal to provide, manage and deliver IT Services to the wider University community. This also includes many underlying services which also provide the foundation for the delivery of the University’s IT strategy. It is therefore imperative that the University of Auckland has the capability and capacity to deliver upon this strategy with the resources (i.e. people, technology and funding) available to it, and to demonstrate a fundamental capacity to execute over the long term.

While Service Management is a broad topic, focus for this strategy is placed upon Capability & Capacity management, and Project & Programme management, both of which directly support the planning and execution of the individual IT Strategic components.

While not necessarily explicit within the overall IT Strategy, the operational and tactical goals for IT need to be included in order for UoA to improve its ability to deliver upon its strategy.

These process changes and initiatives have been given the UoA Strategic Objective name of “Building Capability” within the list of initiatives, and will drive a number of required changes to build and support the capability to support the overall strategy.

Development of capability strategies need to give key consideration to ensure the areas of People, Process, Technology and Organisation are addressed and supported in terms of quality, efficiency and effectiveness and will need to form an integral part of the tactical plans, operational goals and targets for the various contributory areas of IT across the University.

A central requirement to this Strategy is also the development of a model to assess and improve the capabilities across IT. The model (Capability Maturity Model - CMM) needs to provide clear lines of responsibility, and provide a context for which both short term and long term actions can be taken and measured objectively. Taking this approach ensures that Capability and Capacity are seen from an organisational perspective, rather than the focus being placed solely upon human resources.

The CMM approach will provide a framework on which a standard set of capabilities can be measured, and will result in being able to address the three pillars of Quality, Efficiency and Effectiveness in a structured way.

The capabilities to deliver on the IT strategy will be strongly enhanced through the adoption of such an approach.

More detail on the Capability model can be found in Appendix 2.
Building Capability – Planned Initiatives and level of Focus/Impact

The model below represents the ‘Building Capability’ strategic initiatives planned and shows the linkages to where the focus will be directed over the next few years. The model highlights the key areas of focus will be mainly focused around building the EFFECTIVENESS and EFFICIENCY of TECHNOLOGY and PROCESS elements.
Part 4: Linking the University and IT Strategies

Linking back to the UoA Strategy

Overview
This updated IT strategy has been written against the framework of its 2005-12 strategic plan. In this section, the framework of the University Strategy has been taken and within it, identified areas that IT can support the strategy or add competitive advantage for the University.

Mapping Initiatives the UoA Strategy
In the diagrams on the following pages, the high level linkages to the external factors impacting the University and their impact on IT strategy have been identified. The University strategic objectives have then been taken and linked to the three areas that were identified where IT can add strategic advantage to the University. These are:

- Student engagement over the whole life-cycle (e.g. from recruitment to alumni relations)
- Research
- Managing knowledge

Finally, each area of the University’s strategy has been reviewed to identify IT projects that support these areas. These include both strategic projects and projects to provide support to core areas. Many of these requirements were identified in workshops conducted as part of this strategy exercise.

This exercise provides us with a list of projects to support the University’s strategy. The priority projects for the University have been highlighted at the conclusion of this section, and outlined further details of Programmes and Projects in an attached document.

Core IT Strategies
Following the Current and Future State analysis within the previous section of this document, there emerges 12 core ‘IT-focused’ strategies. These IT strategies are aimed at growing and developing IT Capability and Capacity, and more importantly delivering the required changes within this IT Strategy, and will be used in conjunction with the University of Auckland Strategy to generate initiatives, programmes and projects for the 2009-2011 strategy.

Core IT Strategies

<table>
<thead>
<tr>
<th>Core IT Strategies</th>
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<tbody>
<tr>
<td>Provide effective tools to allow transparency of IT investments</td>
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<tr>
<td>Implement workflow around IT investment management</td>
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<tr>
<td>Capture and exploit benefits and value from IT investments.</td>
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<tr>
<td>Manage resources effectively across a prioritised investment profile.</td>
</tr>
<tr>
<td>Provide capabilities to explore and exploit new technologies</td>
</tr>
<tr>
<td>Proactively improve IT security across the University</td>
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<td>Maintain enterprise application investment to remain current</td>
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<td>Expand access to computing and information resources</td>
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<td>Proactively manage infrastructure for growth</td>
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<td>Provide capabilities to explore and exploit new applications and cost structures</td>
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<tr>
<td>Implement an enterprise architecture supporting long term objectives of interconnectivity</td>
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<tr>
<td>Improve UoA processes and change management practices</td>
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</table>
Overview of UoA Strategy & Core IT Strategy Linkages

Linkage between UoA Strategy and IS Strategy

- Achieve High Quality Student Body
- Achieve PBRF ratio thru high quality research environment
- Building Capability
- Culture for staff to reach full potential
- Distinctive international education experience
- Engage alumni & friends in relationships
- Enhanced Research support thru doubling income
- High quality infrastructure for t&l, research etc
- Increase & diversify revenue
- Large Scale Research Centres of Excellence
- NZ premier research university, peer with leading unis
- Outstanding Teaching & Learning Environment
- Planning & review processes to achieve strategy
- Promote governance & management practices
- Recruit & retain high quality staff & student body
- Responsibility & obligations of Te Tiriti o Waitangi
- Safeguard viability & autonomy thru financial mgmt
- Welcoming student environment with academic excellence

- Provide capabilities to explore and exploit new technologies
- Provide capabilities to explore and exploit new applications and cost structures
- Proactively mitigate and manage Risk Exposure and Security across the University IT Infrastructure
- Proactively manage infrastructure for growth
- Manage resources (people/technology/assets/costs) effectively across a prioritised investment profile
- Maintain enterprise application investment to enhance value
- Improve UoA processes and change management practices
- Implement an enterprise architecture supporting long term objectives of interconnectivity
- Expand access to computing and information resources
- Capture and exploit benefits and value from existing IT investments
Objectives and IT Strategy

This section shows the linkage between the University of Auckland’s strategies to the major IT programmes and projects that will support the strategy. A full list of mapped projects is shown in Appendix 1. A full breakdown of Projects with sub projects can be found in Appendix 3. The Programmes and Projects section of the strategy outlines more details about the nature and timing of the projects.

International Standing

UoA strategies are:

1. NZ Premier University with international standing
2. Distinctive International Experience

Major IT initiatives to support the UoA’s international standing in 2009 are the support of the eLearning Strategy, Support of Multimedia Digital Repositories, a significant focus and expansion on lecture recording, a renewed emphasis on further expanding wireless across the campus and execution of the eResearch programme.

UoA Strategy

IS Programme / Project

Teaching & Learning Support

- Implementation of eLearning Strategy
- Lecture Recording and Assoc Repositories
- Multimedia Digital Repositories

Infrastructure Programme

- Wireless and Remote Access

Research Support

- eResearch Programme
- RIMS Replacement
Research & Creative Work

UoA Strategies are:

3. Achieve PBRF ratio through high quality research environment
4. Masters & Doctorial Completions
5. Double Research Income
6. Develop large scale institutes of excellence

Projects supporting collaboration, digital repositories to store research outputs, and access to facilities and data across different organisations have been accorded a priority.

Other priority targets in this area are supporting research administration in order to maximise UoA’s access to research funds, and support for post graduate students and their research requirements through the replacement of the UoA’s Research Management System, RIMS, which is one of the key priorities for 2009.
Teaching & Learning

UoA Strategies are:

7. Achieve High Quality Student Body
8. Curriculum Meeting Highest Standards of Excellence
9. Outstanding Teaching & Learning Environment

Of note is the planned Student Administration system upgrade/replacement over 2009/2010 which is aimed not only at replacing aging technology, but also at enabling significant improvements in business processes, student and staff experience with the system, and also the enabling of many services and features not able to be accessed in the current version of Student Administration. This is seen as a key strategic implementation for the University.

In conjunction with this, is the deployment of the Identity Management Programme, aimed at establishing systems to manage ‘identity’ outside of our core ERP business suite enabling superior management of access, workflow and personalisation across all systems.

Major IT initiatives to support Teaching & Learning at the University of Auckland include the supporting of enhancements to the eLearning strategy. This in turn will influence the ongoing strategy and development for CECIL, the University’s Learning Management System.

In conjunction with the above, the University is also considering how best to serve students who are “time poor”, and therefore desire flexibility in programme delivery. This gives rise to lecture recording and video streaming projects for which a significant focus is needed in 2009.
Treaty of Waitangi

UoA Strategies are:

10. Responsibilities & Obligations of Te Tiriti o Waitangi

Key initiatives in this area are to improve information available for decision making through the Decision Support Programme around cultural diversity and ethnic planning processes, in combination with focusing on student centricity from improvements in the HR and Student Administration systems.

Community Engagement

UoA Strategies are:

11. Partnership with Local, National and International Communities
12. Engage Alumni and Friends in Relationships

Major initiatives are to continue to renew aspects of the Content Management System, which have already included significant changes to the UoA’s core website, and further improvements in the Alumni sections (e.g. Alumni Self Service) are planned. New developments aimed at reengaging Alumni are also planned across the year through advancements in our web presence and functionality.

Excellent People

UoA Strategies are:

13. Recruit & Retain a High Quality Staff & Student Body
14. Welcoming Student Environment with Academic Excellence
15. Culture for Staff to Reach Full Potential

The most significant initiative in this area is to improve the UoA’s systems and processes in the Student Administration area through the upgrade of its Student Administration System and associated Service Delivery Model. The UoA systems and processes for serving staff and students require considerable enhancement, and there are both challenges and opportunities for the University’s process improvement teams to enhance this vital area.

A continuation of the upgrade of our CMS across further Faculties is planned for 2009, and this will enable students, prospects and staff to access and find information more easily (and enjoyably) than in the past.

Focus on improvements in the way courses can be accessed through the delivery of Lecture Recording, and improvements to the way multi-media repositories are managed and accessed will see further improvements in the Teaching and Learning environment.

Through improvements in the way identity is managed within our systems, this will allow greater flexibility in the way we provide access, customisation and configuration to users in the future.
Resourcing and Organising for Quality

UoA Strategies are:

17. Increase & Diversify Revenue
19. Promote Governance & Management Practices

There are a large number of projects to support the University’s infrastructure and administrative practices. These are shown below, clustered by category. Of significance in 2009, is an emphasis on funding support for infrastructure initiatives over the next few years, as further foundations are set, in combination with projected growth and demand for infrastructure services, such as storage.

Priority areas include the support of Information and collaboration initiatives, business continuity, and improving decision making through the University’s Data Warehouse via the Decision Support programme.

Pending further agreements later this year, is a planned upgrade of the PeopleSoft Finance System, with integration of UniServices, however, this is still in the early stages of planning at the time of writing.

The University web program is also essential to the effective operations of the University, including attracting prospective students and other customers.

Within the Teaching and Learning programme, of significance is the implementation a new timetabling system, providing improved ability to maximise room/resource utilisation across the University.
Part 5: KEY PROGRAMMES AND PROJECTS

Programmes and Projects

A full list of proposed projects is shown in the attached “Programmes and Projects” document. This describes the projects and proposed budgets and timings, along with linkages of each programme and project back to the University’s strategic objectives.

Priority Programmes and Objectives

Top Level Priorities

To determine the top level priority projects, the size and complexity has been considered, together with their impact on UoA strategies (or building of capability.) The top level priority projects and programmes for the University which have the greatest impact on UoA Strategic Objectives are summarised below.

<table>
<thead>
<tr>
<th>Top Level Priorities</th>
<th>Very High</th>
<th>High</th>
<th>Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Support Program</td>
<td>Finance Systems Upgrade</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Decision Support</td>
<td>Decision Support Programme</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>eResearch</td>
<td>eResearch Programme</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Identity Management</td>
<td>Identity Management Programme</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Info Management &amp; Collaboration</td>
<td>Info Management Strategy</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Information Lifecycle Management</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Online Collaborative Workspace Environments</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Info Security &amp; Risk Mgmt</td>
<td>Business Continuity</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Information &amp; Security Risk Mgmt Programme</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Replace Newton Data Centre</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Infrastructure Program</td>
<td>UoA Infrastructure Program</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>UoA Network Programme</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>UoA Storage - SAN Storage Capacity Growth</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UoA Voice &amp; IP Services</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Wireless and Remote Access</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>IS Governance</td>
<td>Strengthen IT Governance</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Policy Standards &amp; Principles</td>
<td>Documented Strategic Directions</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Service Orientated Architecture</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Research Support</td>
<td>Storage for Imaging &amp; Research</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Research+ (RIMS Replacement)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Student Experience</td>
<td>Student Admin System Upgrade</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Student Administration Programme</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student Services Programme</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Teaching &amp; Learning Program</td>
<td>Implement eLearning Strategy</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Lecture Theatre Audio Visual Enhancements</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Timetabling Project</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lecture Recording and Associated Digital Storage</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Multimedia Digital Repositories</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>User Services &amp; Support</td>
<td>Service Level Management</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Web Program</td>
<td>Web Content Management System Upgrade</td>
<td>1</td>
<td>3</td>
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<tr>
<td></td>
<td>Web Strategy, Roles &amp; Responsibilities</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Web Developments</td>
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</tr>
</tbody>
</table>

The University’s Information Security and Risk Management programme applies across these projects and is integral to the success of the overall programme.
The timings of the University’s highest priority projects for 2009-2011 are:

<table>
<thead>
<tr>
<th>Programme</th>
<th>Project</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Support Program</td>
<td>Finance Systems Upgrade</td>
<td>X</td>
<td>X</td>
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<tr>
<td></td>
<td>Process Improvement Programme</td>
<td>X</td>
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<td>Decision Support</td>
<td>Decision Support Programme</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>eResearch</td>
<td>eResearch Programme</td>
<td>X</td>
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<tr>
<td>Identity Management</td>
<td>Identity Management Programme</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Info Management &amp; Collaboration</td>
<td>Info Management Strategy</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Information Lifecycle Management</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Online Collaborative Workspace Environments</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Info Security &amp; Risk Mgmt</td>
<td>Business Continuity</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Information &amp; Security Risk Mgmt Programme</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Replace Newton Data Centre</td>
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<tr>
<td>Infrastructure Program</td>
<td>UoA Infrastructure Program</td>
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<td>X</td>
<td>X</td>
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<tr>
<td></td>
<td>UoA Network Programme</td>
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<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>UoA Storage - SAN Storage Capacity Growth</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>UoA Voice &amp; IP Services</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wireless and Remote Access</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>IS Governance</td>
<td>Strengthen IT Governance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policy Standards &amp; Principles</td>
<td>Documented Strategic Directions</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Service Orientated Architecture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research Support</td>
<td>RIMS Replacement</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Storage for Imaging &amp; Research</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Student Experience</td>
<td>Student Admin System Upgrade</td>
<td>X</td>
<td></td>
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<tr>
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<td>Student Administration Programme</td>
<td>X</td>
<td>X</td>
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<tr>
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<td>Student Services Programme</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching &amp; Learning Program</td>
<td>Implement eLearning Strategy</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lecture Theatre Audio Visual Enhancements</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Timetabling Project</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Multimedia Digital Repositories</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Lecture Recording and Associated Digital Storage</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>User Services &amp; Support</td>
<td>Service Level Management</td>
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<td></td>
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<tr>
<td>Web Program</td>
<td>Web Content Management System Upgrade</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Web Strategy, Roles &amp; Responsibilities</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Web Developments</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

The proposed costs of this programme is outlined in the Programme & Projects section of this Strategy.
Overview of Linkages between UoA Strategy & IT Projects

Project Impact on UoA Strategy

<table>
<thead>
<tr>
<th>Project Impact</th>
<th>Medium</th>
<th>High</th>
<th>Very High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieve High Quality Student Body</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achieve PBRF ratio thru quality research env.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building Capability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culture for staff to reach full potential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distinctive international education experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engage alumni &amp; friends in relationships</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhanced Research support thru doubling income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High quality Infrastructure for t&amp;l, research etc</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase &amp; diversify revenue</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large Scale Research Centres of Excellence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NZ premier research Uni, peer with leading Unis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outstanding Teaching &amp; Learning Environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning &amp; review processes to achieve strategy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promote governance &amp; management practices</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recruit &amp; retain high quality staff &amp; student body</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safeguard viability &amp; autonomy thru financial mgmt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Welcoming student environment with academic exc.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part 6: Appendices
Appendix 1  IT Projects Sorted by UoA Strategies
Appendix 2  The Capability Model
Appendix 3  Projects and Sub Projects
## Appendix 1  IT Projects Sorted By UoA Strategies

### IS Strategy - By UoA Strategic Goal

<table>
<thead>
<tr>
<th>UoA Strategic Goal</th>
<th>UoA Strategy Category</th>
<th>Impact</th>
<th>Project</th>
<th>Project Description</th>
<th>High Priority</th>
<th>Programme</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>International Standing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 NZpremier research Uni, peer with leading Unis</td>
<td></td>
<td>VH</td>
<td>eResearch Programme</td>
<td>Establish and foster support for eResearch via the VC's task force findings.</td>
<td>Yes</td>
<td>eResearch</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H</td>
<td>Research+ (RIMS Replacement)</td>
<td>Support the acquisition of the InfoEd package and the preparation and implementation of a research systems program over 2009-10</td>
<td>Yes</td>
<td>Research Support</td>
</tr>
<tr>
<td><strong>International Standing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Distinctive international education experience</td>
<td></td>
<td>H</td>
<td>Implement eLearning Strategy</td>
<td>Support implementation of the findings of the 2008 eLearning strategy, including the development of a T&amp;L technology roadmap, development of CCEL strategy, Virtual Environments and Social networking.</td>
<td>Yes</td>
<td>Teaching &amp; Learning Program</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H</td>
<td>Lecture Recording and Associated Digital Storage</td>
<td>Encapsulates significant expansion of Lecture Recording, and the infrastructure/systems and structures necessary to make the material available to staff/students. Includes iTunesU, Digital Storage etc.</td>
<td>Yes</td>
<td>Teaching &amp; Learning Program</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H</td>
<td>Multimedia Digital Repositories</td>
<td>Develop multimedia repositories in partnership with the Library for externally sourced content (eg via Unisat or commercial providers such as and the reconstitution of Web Governance.</td>
<td>Yes</td>
<td>Teaching &amp; Learning Program</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VH</td>
<td>eResearch Programme</td>
<td>Establish and foster support for eResearch via the VC's task force findings, and the reconstitution of Web Governance.</td>
<td>Yes</td>
<td>eResearch</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L</td>
<td>Wireless and Remote Access</td>
<td>Encourage &amp; support students to use their own devices, including through improving wireless &amp; remote access services. In addition, continue to expand/enhance Wireless across campuses.</td>
<td>No</td>
<td>Infrastructure Program</td>
</tr>
<tr>
<td><strong>Research &amp; Creative Work</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Achieve PBRF ratio thru hi quality research env.</td>
<td></td>
<td>VH</td>
<td>eResearch Programme</td>
<td>Establish and foster support for eResearch via the VC's task force findings.</td>
<td>Yes</td>
<td>eResearch</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VH</td>
<td>Research+ (RIMS Replacement)</td>
<td>Support the acquisition of the InfoEd package and the preparation and implementation of a research systems program over 2009-10</td>
<td>Yes</td>
<td>Research Support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H</td>
<td>Storage for Imaging &amp; Research</td>
<td>Provide increased storage and management for Research Data across the University</td>
<td>Yes</td>
<td>Research Support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>Online Collaborative Workspace Environments</td>
<td>Further expansion of SharePoint beyond the secretariat and expansion of the use of collaboration tools.</td>
<td>No</td>
<td>Info Management &amp; Collaboration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>Student Administration Programme</td>
<td>Programme of minor Student Administration enhancements aimed at tactical improvements in assisting the enrolment process, and the UoA ability to better manage the relationship with the student. Includes Student Online Payments, Student profile etc</td>
<td>No</td>
<td>Student Experience</td>
</tr>
<tr>
<td><strong>Research &amp; Creative Work</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Enhanced Research support thru doubling income</td>
<td></td>
<td>VH</td>
<td>eResearch Programme</td>
<td>Establish and foster support for eResearch via the VC's task force findings.</td>
<td>Yes</td>
<td>eResearch</td>
</tr>
<tr>
<td></td>
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<td>H</td>
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<td></td>
<td></td>
<td>M</td>
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<td>No</td>
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</tr>
<tr>
<td><strong>Research &amp; Creative Work</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Large Scale Research Centres of Excellence</td>
<td></td>
<td>M</td>
<td>Storage for Imaging &amp; Research</td>
<td>Provide increased storage and management for Research Data across the University</td>
<td>Yes</td>
<td>Research Support</td>
</tr>
<tr>
<td><strong>Teaching &amp; Learning</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Achieve High Quality Student Body</td>
<td></td>
<td>VH</td>
<td>Student Admin System Upgrade</td>
<td>Implementation of SA Systems Upgrade Project, incorporating Systems Replacement, Business Process Design and Implementation of new operating model.</td>
<td>Yes</td>
<td>Student Experience</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>Identity Management Programme</td>
<td>Project aimed at the revamp of the way identify is managed within core systems across the University. Improve Identity Management principals and frameworks allowing staff, prospects &amp; others easier and simper access to systems, both internal and external</td>
<td>Yes</td>
<td>Identity Management</td>
</tr>
</tbody>
</table>
Teaching & Learning

9 Outstanding Teaching & Learning Environment

VH Implement eLearning Strategy
Support implementation of the findings of the 2008 eLearning strategy, including the development of a T&L technology roadmap, development of CECIL strategy, Virtual Environments and Social networking.

H Lecture Recording and Associated Digital Storage
Encapsulates significant expansion of Lecture Recording, and the infrastructure/systems and structures necessary to make the material available to staff/students. Includes iTunesU, Digital Storage etc.

H Lecture Theatre Audio Visual Enhancements
Ongoing enhancements to the Lecture Theatre Audio Visual Environment and Equipment.

H Multimedia Digital Repositories
Develop multimedia repositories in partnership with the Library for externally sourced content (eg via Unisat or commercial providers such as Rockwell & others).

H Web Strategy, Roles & Responsibilities
Implementation of the University’s overall web strategy and approach to our web presence, including implementation of roles and responsibilities, and the reconstitution of Web Governance.

H Wireless and Remote Access
Encourage & support students to use their own devices, including through improving wireless & remote access services. In addition, continue to expand/upgrade Wireless across campuses.

M Identity Management Programme
Project aimed at the revamp of the way identify is managed within core systems across the University. Improve Identity Management principals and frameworks allowing staff, prospects & others easier and simpler access to systems, both internal and external.

M Online Collaborative Workspace Environments
Further expansion of SharePoint beyond the secretariat and expansion of the use of collaboration tools.

M Student Admin System Upgrade

L Decision Support Programme
2009 priorities: Enhance ETL reporting, Student and HR information, Reporting Strategy and Balanced scorecard.

Treaty of Waitangi

10 Resp. & obligations of Te Tiriti o Waitangi

L Decision Support Programme
2009 priorities: Enhance ETL reporting, Student and HR information, Reporting Strategy and Balanced scorecard.

Community Engagement

12 Engage alumni & friends in relationships

H Web Strategy, Roles & Responsibilities
Implementation of the University's overall web strategy and approach to our web presence, including implementation of roles and responsibilities, and the reconstitution of Web Governance.

M Web Content Management System Upgrade
Further deployment of new CMS across Faculties as appropriate (including implementation of new style guide, navigation and functionality).

M Web Developments
Web Developments Programme incorporating Staff Directory, Staff Intranet, Shopping Cart/Online Payments Gateway

Excellent People

13 Recruit & retain high quality staff & student body

VH Student Admin System Upgrade

L HR Systems Enhancements
Minor enhancements and developments to support post go live requirements from the new PeopleSoft HR System deployed in 2008. Includes improvements such as interfaces b/w HR and Finance

Excellent People

14 Welcoming student environment with academic exc.

H Lecture Theatre Audio Visual Enhancements
Ongoing enhancements to the Lecture Theatre Audio Visual Environment and Equipment.

H Student Admin System Upgrade

M Info Management Strategy
Determining a programme following the completion of a draft Info Mgmt strategy

M Web Content Management System Upgrade
Further deployment of new CMS across Faculties as appropriate (including implementation of new style guide, navigation and functionality).

M Web Developments
Web Developments Programme incorporating Staff Directory, Staff Intranet, Shopping Cart/Online Payments Gateway

Excellent People

15 Culture for staff to reach full potential

H Info Management Strategy
Determining a programme following the completion of a draft Info Mgmt strategy

2009
Resourcing & Organising for Quality

16  Safeguard viability & autonomy thru financial mgmt

M  Finance Systems Upgrade  Upgrade PeopleSoft Finance to version 9, gaining improved functionality in asset management and other areas.  No  Central Support Programme
L  HR Systems Enhancements  Minor enhancements and developments to support post go live requirements from the new PeopleSoft HR System deployed in 2008. Includes improvements such as interfaces b/w HR and Finance  No  HR Support Programme
L  Student Administration Programme  Programme of minor Student Administration enhancements aimed at tactical improvements in assisting the enrolment process, and the University's ability to better manage the relationship with the student. Includes Student Online Payments, Student profile etc  No  Student Experience Programme

Resourcing & Organising for Quality

17  Increase & diversify revenue

M  Student Administration Programme  Programme of minor Student Administration enhancements aimed at tactical improvements in assisting the enrolment process, and the University's ability to better manage the relationship with the student. Includes Student Online Payments, Student profile etc  No  Student Experience Programme

Resourcing & Organising for Quality

18  High quality infrastructure for t&l, research etc

VH  Business Continuity  Completion of University wide Business Continuity programme, including BC support of research equipment. This project primarily focuses on the IT Business Continuity completion and will work in conjunction with the wider BC programme.  Yes  Info Security & Risk Mgmt Programme
VH  Identity Management Programme  Project aimed at the revamp of the way identity is managed within core systems across the University. Improve Identity Management principals and frameworks allowing staff, prospects & others easier and simpler access to systems, both internal and external  Yes  Identity Management Programme
VH  Info Management Strategy  Determining a programme following the completion of a draft Info Mgmt strategy  Yes  Info Management & Collaboration Programme
VH  Information & Security Risk Mgmt Programme  Reduce risk to the University through the information security and risk mgmt program, including the security mgmt processes for our major enterprise applications and infrastructure including email SPAM, Virus and Intrusion protection  Yes  Info Security & Risk Mgmt Programme
VH  Storage for Imaging & Research  Provide increased storage and management for Research Data across the University.  Yes  Research Support Programme
VH  Student Admin System Upgrade  Implementation of SA Systems Upgrade Project, incorporating Systems Replacement, Business Process Design and Implementation of new operating model.  Yes  Student Experience Programme
VH  UoA Infrastructure Program  Program of ongoing work related to improving the UoA Infrastructure, Increasing capacity for growth, and infrastructure replacement and additional network equipment for growth, and associated monitoring.  Yes  Infrastructure Programme
VH  UoA Network Programme  Enhance the University’s network backbones, and cabling. Includes completion of University wide Business Continuity programme, including BC support of research equipment. This project primarily focuses on the IT Business Continuity completion and will work in conjunction with the wider BC programme.  Yes  Infrastructure Programme
H  Information Lifecycle Management  Introduction of improved archiving and classification, including meeting the requirements of the Public Records Act. Also incorporates introduction of archiving tools such as the EV Enterprise Vault for email.  Yes  Info Management & Collaboration Programme
H  Lecture Recording and Associated Digital Storage  Encapsulates significant expansion of Lecture Recording, and the infrastructure/systems and structures necessary to make the material available to staff/students. Includes (iTunes), Digital Storage etc.  Yes  Teaching & Learning Programme
H  Lecture Theatre Audio Visual Enhancements  Ongoing enhancements to the Lecture Theatre Audio Visual Environment and Equipment.  No  Teaching & Learning Program
H  Multimedia Digital Repositories  Develop multimedia repositories in partnership with the Library for externally sourced content (eg via Unisat or commercial providers such as iTunes).  Yes  Teaching & Learning Program
H  Replace Newton Data Centre  The University’s second data centre at IBM’s Newton facility is at capacity, and does not meet the necessary distance requirements from the City campus to effectively serve the University’s Disaster Recovery needs.  Yes  Info Security & Risk Mgmt Programme
H  Timetabling Project  Implementation of new booking and timetabling system, including enhancement of associated processes and practices.  Yes  Teaching & Learning Program
H  UoA Voice & IP Services  Implementing the findings of a strategic review of voice & IP services, including gradual replacement of the University’s PBX technology.  Yes  Infrastrucutre Programme
H  Web Content Management System Upgrade  Further deployment of new CMS across Faculties as appropriate (including implementation of new style guide, navigation and functionality.  Yes  Web Program
H  Web Developments  Web Developments Programme incorporating Staff Directory, Staff Intranet, Shopping Cart/Online Payments Gateway  Yes  Web Program
M  Decision Support Programme  2009 priorities: Enhance ETL reporting, Student and HR information, Reporting Strategy and Balanced scorecard.  Yes  Decision Support Programme
Resourcing & Organising for Quality

19 Promote governance & management practices

- VH Process Improvement Programme: The University's programme of process improvement supporting the Process Office. This includes enhancing our overall capability for Business Process Review, Customer Input and the University's Continuous Improvement (CIP) programme.
- VH Strengthen IT Governance: Strengthen the governance of IT across the University. This programme of work incorporates implementation of the results of the Roles & Responsibilities review from 2008.
- H Business Continuity: Completion of University wide Business Continuity programme, including BC support of research equipment. This project primarily focuses on the IT Business Continuity completion and will work in conjunction with the wider BC programme.
- L HR Systems Enhancements: Minor enhancements and developments to support post go live requirements from the new PeopleSoft HR System deployed in 2008. Includes improvements such as interfaces b/w HR and Finance.

Resourcing & Organising for Quality

20 Planning & review processes to achieve strategy

- VH Documented Strategic Directions: Documentation of Architectural strategies and implementation of architecture repository.
- M Business Continuity: Completion of University wide Business Continuity programme, including BC support of research equipment. This project primarily focuses on the IT Business Continuity completion and will work in conjunction with the wider BC programme.
- L HR Systems Enhancements: Minor enhancements and developments to support post go live requirements from the new PeopleSoft HR System deployed in 2008. Includes improvements such as interfaces b/w HR and Finance.
- L Timetabling Project: Implementation of new booking and timetabling system, including enhancement of associated processes and practices.

Building Capability

21 Building Capability

- VH Replace Newton Data Centre: The University's second data centre at IBM's Newton facility is at capacity, and does not meet the necessary distance requirements from the City campus to effectively serve the University's Disaster Recovery needs.
- VH Service Orientated Architecture: Implementation of a Service Oriented Architecture approach to improve the University's capability of delivering functionality to support processes.
- H Strengthen IT Governance: Strengthen the governance of IT across the University. This programme of work incorporates implementation of the results of the Roles & Responsibilities review from 2008.
- H UoA Infrastructure Program: Program of ongoing work related to improving the UoA Infrastructure, increasing capacity for growth, and infrastructure replacement and enhancements to the University's data storage capacity due to growth in storage demands.
- M Lecture Recording and Associated Digital Storage: Encapsulates significant expansion of Lecture Recording, and the infrastructure/systems and structures necessary to make the material available to students. Includes iTunesU, Digital Storage etc.
- M Multimedia Digital Repositories: Develop multimedia repositories in partnership with the Library for externally sourced content (eg via Unisat or commercial providers such as Elsevier) and Digital Storage etc.
- M Service Level Management: Programme of improving service catalogue maintenance, and negotiation of SLAs, SLAs and reporting. Improvements to Service Management and Service Delivery.
- M Student Services Programme: Enhance the provision of services and technologies provided to, or for assisting students. This includes environmental aspects such as printing, email, and Electronic Campus related enhancements.
- M UoA Storage - SAN Storage Capacity Growth: Enhancements to the University's data storage capacity due to growth in storage demands.
- M UoA Voice & IP Services: Implementing the findings of a strategic review of voice & IP services, including gradual replacement of the University’s PABX technology.
- L Documented Strategic Directions: Documentation of Architectural strategies and implementation of architecture repository.
- L Minor Capital Works: Budget for minor capital works programme allowing smaller projects to progress. These projects are sourced from Faculty and Service Division. Eg: Secure Exam Delivery, Instructors and Advisors etc.
Appendix 2  The Capability Model

The model does not prescribe a set sequence for addressing each component, but instead, aims to define levels by which the IT can measure and address its current capability level along the maturity continuum.

The advantage of establishing more mature levels is that it promotes consistency, and produces more predictable outcomes across the diversity of the organisation. It will also serve to highlight areas of attention and provide a facilitative mechanism for ownership and collaboration of senior management to address.

The two capability model tables presented over page provide illustrative levels of capability maturity, and are expected to be reviewed and refined in the early stages of tactical deployment across IT.

Each table will need to be further refined to accommodate the four foundation components (People, Process, Technology and Organisation).
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<th>Immature</th>
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<tr>
<td><strong>Illustrative characteristics</strong></td>
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<tr>
<td>The University is unable to identify its resources with the appropriate skills for successful project delivery</td>
<td>Projects are generally good at identifying resource needs and allocation decisions are generally approved outside of each project and consider the potential impact on other projects or programmes</td>
<td>The University has established a resource pool which identifies the people with the appropriate skills and experience for managing a range of project</td>
<td>The University is able to identify resource utilisation of its resource pool to plan and profile allocation and deliver benefits more effectively</td>
</tr>
<tr>
<td>The University isn't able to gauge or assess if it can fulfil current or planned project commitments with the resources it has.</td>
<td>Project Boards and Project Sponsors have clearly defined roles and responsibilities that are understood and practised.</td>
<td>Resources conflicts are smoothed out and managed before being approved and allocated to projects.</td>
<td>All resources decisions and resource allocations are made giving regard to the impact on other projects and programme benefit delivery and the University's ability to maintain its operational service standards.</td>
</tr>
<tr>
<td>The University cannot gauge the level of resources and skills it requires to fulfil current and future project commitments</td>
<td>The University has developed a database of key project resources and is able to identify current utilisation.</td>
<td>Stage Plans are prepared consistently across all projects which identify the level and number of resources required</td>
<td>The impact of strategic planning and its implementation on future capacity demands and capability requirements is understood and managed.</td>
</tr>
<tr>
<td>Resource conflicts are commonplace when managing projects and programmes</td>
<td>Skills assessments are completed to identify overall capacity and capability within the University.</td>
<td>Performance and availability of resources is assessed against organisational needs</td>
<td>The University has effective demand management strategies in place, and can influence the balance between demand and availability through reprioritisation, sequential and cross project and programme planning.</td>
</tr>
<tr>
<td>Projects and programmes are not managed or delivered consistently with the skills appropriate for the type of projects</td>
<td>The University has established a method for measuring proficiency levels of project resources and evaluating the criticality of its projects</td>
<td>Refresh polices and sequential planning maintains a constant level of capacity and capability</td>
<td>The University can demonstrate optimum usage of its resources.</td>
</tr>
<tr>
<td>There are no standardised and repeatable process for defining, initiating, prioritising, selecting and managing projects</td>
<td>Projects are being managed with the degree of skill and competence appropriate for each type of project</td>
<td>Skills assessments are translated into organisation development plans</td>
<td>Fully effective process for obtaining, allocating and adjusting resource levels are in place.</td>
</tr>
<tr>
<td>The University does not prescribe or mandate the use of specific tools or techniques to support the project delivery and management process</td>
<td>The University is starting to set up formal internal groups to share best practise</td>
<td>Skills within the resource pool are matched according to the proficiency required for each level of project</td>
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## Project and Programme Management - Indicative Model

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<td><strong>Illustrative characteristics</strong></td>
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<td>There is little or no consistency in the University’s approach to project management and the success factors of one project are difficult to replicate.</td>
<td>A corporate approach for project management is developing within the University based on internal and external good practice. Policies and governance arrangements are being established for co-ordinating projects and programmes. Project Boards are established to oversee the implementation of significant change projects. Although plans are relatively high level, plans generally define stages and the key decision points. All projects articulate their objectives. Project resources are identified during initiation as standard practice. All projects have a project plan but these may vary in quality and detail.</td>
<td>The University has established a common framework and standard for managing its projects. Programme Management is being used in parts of the organisation for defining and shaping change programmes and identifying the constituent projects that will deliver the change. The University has established a governance framework for the initiation all projects and programmes. No project is initiated or approved without Senior Sponsor ownership for the business case, providing direction to the project, and the realisation of projected benefits. Plans are developed in sufficient detail with clear timeline plans, milestones and work packages defined.</td>
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<td>No particular project management standard is applied within the organisation. It isn’t uncommon for projects not to have any senior business ownership or direction. The are no governance arrangements or policies for initiating, selecting, running and closing projects and programmes. Project management expertise is not matched to the demands of the project. Projects plans are created in isolation, and in some cases there are no formal documented plans.</td>
<td>The University has fully embedded a corporate standard for project management, which all change projects use consistently. The principles and practices of programme management are now being used to some extent in delivering strategic change. Programme plans integrate and synchronise the timetable for projects with the benefit realisation plan. The University has effective governance for managing projects that span internal and external boundaries. Governance arrangements apply to all project activity across the University. Programme Management is established to translate strategic aims into co-ordinated projects that will bring into effect the necessary business change.</td>
<td>The University is continually developing and improving the standard of project management through a process of establishing best practise, internal/external networks, and lessons learned. A standard programme management approach is embedded across the organisation, through which all strategic change programmes are defined and managed to deliver the University’s vision for change. Projects are controlled and managed through the development and approval of costed stage plans. Individual project plans reflect decision made at the programme level on the sequencing of the projects designed to deliver and maximise benefit, capacity and achievability. Governance for all projects/ and programmes is appropriate to the level of investment and scope.</td>
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The University has established a common framework and standard for managing its projects. Programme Management is being used in parts of the organisation for defining and shaping change programmes and identifying the constituent projects that will deliver the change. The University has established a governance framework for the initiation all projects and programmes. No project is initiated or approved without Senior Sponsor ownership for the business case, providing direction to the project, and the realisation of projected benefits. Plans are developed in sufficient detail with clear timeline plans, milestones and work packages defined. The University has fully embedded a corporate standard for project management, which all change projects use consistently. The principles and practices of programme management are now being used to some extent in delivering strategic change. Programme plans integrate and synchronise the timetable for projects with the benefit realisation plan. The University has effective governance for managing projects that span internal and external boundaries. Governance arrangements apply to all project activity across the University. Programme Management is established to translate strategic aims into co-ordinated projects that will bring into effect the necessary business change. The University is continually developing and improving the standard of project management through a process of establishing best practise, internal/external networks, and lessons learned. A standard programme management approach is embedded across the organisation, through which all strategic change programmes are defined and managed to deliver the University’s vision for change. Projects are controlled and managed through the development and approval of costed stage plans. Individual project plans reflect decision made at the programme level on the sequencing of the projects designed to deliver and maximise benefit, capacity and achievability. Governance for all projects/ and programmes is appropriate to the level of investment and scope.
Information Security and Risk Management - Indicative Model

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<td>Illustrative characteristics</td>
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<td></td>
<td>Risk assessment for processes and business decisions does not occur. The organisation does not consider the business impacts associated with security vulnerabilities and with development project uncertainties. Risk management has not been identified as relevant to acquiring IT solutions and delivering IT services. The organisation does not recognise the need for IT security. Responsibilities and accountabilities are not assigned for ensuring security. Measures supporting the management of IT security are not implemented. There is no IT security reporting and no response process to IT security breaches. There is a complete lack of a recognisable system security administration process. There is no understanding of the risks, vulnerabilities and threats to IT operations or the impact of loss of IT services to the business. Service continuity is not considered as needing management attention.</td>
<td>The organisation considers IT risks in an ad hoc manner, without following defined processes or policies. Informal assessments of project risk take place as determined by each project. The organisation recognises the need for IT security, but security awareness depends on the individual. IT security is addressed on a reactive basis and not measured. IT security breaches invoke &quot;finger pointing&quot; responses if detected, because responsibilities are unclear. Responses to IT security breaches are unpredictable. Responsibilities for continuous service are informal, with limited authority. Management is becoming aware of the risks related to and the need for continuous service.</td>
<td>There is an emerging understanding that IT risks are important and need to be considered. Some approach to risk assessment exists, but the process is still immature and developing. Responsibilities and accountabilities for IT security are assigned to an IT security co-ordinator with no management authority. Security awareness is fragmented and limited. IT security information is generated, but not analysed. Security tends to respond reactively to IT security incidents and by adopting third-party offerings, without addressing the specific needs of the organisation. Security policies are being developed, but inadequate skills and tools are still being used. IT security reporting is incomplete, misleading or not pertinent. Responsibility for continuous service is assigned. The approaches to continuous service are fragmented. Reporting on system availability is incomplete and does not take business impact into account.</td>
<td>An organisation-wide risk management policy defines when and how to conduct risk assessments. Risk assessment follows a defined process that is documented and available to all staff through training. Security awareness exists and is promoted by management. Security awareness briefings have been standardised and formalised. IT security procedures are defined and fit into a structure for security policies and procedures. Responsibilities for IT security are assigned, but not consistently enforced. An IT security plan exists, driving risk analysis and security solutions. IT security reporting is IT-focused, rather than business-focused. Ad hoc intrusion testing is performed. Management communicates consistently the need for continuous service. High-availability components and system redundancy are being applied piecemeal. An inventory of critical systems and components is rigorously maintained.</td>
<td>The assessment of risk is a standard procedure and exceptions to following the procedure would be noticed by IT management. It is likely that IT risk management is a defined management function with senior level responsibility. Senior management and IT management have determined the levels of risk that the organisation will tolerate and have identified measures for risk/return ratios. Responsibilities for IT security are clearly assigned, managed and enforced. IT security risk and impact analysis is consistently performed. Security policies and practices are completed with specific security baselines. Security awareness briefings have become mandatory. User identification, authentication and authorisation are standardised. Security certification of staff is established. Intrusion testing is a standard and formalised process leading to improvements. Cost/benefit analysis, supporting the implementation of security measures, is increasingly being utilised. IT security processes are co-ordinated with the overall organisation security function. IT security reporting is linked to business objectives. Responsibilities and standards for continuous service are enforced. System redundancy practices, including use of high-availability components, are consistently deployed.</td>
<td>Risk assessment has developed to the stage where a structured, organisation-wide process is enforced, followed regularly and managed well. IT security is a joint responsibility of business and IT management and is integrated with corporate security business objectives. IT security requirements are clearly defined, optimised and included in a verified security plan. Security functions are integrated with applications at the design stage and end users are increasingly accountable for managing security. IT security reporting provides early warning of changing and emerging risk, using automated active monitoring approaches for critical systems. Incidents are promptly addressed with formalised incident response procedures supported by automated tools. Periodic security assessments evaluate the effectiveness of implementation of the security plan. Information on new threats and vulnerabilities is systematically collected and analysed, and adequate mitigating controls are promptly communicated and implemented. Intrusion testing, root cause analysis of security incidents and proactive identification of risk is the basis for continuous improvements. Security processes and technologies are integrated organisation-wide. Continuous service plans and business continuity plans are integrated, aligned and routinely maintained. Buy-in for continuous service needs is secured from vendors and major suppliers.</td>
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## Disaster Recovery and Business Continuity Management - Indicative Model

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<td><strong>Illustrative characteristics</strong></td>
<td><strong>Preparing</strong></td>
<td><strong>Developing</strong></td>
<td><strong>Completing</strong></td>
<td><strong>Mature</strong></td>
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</table>
| Computer system recovery in the event of a disaster has not yet been recognised as strategically important by senior management. Risk assessment for business processes and IT systems that support them does not occur. The organisation does not consider the business impacts associated with unscheduled systems outages. Responsibilities and accountabilities are not assigned for ensuring the business can maintain essential activities following a disaster. There is a complete lack of any administration contingency processes. There is no understanding of the risks, vulnerabilities and threats to IT operations or the impact of loss of IT services to the business. Service continuity is not considered as a business driver for planning a business continuity plan. The organisation is not aware of the business continuity strategies it has in place. The management of risks in this area has not been identified as relevant to acquiring IT solutions or delivering IT services. The state of preparedness is generally low across the organisation. The organisation considers risks associated with computer system recovery in an ad-hoc manner, if at all, without following defined processes or policies. Senior management may be becoming aware of the risks related to poor preparedness and may see the value of a disaster recovery program, but they are unwilling to make it a priority and commit resources. Responsibilities for managing this risk are informal, with limited authority. Although one or more faculty, Service Division or functional area has recognised the strategic importance of business continuity, and may have begun efforts to increase executive and enterprise wide awareness, they are left “on their own” to organize, implement, and self-govern any limited business continuity efforts. The state of preparedness may be moderate for the limited number of active participants but remains relatively low across the organisation as a whole. There is an emerging understanding that risks associated with inadequate computer system recovery are significant and need to be considered. Some approach to risk assessment exists, and localised policy and governance frameworks may be in place, but the process is still immature and developing. Senior management, as a group, has not yet committed to a disaster recovery program, although they may have a project under way to assess the business case for it. Senior management interest is being raised and interest in leveraging the ad-hoc work already completed. This work is being promoted as a business driver for launching an enterprise-wide program. Although responsibility for preparation of disaster recovery plans has been assigned, the approaches are fragmented. Any plans that are in place are not coordinated across the organisation and are rarely, if ever, tested. Often plans are allowed to become out-of-date either due to lack of process or insufficient resource allocation – or both. A minority of functional areas or departments have achieved a reasonable state of preparedness. However, as a whole, the organisation is at best moderately prepared. Senior management is committed to the strategic importance of an effective business continuity program. The IT disaster recovery program is understood, supported and is promoted by management. DR procedures are defined and fit into a governance structure for risk management policies and procedures. A central office or department has been created to govern the program and support all enterprise participants. Business continuity policy, practices and processes are standardised across the organisation. Although responsibilities for business continuity are assigned, they may not be consistently enforced. All critical business functions have been identified and continuity plans for their protection have been developed across the organisation. Departments conduct localised tests of critical business continuity plan elements. Most business continuity plans are updated routinely. High-availability components and system redundancy are being applied but only in a piecemeal manner. An inventory of critical systems and components is mostly well maintained. Overall the organisation is moderately prepared. Senior management has participated in crisis management exercises. A multiyear plan has been adopted to continuously “raise the bar” for planning a sophisticated and enterprise wide state of preparedness. Senior management and IT management have determined the levels of risk that the organisation will tolerate and have standard measures for risk/return ratios. It is likely that IT risk management is a defined management function with senior level responsibility. All faculties, Service Divisions and departments have completed tests on all elements of their business continuity plans, and their plan update methods have proven to be effective. Business continuity plans and tests incorporate multi-departmental considerations of critical enterprise business processes. An energetic communications and training program exists to sustain the high level of business continuity awareness following a structured business continuity maturity program. Audit reports no longer highlight business continuity shortcomings. Responsibilities and standards for continuous service are clearly assigned, managed and enforced. System redundancy practices, including use of high-availability components, are consistently deployed. The organisation has reached a good level of preparedness. All faculties, Service Divisions and departments have a measurably high degree of business continuity planning competency. Disaster recovery risk assessment has developed to the stage where a structured, organisation-wide process is enforced, followed regularly and managed well. Complex business protection strategies are formulated and tested successfully. Cross-functional coordination has led participants to develop and successfully test upstream and downstream integration of their business continuity plans. IT recovery management is a joint responsibility of business and IT management and is integrated with strategic business objectives. Periodic assessments evaluate the effectiveness of implementation of the DR plan. Innovative policy, practices, processes and technologies are piloted and incorporated into the business continuity program as appropriate. Continuous service plans and business continuity plans are integrated, aligned and routinely maintained. Buy-in for continuous service is secured from vendors and major suppliers. The organisation is in a state of excellent business continuity readiness.
## Appendix 3 IT Projects and Associated Sub Projects

<table>
<thead>
<tr>
<th>Programme</th>
<th>2009 Funding</th>
<th>Centrally Funded</th>
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### Business Continuity

Completion of University wide Business Continuity programme, including BC support of research equipment. This project primarily focuses on the IT Business Continuity

| Business Continuity Management | 0 | Yes |

### Decision Support Programme

**2009 priorities: Enhance ETL reporting, Student and HR information, Reporting Strategy and Balanced scorecard.**

| Balanced Scorecard Reporting | 0 | Yes |
| DSS Work 2009 | xxx | Yes |
| Reporting Strategy | 0 | Yes |

### Documented Strategic Directions

**Documentation of Architectural strategies and implementation of architecture repository.**

| Architectural Repository | 0 | Yes |
| Personalisation Strategy | 0 | Yes |

### eResearch Programme

**Establish and foster support for eResearch via the VC's task force findings.**

| Expand ability to host research computing infrastructure | 0 | Yes |
| Expansion of BeSTGRID computing platform | 0 | Yes |
| Improve Communications with Research Community | 0 | Yes |

### Finance Systems Upgrade

Upgrade Peoplesoft Finance to version 9, gaining improved functionality in asset management and other areas.

| Support UniServices Financial Systems Implementation | 0 | No |
| Upgrade Finance to 9.x (subject to funding and agreement) | xxx | No |

### HR Systems Enhancements

Minor enhancements and developments to support post go live requirements from the new PeopleSoft HR System deployed in 2008. Includes improvements such as interfaces b/w

| 2009 Minor Enhancements | xxx | Yes |

### Identity Management Programme

Project aimed at the revamp of the way identify is managed within core systems across the University. Improve Identity Management principals and frameworks allowing staff,

| Identity and Access Management Infrastructure | xxx | Yes |
| IDM Strategy | 0 | Yes |

### Implement eLearning Strategy

Support implementation of the findings of the 2008 eLearning strategy, including the development of a T&L technology roadmap, development of CECIL strategy, Virtual

| ACT - Gradebook Web Services | xxx | Yes |
| ACT - Other Cecil Web Services | xxx | Yes |
| ACT - Reporting Web Services | xxx | Yes |
| ACT - Student Evaluation in QM | xxx | Yes |
| ACT - Survey in QM | xxx | Yes |
| Complete Student Response Systems Implementation | 0 | Yes |
| National Virtual World Grid | xxx | Yes |
| T&L Technology Roadmap | 0 | Yes |
| Virtual Environment Role Review | 0 | Yes |
Info Management Strategy

**Determining a programme following the completion of a draft Info Mgmt strategy**

Enhance Draft IM Strategy 0 Yes

Information & Security Risk Mgmt Programme

**Reduce risk to the University through the information security and risk mgmt program, including the security mgmt processes for our major enterprise applications and**

Information Risk and Security Programme xxx Yes

Security Enhancements to University Mail gateway xxx Yes

Information Lifecycle Management

Introduction of improved archiving and classification, including meeting the requirements of the Public Records Act. Also incorporates introduction of archiving tools such as the

Simple Document Management/PRA Support xxx Yes

Lecture Recording and Associated Digital Storage

Encapsulates significant expansion of Lecture Recording, and the infrastructure/systems and structures necessary to make the material available to staff/students. Includes

iTunesU 0 Yes

Lecture Recording Deployment xxx No

Lecture Theatre Audio Visual Enhancements

Ongoing enhancements to the Lecture Theatre Audio Visual Environment and Equipment.

LTMU AV 2009 xxx Yes

Minor Capital Works

Budget for minor capital works programme allowing smaller projects to progress. These projects are sourced from Faculty and Service Division. Eg: Secure Exam Delivery,

Minor Capital Works Budget xxx Yes

Multimedia Digital Repositories

Develop multimedia repositories in partnership with the Library for externally sourced content (eg via Unisat or commercial providers such as ECast)

Library Digital Repositories 0 Yes

Online Collaborative Workspace Environments

Further expansion of SharePoint beyond the secretariat and expansion of the use of collaboration tools.

Collab Proposed 2009 xxx Yes

Process Improvement Programme

The University's programme of process improvement supporting the Process Office. This includes enhancing our overall capability for Business Process Review, Customer Input

Balanced Scorecard and associated reporting 0 Yes

Customer Input/Satisfaction Survey 0 Yes

Enhance Service & Relationship Management 0 Yes

Improve Portfolio Management and Reporting 0 Yes

Support of Process Improvement (ITIL) 0 Yes

Replace Newton Data Centre

The University’s second data centre at IBM’s Newton facility is at capacity, and does not meet the necessary distance requirements from the City campus to effectively serve the

Interim 2nd Datacentre at 24 Symonds St 0 Yes

Setup Tamaki Data Centre 0 Yes

Research+ (RIMS Replacement)

Support the acquisition of the InfoEd package and the preparation and implementation of a research systems program over 2009-10

InfoEd Implementation xxx Yes
Service Level Management
Programme of improving service catalogue maintenance, and negotiation of OLAs, SLAs and reporting. Improvements to Service Management and Service Delivery.

- Complete Service Level Ownership across ITS
- Implement ITIL Recommendations from ITL Report

Service Orientated Architecture
Implementation of a Service Oriented Architecture approach to improve the University’s capability of delivering functionality to support processes.

- SOA Phase III

Storage for Imaging & Research
Provide increased storage and management for Research Data across the University

- Storage 2009

Strengthen IT Governance
Strengthen the governance of IT across the University. This programme of work incorporates implementation of the results of the Roles & Responsibilities review from

- Implementation of IT Governance Framework model
- Implementation of Roles and Responsibilities review

Student Admin System Upgrade

- 7 DeskTops for SA Project
- Phase I SA Upgrade

Student Administration Programme
Programme of minor Student Administration enhancements aimed at tactical improvements in assisting the enrolment process, and the UoA ability to better manage

- SA Programme proposed 2009

Student Services Programme
Enhance the provision of services and technologies provided to, or for assisting students. This includes environmental aspects such as printing, email, and Electronic Campus

- Deployment of Google Apps
- Enhance uoa ricoh client
- Kate Edgar NetAccount Print Station refresh
- NetAccount EFTPOS terminal refresh.
- Virtual Desktop trial

Timetabling Project
Implementation of new booking and timetabling system, including enhancement of associated processes and practices.

- Timetabling - Tranche 2 Funding

UoA Infrastructure Program
Program of ongoing work related to improving the UoA Infrastructure, Increasing capacity for growth, and infrastructure replacement and renewal.

- Comms Rooms and Facilities
- Expansions of the KVM/IP infrastructure
- Installation of racks for Faculty IT equipment.
- Installation of the 4Gb FC line modules required for Items
- Power Usage Monitoring
- Purchase of second SVC cluster nodes for OGG & NDC
- Replace the remaining 12x IBM x366 servers
- Replacement of the old production database server,
- Sun Server Replacement Strategy
- TSM capacity growth
- TSM Growth
### UoA Network Programme

*Enhance the University's network backbones, and cabling. Includes additional network equipment for growth, and associated monitoring.*

- Fibre Network Expansion  
  - XXX  
  - Yes
- Network Equipment interface cards to allow for growth.  
  - XXX  
  - Yes
- Upgrade the network address management systems  
  - XXX  
  - Yes

### UoA Storage - SAN Storage Capacity Growth

*Enhancements to the University's data storage capacity due to growth in storage demands.*

- Increase SAN storage by 70TB + supporting infrastructure  
  - XXX  
  - Yes

### UoA Voice & IP Services

*Implementing the findings of a strategic review of voice & IP services, including gradual replacement of the University's PABX technology.*

- VOIP Proposed 2009  
  - XXX  
  - Yes

### Web Content Management System Upgrade

*Further deployment of new CMS across Faculties as appropriate (including implementation of new style guide, navigation and functionality.***

- CMS Continuation (Faculty Provision)  
  - XXX  
  - No
- CMS Continuation 2009  
  - XXX  
  - Yes

### Web Developments

*Web Developments Programme incorporating Staff Directory, Staff Intranet, Shopping Cart/Online Payments Gateway*  

- Web Proposed 2009  
  - XXX  
  - Yes

### Web Strategy, Roles & Responsibilities

*Implementation of the University's overall web strategy and approach to our web presence, including implementation of roles and responsibilities, and the reconstitution*  

- Implementation of Web Strategy  
  - 0  
  - Yes

### Wireless and Remote Access

*Encourage & support students to use their own devices, including through improving wireless & remote access services. In addition, continue to expand/enhance Wireless*  

- Wireless Expansion  
  - XXX  
  - Yes

**Grand Total**  

- XXX  