UBC IT Strategic Plan 2011

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INFORMATION TECHNOLOGY
6356 Agricultural Road, Vancouver, BC V6T 1Z2
www.it.ubc.ca

UBC IT Strategic Plan 2011

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I. Purpose of this Document

This document defines the rolling three-year strategic plan of UBC's central IT department. It is meant to inform all customers and other departmental stakeholders of our strategic intent for the coming three years, and invite participation in the annual process of reviewing and revising the plan.

II. Background, Scope and Objectives

In 2008, the UBC Provost commissioned an external review of IT at UBC in general and the UBC IT department in particular. This review resulted in a number of recommendations and led to a change in IT governance at UBC and a re-focusing of the UBC IT department on providing services and technical solutions required by a wide range of customers within our community. In the summer of 2009, UBC IT launched a series of Executive-sponsored IT Transformation initiatives aimed at creating the tools needed to provide such services and solutions.

Following an amalgamation of several major administrative IT groups under UBC IT in early 2010, the department updated its Vision, Commitment and Goals statements in close alignment with the university's overall strategy. During the summer of 2010, the department developed a series of Technology Roadmaps to define and develop the major services offered to the community.

This Strategic Plan is built on these Technology Roadmaps. It sets out UBC IT's vision and scope, summarizes the Roadmaps and describes the resources required to implement them, in terms of people capacity, skills, facilities and funding.

The objective of the Strategic Plan is to:

- define a baseline of intentions and initiatives to improve services and technologies offered by UBC IT over a three-year period
- communicate the planned direction to our stakeholders in the community
- invite comments and contributions to the evolution of our services and technologies
- be a platform for the annual review and refresh of our strategic direction.

III. Development Approach

The UBC IT statement of Vision, Commitments and Goals was developed internally to the department and validated with selected stakeholders in the spring of 2010. During the summer, members of the Management Team at UBC IT took ownership of roadmaps specific to their scope areas and developed these together with their staff, and in consultation with stakeholders, as was appropriate to the given roadmap area. Some roadmaps (such as Identity and Access Management) are defined through specific projects already in progress and were supported by their respective steering committees.

The Strategic Plan was initially developed by the UBC IT Management Team in early September 2010. Subsequently, the content of the Plan was reviewed in parts or in whole with selected stakeholders of the department. It was presented to the IT Executive Steering Committee for support in February 2011, and then released to a broad campus audience.

As any strategic plan must remain relevant to the evolving business priorities of the institution as well as the rapidly changing technology landscape, lifecycle management of the plan will include an annual review process with our key stakeholders, as well as updates to individual roadmaps based on technology changes and successful project delivery.

IV. UBC IT's Vision, Commitments and Goals

Vision

UBC IT, in support of *Place and Promise: The UBC Plan*, has stated its Vision as follows:

We are a service organization that continually engages with our community to provide technology which enables an exceptional learning and research environment at UBC.

Commitments and Goals

In conjunction with its vision, UBC IT has made specific commitments, each paired with goals designed to see them through.

UBC IT's core commitments are to **Community Service**, **Operational Stability**, **Technology Leadership**, and **People Development**. Our commitments have been chosen to support UBC IT's mission, capitalize on our strengths and focus on the needs of our community including our faculty, staff, and students.

The following table outlines our four commitments and eight associated goals:

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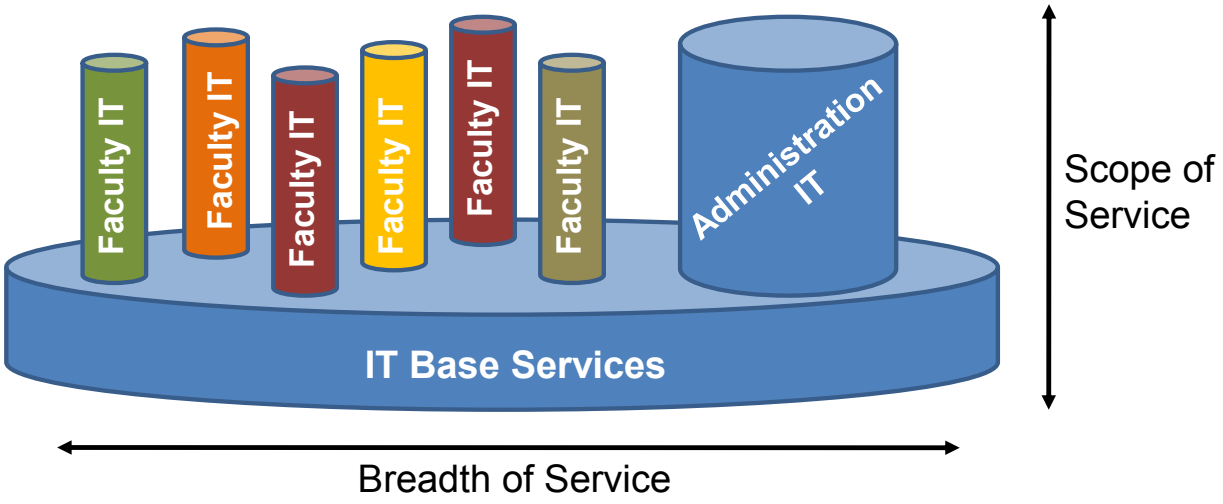
Commitment	Goal
Community Service UBC IT engages with the UBC community to identify their needs and is accountable for delivering effective technology solutions.	**Accountable** Be responsible for the actions and decisions we make and accountable for resulting outcomes. Using appropriate metrics and benchmarks, we measure the performance, cost effectiveness and reliability of the services we provide, and make this information available to the university community.
	Collaborative Together, we work with the UBC community to achieve UBC's vision. By coordinating mutual activities and leveraging pooled resources, we deliver IT solutions that are the best for UBC.
Operational Stability UBC IT provides an efficient, secure and reliable operating environment that is transparent and adaptable.	**Reliable** We use current and stable technologies, project management and improved procedures to enhance quality, throughput, and performance to enable the University to achieve goals and execute strategies. Our policies and practices provide mitigating actions and minimize risk for any unexpected service degradations or outages.
	Secure We ensure the privacy, security and integrity of information entrusted to us, while making authorized access to information easy. We use sound audit, change management, testing procedures and quality control to provide security and integrity of the data within our purview.
	Cost-Effective Our technology solutions effectively address UBC's challenges and opportunities. We seek to promote financial sustainability and deliver transparency with respect to the associated costs. We engage all units of the University to reduce redundancies and fully leverage our shared IT resources.
Technology Leadership UBC IT provides vision and leadership in the planning, delivery and sustainment of technology solutions.	**Sustainable** We consider all aspects of economic, environmental and social sustainability in our utilization of information technology endeavours.
	Innovative UBC IT values and encourages creativity, innovation and the open exchange of ideas to address the systems, informational and process needs of the University community now and into the future.
People Development UBC IT provides a safe and respectful environment that attracts and retains exceptional people.	**Supportive** We strive to develop a sustainable, healthy workplace within a culture of positive values and good relationships. We are dedicated to providing an environment of mutual respect where employees can thrive and build their careers at UBC.

V. UBC IT's Scope

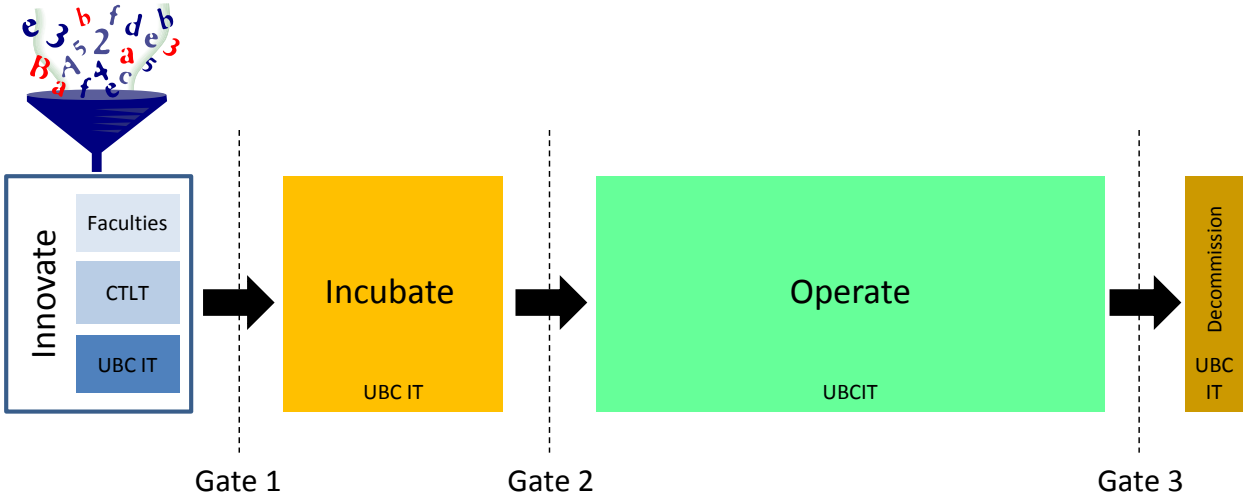
UBC IT is the university's department for centrally provided IT services to our community. Our principal service offerings can be accessed from our main web page at www.it.ubc.ca .

Most of UBC IT's services are offered to the community on an optional basis; only data and voice network services, as well as core administrative systems including the Student Information System and HR/Finance Systems, are provided exclusively by the department. Our intention is to offer optional services in the most cost efficient and effective manner in order to make it an easy choice for Departments, Faculties, Schools, and Institutes to participate. Some services are centrally funded by the university and free of charge to the end-user (e.g., email) while others are cost-recovered from departments and end-users based on consumption. UBC IT is a cost-centre within UBC and does not generate a profit.

In the long-term, UBC IT views its scope as providing all IT services to the administration of the university as well as being the sole provider of certain base IT services to the entire community. The majority of our services will always be optional for the academic units to subscribe to, depending on their individual desire to divest themselves of commodity computing support and focus on specialist support related to their teaching and research. The picture below illustrates this principle.



UBC IT delivers IT services through full life-cycle stages of innovation, incubation, and operation, to decommissioning. Innovative ideas and services from the UBC community, including Faculties and service units such as the Centre for Teaching, Learning, and Technology (CTLT), as well as UBC IT, will be reviewed and entered into a formal gated process that includes piloting and an incubation stage before a potential full deployment to operations. Our innovation focus is on information technologies that can benefit the university in all aspects of its mission. We work collaboratively with other departments across the institution, as illustrated below.



VI. Strategic Principles

Focus on Delivery

UBC IT's strategy work concentrates on the practical and achievable. We focus on strategic activities that add value to the university within one to three years and are aligned with its goals. We determine what is strategic by constantly checking our actions against baseline roadmaps and objectives, and assessing our dependencies on other teams and departments.

Technology Agnostic

UBC IT does not subscribe to any particular technology direction as a matter of principle. We recognize that the diversity of our institution requires us to work with a variety of options. We regularly examine vendor products, community solutions and open source developments for best fit with our architectures and our customers' needs.

Modular and Connected

The diversity and constant flux of UBC requires us to offer flexible solutions that can grow, shrink, and change as circumstances require. We focus on non-monolithic, modular solutions that need reasonable effort to integrate with other products and to maintain.

Integrated but Distributed

UBC IT provides technologies and services to our community members wherever they are. Our support staff is present where our customers need them to be, and customization of our technologies is put in the hands of our customers wherever possible.

Sustainable

UBC IT will focus on sustainable solutions from the perspectives of both Green IT and life cycle management. Green IT solutions reduce the environmental impact of university activities. Life cycle management ensures that our services are renewed or replaced on a regular basis, and that the costs associated with any service are well understood and can be projected accurately.

VII. Strategic Roadmaps

UBC IT has defined a set of Technology Roadmaps that lay out the expected direction of our product and service offerings for the next three to five years. This strategic plan is about implementing and supporting these technologies for our customers.

Each roadmap has a unique starting point based on currently available systems, unique demands from our customers and unique industry directions. Consequently, each roadmap has a different level of detail, firmness and time horizon. Roadmaps will be reviewed regularly and formally assessed annually, in line with the annual review of the strategic plan.

In 2010, UBC IT's strategic focus had a strong emphasis on stabilizing existing products and services by rationalizing service offerings and increasing redundancy and reliability. While some of this stabilization work continues into 2011, the Roadmaps call for a shift to focusing on enhancing and optimizing those services, while beginning to deliver new technologies and services offerings that help transform both UBC IT and the broader campus. A move toward improved and consolidated tools and standardized processes will help streamline the delivery of both existing and new services. In addition, a focus on campus engagement to better understand the business and functional drivers of the institution will ensure that UBC IT provides technology leadership that meets the diverse needs of our stakeholder community.

By 2012 and 2013, the Roadmaps call for balancing the need to optimize and life-cycle manage existing services with the flexible delivery of transformative new services that help meet the ever changing business requirements of the institution. The Roadmaps also highlight the move towards a model of continuous improvement, and tight coordination with our customers to provide integrated services and solutions. The Appendix to this strategic plan spells out each Roadmap in more detail, and full details are available from the responsible managers.

A number of substantive changes and potentially disruptive innovations have been identified by the individual roadmaps. Key among those changes is a move from many disparate point solutions to fully interconnected and integrated services and solutions. While adding a degree of complexity and requiring stricter institutional governance over IT assets and data, these integrated services will open the door to better reporting tools and data driven decision-making.

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A focus on Green IT and sustainability is also found across the roadmaps, enabling UBC to meet the ambitious goals and commitments of the *Sustainability Academic Strategy*. Leveraging new technologies and services will be essential in helping transform UBC into a living laboratory in environmental sustainability.

Another central theme is the need to provide an outstanding user experience for all faculty, staff, and students. A focus on self-service and personalised services will enable a universal university experience for our community, allowing them to access the services they need wherever and whenever they need them. Enhancements in Identity and Access Management will be coupled with the implementation of a mobile framework to better support the growing needs of mobile users across a wide range of platforms and devices.

Over 20 separate service area roadmaps were developed. A summary of each of the roadmaps, including an overall description as well as high-level milestones and dependencies, are included as an Appendix to this document. In addition, the Appendix includes a high level summary of the key deliverables for each roadmap.

Roadmaps have defined for the following areas:

Business Information Systems	Payroll / HR Systems
Digital Signage	Project Management Office
Data Centre	Portal
Database Management	Reporting / Business Intelligence
Directory Services	Research Systems
Desktop Services	Security
Electronic Payment Gateway	Service Provisioning System
Email	Software Licensing
Enterprise SAN	Student Systems
Financial Systems	UBC Directory
Identity and Access Management	UBC Network
Internal Business Applications	UBC Events
IT Service Centre	Virtual Server
IT Service Management Program	Voice and Unified Communications
Learning Systems	Web Presence Support

VIII. Critical Success Factors and Key Gaps

Achieving the intent of the strategic plan by implementing the Technology Roadmaps will require resources, disciplined management, diligent work focus, and funding. This section identifies what is needed for UBC IT to be successful, and highlights what is missing.

Critical Success Factors

The following critical success factors highlight key elements necessary for the delivery of the strategic plan.

Governance

- Transparent and effective IT Governance is established across UBC
- Clear direction and feedback is received from the UBC executive, faculties, and departments on IT priorities
- A consistent and integrated IT framework is in place which guides decisions on IT service delivery across campus

Engagement

- UBC IT is seen as a trusted partner and key advisor to faculties and administrative units
- Central services are highly leveraged throughout the campus to meet institutional and local needs
- Data, systems, and process supported by UBC IT enhance and improve institutional decision-making.

Organization

- Efficient and effective personnel and service management is present throughout UBC IT
- Roles and responsibilities are clearly defined for all staff and groups
- Teams and processes are integrated across the organization
- A culture of client service exists throughout UBC IT
- Demand and project management ensure that projects meeting customer needs are delivered on time and on budget

Staffing

- A challenging but balanced and well-managed work environment lead to high staff satisfaction and low turnover
- Staff at all levels have the training (both technical and management) and tools required to succeed
- Cross training, skills overlap, and staffing levels ensure adequate coverage for all services
- Talent development, mentorship programs, and succession planning are in place

Finances

- Stable funding is secured for all core services, and appropriate pricing structures are in place for demand-supported services
- Investment decisions are based on lifecycle management principles and Total Cost of Ownership-based business cases
- Vendor and supplier management is established to enable strategic purchasing across both UBC IT and the wider UBC enterprise

Operations

- Standardized tools and practices, and procedures are in place throughout UBC IT
- Simplified and automated procedures are in place to streamline technology and service provisioning and maintenance
- Consolidated and virtualized systems and network infrastructure provide an efficient, highly available, and Disaster Recovery-capable foundation for all services
- A culture of IT Service management is in place and has reached target maturity levels

Key Gaps

While UBC IT continues to improve on its capabilities and ability to deliver, there are still a number of critical areas that need to be addressed in order for the strategic plan to be successful. The following table outlines those key gaps, and the associated activities for addressing them at a high level. The individual Technology Roadmaps go into greater detail on how service-specific gaps will be addressed.

Key Gap	Activities
Technology Skills A number of technology skill gaps exist. Some require the strengthening of new skills, while others require the development of entirely new ones. Key areas of focus include: • Databases (MySQL, MS-SQL) • Identity and Access Management • Distributed and cloud computing • Identity-based networking and security • Project Management standards	UBC IT will ensure that a managed training process exists for all projects and services, including: • Up-to-date training plans for all staff • Targeted training programs for under-developed and new skills • Skills upgrading for staff transitioning to new service areas • Support for staff certifying in relevant professional certifications UBC IT will also establish a recruitment plan to fill critical skill gaps where needed.

Resource Shortages Without additional resources in a number of areas, there will be increasingly long delivery timeframes across a wide range of projects. Critical resource gaps include: • Java development • Enterprise Active Directory • Server and SAN Management • MySQL and MSSQL • Central Desktop Management • Distributed Service Consolidation • Faculty Shared Services • ERP Systems Implementation	Wherever possible, UBC IT will work to find efficiencies within its existing funding envelope, including • Server, storage, and service consolidation • Technology and process standardization • Vendor and procurement management • Decommissioning of old services Where additional resources are required for externally driven initiatives, additional funding will be sought. Targeted hiring will be carried out to fill specific gaps, including term positions for one-time transitions.
Organizational Health Significant challenges exist with current workloads. There have been increasing incidences of staff absenteeism and burnout, and there are concerns with lack of adequate coverage in a number of areas. Many skills within the organization are only one employee deep, leading to challenges with vacation and illness coverage. Long-term career development has also been inadequately supported.	UBC IT is developing a comprehensive plan, in conjunction with the Focus on People framework, to address a wide range of workload and work-life balance issues including: • IT Career Framework • Cross training • Team-based technology support • Succession Planning • Mentorship and career growth • Demand Management and client onboarding
Processes A number of gaps in processes, automation, and workflow exist across a wide range of service areas. These gaps lead to operational inefficiencies in areas such as: • Project management • Desktop management • Server management • Network management • Internal support	Six IT departments at UBC are collaborating on an IT Service Management (ITSM) Program: Applied Science IT, Arts ISIT, CTLT, MedIT, Sauder and UBC IT. The ITSM program will deliver new processes based on the ITIL framework that will • Streamline service operations and management • Manage customer expectations • Train all IT staff on ITSM In addition, Demand Management and project prioritization processes will be developed.

Tools Over the past year, UBC IT has consolidated and integrated with a number of other administrative IT units. This has led to a wide range of incompatible tools in the areas of collaboration, internal support, operational monitoring, and project management.	The department will migrate all IT staff and tools onto a common, managed infrastructure. Projects include: • ITSM Enterprise Tool Selection Project • Communication, Collaboration and Information Sharing Project • Project Portfolio Management Tool selection
Client Service Management As more Faculties participate in consolidation and shared services, there is a growing need for UBC IT to: • Connect more closely with stakeholders to understand their needs • Include stakeholder feedback in strategic planning processes • Include stakeholder feedback in the planning and evaluation of services	UBC IT formed a Client Service group in January of 2010, and has so far hired three Client Service Managers. This will likely grow to meet the full campus needs with a mandate to: • Increase understanding of campus needs & communicate value of technology services • Build long-term relationships and trust • Provide a single point of contact for non-routine issues • Provide accountability for service performance • Provide a mechanism for joint planning & funding • Act as overall liaison between IT and customer

IX. Major Initiatives

UBC IT is engaged in a number of major initiatives that are driven by customer requirements as well as by the internal needs of the department. Achievement of targeted milestones of this Strategic Plan and the Technology Roadmaps is dependent on the success of a number of strategic initiatives that are in various stages of progress. This section summarizes these initiatives, outlines our key areas of focus and investment, and details some of the specific projects that support each initiative. Current progress updates are available from the responsible project managers and UBC IT's Client Service group.

Over the next three years, there are a number of key milestones across a range of major initiatives. Most of these initiatives have individual timelines that include a range of phased deliverables over a period of months or years. The following table summarizes at a very high level the timing of the major initiatives that, as of March 2011, have been funded through a combination of UBC IT base operating funds, recurring funding from other UBC units, and one-time funding.

Enterprise Transformation		2011 - 2012	2012 - 2013	2013 - 2014
Student Interaction Transformation	SIS Renewal			
	Learning Management Upgrade			
Integrated Communication Services	Digital Channel Intergration			
	Unified Communications			
	Campus-Wide Email Services			
Administrative System Enhancements	Integrated Reporting			
	Administrative Streamlining			
	FME / Utility Billing			
	Absence Management			

IT Transformation		2011 - 2012	2012 - 2013	2013 - 2014
IT Transformation Program	IT Career Framework			
	IT Service Management			
	Identity and Access Management			
	Unified Data Centre Strategy			
	Virtual Desktop Pilot			
	Faculty IT Onboarding			
Core Infrastructure Lifecycle Management	Enhanced Infrastructure			
	Operational Monitoring Tools			

Enterprise Transformation

In support of the commitments made in *Place and Promise: The UBC Plan* to create an outstanding learning and research environment, UBC IT is working in partnership with other units to enable the transformation of the academic and administrative landscape at UBC. The following initiatives are driven by needs identified by the UBC executive, faculties, and support units, with UBC IT responsible for delivering services to support those requirements.

Student Interaction Transformation

As part of the Place and Promise commitment to Student Learning, UBC has outlined goals to enhance the quality and impact of teaching for all students, expand educational enrichment activities, and support student well-being through service excellence. A number of overlapping initiatives in this area, including Place and Promise Awards, the Academic Success In Student Transition (ASIST) Business Process Re-engineering (BPR), and the review of program delivery led by the Provost, Registrar, and AVP Academic Affairs require enhanced capabilities in a number of IT-supported systems and services.

Project	Description
Student Information System (SIS) Renewal *Student Systems Roadmap*	A number of enhancements to the SIS are required to meet the needs of a range of programs including Go Global, Broader Based Admission, and Student Advising, in addition to modernizing the core SIS.
Research Information System (RISe) Upgrades *Student Systems Roadmap*	RISe will be migrated to our virtual infrastructure to ensure ongoing support and stability. In addition, a new Internal Awards module will be implemented, and reporting functions will be enhanced as part of our Integrated Reporting deployment.
Learning Management System (LMS) Upgrade *Learning Systems Roadmap*	WebCT Vista is nearing the end of its lifecycle, and Blackboard will cease support by 2013. UBC has begun selecting the next generation implementation of our LMS, including increased support for blended learning.

Integrated Communication Services

Communication services are currently fractured across a wide range of platforms and departments. This leads to significant challenges when Student Development, Public Affairs, or other groups need to send targeted messages to a subset of the campus population, and fails to provide choices for end users to manage their messaging preferences.

Project	Description
Digital Channel Integration *Portal Roadmap* *Digital Signage Roadmap*	Integration of mobile devices, broadcast messaging, digital signage, notification, and campus portal.
Unified Communications *Voice and Unified Communications*	Integration of Voice over IP (VoIP), voicemail, and presence with email services.
Campus-Wide Email Services *E-mail Roadmap*	Migration from two central email services and a number of distributed email services to a single centrally supported Exchange email and calendaring service for all faculty and staff, with the potential of cloud-based email services for students.

Administrative System Enhancements

Administrative and academic units across campus are supported by a wide range of administrative software and services. A number of UBC units have requested enhancements to centrally-provided IT services in support of their Mid Level and Unit Plans.

Project	Description
Integrated Reporting *Reporting/Business Intelligence Roadmap*	Currently institutional data is spread across a range of administrative systems, leading to challenges in supporting data-driven decision-making. Over the next five years we will deliver a fully integrated reporting solution backed by a full data warehouse.
Administrative Streamlining *Financial Systems Roadmap*	Implement systems to support the Administrative Streamlining Initiative, including Travel and Expense processing, Inventory Management, and e-Procurement
Facilities Management Enterprise (FME)/Utility Billing Replacement *Business Information Systems Roadmap*	A complete overhaul of our facilities management system is required by Business Operations to support property management across the Vancouver campus.

Absence Management *Payroll / HR Systems Roadmap*	There are currently a number of shadow systems that have been implemented for absence management. A campus-wide system will be implemented based on our enterprise PeopleSoft deployment.

IT Transformation

In addition to the wide range of initiatives driven by UBC's overall strategic plan and the needs of our key stakeholders, a number of internal initiatives are focused on transforming our internal capabilities in order to better provide outstanding technology solutions to the campus.

IT Transformation Program

The IT Transformation Program is intended to identify, develop and deploy new ways of delivering information services to the university community that reduce costs, improve IT for learning and teaching, reduce operational risks, and improve environmental sustainability.

The Program will define and implement strategic transformational changes that will help transition the university's information technology landscape from being highly decentralized into an integrated IT service function that is balanced between central and distributed, uses common standards, follows common processes and shares resources.

The following projects will enable UBC IT to better support departments and faculties in their IT needs, by strengthening our own processes and tools, increasing our risk awareness and enhancing our professional development abilities.

Project	Description
IT Career Framework *IT Transformation Program Charter*	The IT Career Framework Project will develop a series of IT career ladders, based on standardized Management and Professional (M&P) position descriptions and a set of common competencies shared across five pilot IT groups. The framework developed in this pilot will serve as a model that can be extended and adapted to all IT professionals at UBC.
IT Service Management *ITSM Program Charter*	The IT Service Management Program at UBC is a series of projects and activities to implement select ITIL principles and processes. The projects will develop new operational and management processes based on the ITIL framework, as well as implement new supporting tools.

Identity and Access Management *Identity and Access Management Roadmap*	Identity and Access Management (IAM) is the set of business policies, processes, and supporting infrastructure for managing the creation, maintenance and use of digital identities. The IAM program is a multi-year initiative to develop an Identity and Access management system that will enable users to securely and efficiently access electronic resources.
Unified Data Centre Strategy *Data Centre Roadmap*	In conjunction with the construction of the new Research Data Centre, UBC will define and implement a Data Center Strategy to address the current data center space shortage and to consolidate existing IT assets. This will provide researchers with predictable infrastructure costs, as well as leveraging energy efficient design to reduce UBC's power utilization and carbon footprint.
Virtual Desktop Pilot *Desktop Services Roadmap*	The Virtual Desktop pilot will deliver managed desktops (or thin clients) that run on UBC IT servers at a reduced cost and greatly reduced environmental footprint.
Faculty IT Onboarding *IT Transformation Program Charter*	As UBC IT begins to offer full service desktop and server support, it is expected that a number of Faculties and Departments will require assistance in transitioning to those core services.

Core Infrastructure Lifecycle Management

The majority of central services provided by UBC IT leverage a common set of core infrastructure. Upgrades that provide enhancements to the capacity and reliability of that infrastructure benefit a wide range of academic and administrative services, including an increasing number of departmental services that leverage the central infrastructure.

Project	Description
Enhanced Infrastructure *Virtual Server Roadmap* *Enterprise SAN Roadmap* *UBC Network Roadmap*	A wide range of enhancements are planned for the central storage, server, and network infrastructure including consolidation and virtualization, as well as increased redundancy, high availability, and improved fault tolerance.

Enhanced Management *ITIL Program Charter* *Virtual Server Roadmap*	Process improvements and increased automation will provide more effective management and scalability of storage and servers, as well as rapid provisioning.
Operational Monitoring Tools *Virtual Server Roadmap*	Deploy component and service level monitoring to provide greater reliability for core infrastructure and services.
Secure Data Facility *Enterprise SAN Roadmap*	Researchers and other faculty and staff members increasingly rely on highly available, secure, and backed-up storage for their daily needs. UBC IT will seek the required funding to build out the infrastructure needed to provide this service.

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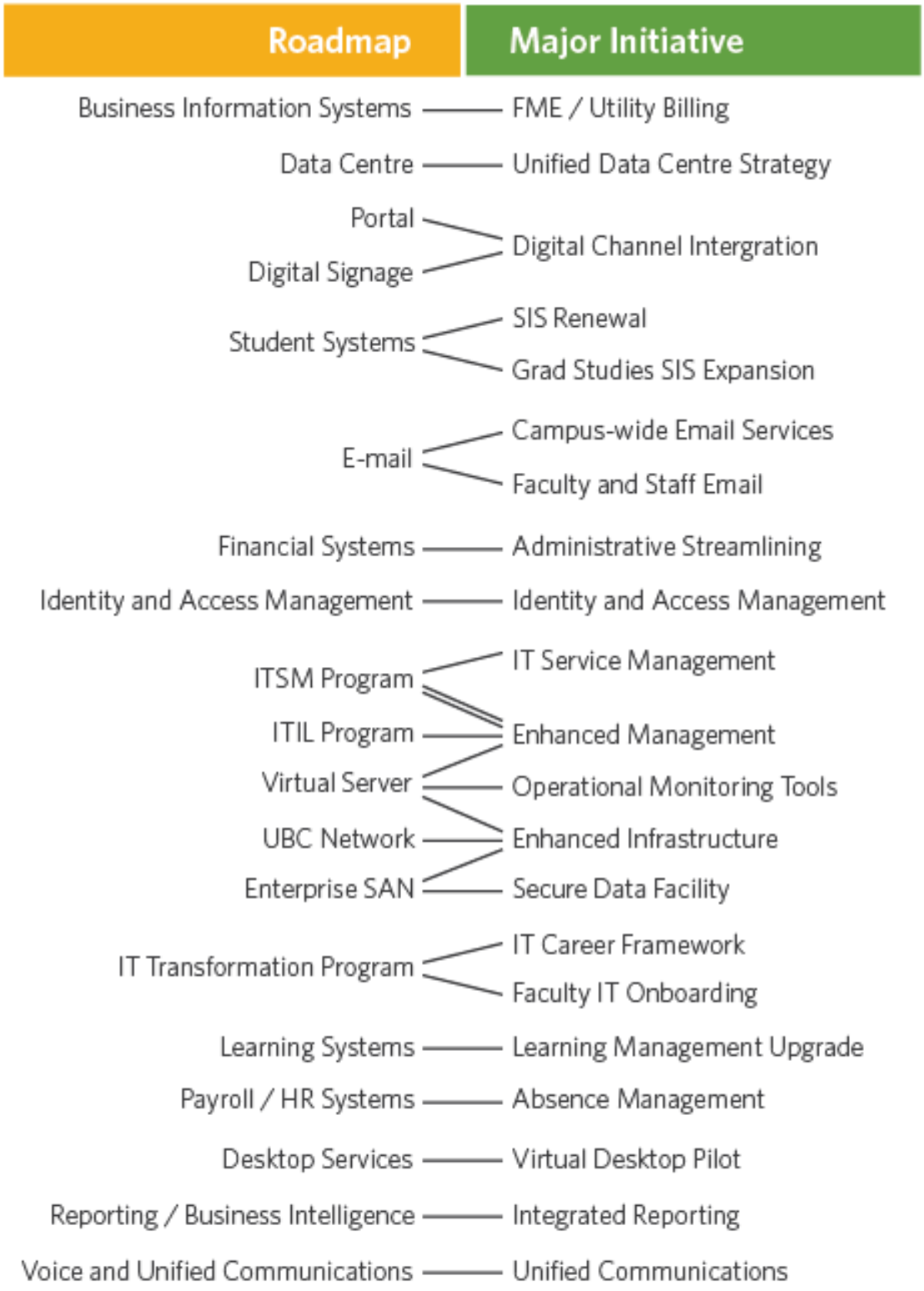
The following figure illustrates how each project relates to the Technology Roadmaps:



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The following table highlights the alignment between the key strategic initiatives and UBC IT's eight commitments:

	Accountable	Collaborative	Reliable	Secure	Cost-Effective	Sustainable	Innovative	Supportive	
Enterprise Transformation									
SIS Renewal		●	●		●	●	●		Student Experience Transformation
Grad Studies SIS Expansion		●	●		●				
Learning Management System	●	●	●			●			
Digital Channel Integration		●					●		Integrated Communication Services
Unified Communications		●	●	●			●		
Campus-wide Email Services	●	●	●	●	●	●			
Integrated Reporting	●	●		●	●		●		Administrative System Enhancements
Adminstrative Streamlining	●	●		●	●	●		●	
FME/Utility Billing		●	●	●	●	●			
Absence Management		●	●	●	●			●	
IT Transformation									
IT Career Framework		●				●		●	IT Transformation Program
IT Service Management	●	●	●	●		●			
Identity and Access Management		●		●			●	●	
Unified Data Centre Strategy	●	●	●	●	●	●			
Virtual Desktop Pilot		●	●	●	●	●	●		
Faculty IT Onboarding	●	●		●	●	●			
Enhanced Infrastructure			●	●	●	●			Core Infrastructure Lifecycle Management
Enhanced Management			●	●	●	●			
Operational Monitoring Tools			●	●	●				
Secure Data Facility		●	●	●		●	●		
	Community Service		Operational Stability			Technology Leadership		People	

X. Risks and Dependencies

A number of key risks and critical dependencies have been identified which have a direct impact on the delivery of the Technology Roadmaps. Full details can be found in the individual roadmaps.

Key Risks

The following table outlines the key risks and mitigating factors that impact the delivery of this strategic plan. The *UBC IT Risk Register* is a separate document that examines the full range of operational risks to UBC IT, and is integrated with UBC's Enterprise Risk Management framework.

Risk	Mitigation Plan	Owner	Target Date
Critical resource gaps exist in a wide range of areas, which dramatically delay or cancel necessary strategic initiatives.	Disciplined multi-year budgeting and operational efficiency improvements, coupled with a targeted short and long-term hiring plan to address critical gaps.	Oliver Grüter-Andrew	2011-August
Uneven cultural change in merging the three distinct IT organizations leads to a failure to operate as a cohesive team, leading to large operational inefficiencies.	Specialist hired to implement Management of Change Program and guide organization through implementation. Focus on culture, values, and standard practices between groups.	Julie Kothlow	2011-June
Conflicting and unmanaged demand for new services and clients, as well as for key staff resources, causes increased stress and absenteeism. Low priority projects cause delay in critical priorities. No balance is achieved between project and operational work.	Implement structured project prioritization and demand management processes to ensure resources are not overworked, and high impact projects are delivered before low impact ones.	Claudio Pini	2011-June

Inadequate processes fail to scale to meet increasing demand and ever more complex environments, leading to a reliance on individual heroics rather than stable structures.	Conduct a structured rollout of ITIL tools processes, including full staff training, to ensure a consistent level of IT service management across the department.	Claudio Pini	2011-December
Lack of disaster recovery (DR) infrastructure and business continuity planning leads to long service outages and data loss.	Continue to build out redundant, multi-site infrastructure. Implement Kuali Ready and develop unit and institutional DR plans.	Michael Thorson	2013-March
Unclear understanding of customer needs and requirements leads to the delivery of unnecessary and incorrectly scoped services.	Focus on building partnerships, understanding requirements, and ensuring alignment between UBC IT and stakeholders.	Jennifer Burns	2011-December
Lack of architectural standards and service integration leads to inefficient, overlapping, and incompatible technology solutions.	Create an Enterprise Architecture group. Develop architectural capabilities within IT. Document and promote standards.	Paul Hobson	2012-March
Lack of institutional data management and data governance leads to fragmented, inaccurate, and out-of date data proliferating throughout UBC.	Implement a data management plan and associated governance. Inventory and document key data stores and flows.	Paul Hobson	2012-March
Lack of alignment with UBC Senior Executive leads to unclear direction and lack of stable funding.	Continue to implement enhanced IT Governance Framework. Provide transparent five-year budget.	Oliver Grüter-Andrew	2011-June

Critical Dependencies

While there are a number of individual dependencies listed in the Technology Roadmap Appendix and in the Roadmaps themselves, there are a number of dependencies that span a wide range of different services and roadmaps. These are summarized in the table below.

Dependency	Activity	Owner
Demand Management	Implement Demand Management, including resource allocation tool and project prioritization process.	Claudio Pini *PMO Roadmap*
IT Service Management	Phased rollout of ITSM Program, including multiple ITIL processes, tools, and training.	Claudio Pini *ITIL Program Charter*
Change Management	Fully implement Management of Change program, including complete roll out throughout UBC IT.	Julie Kothlow *Management of Change Plan*
Virtual Servers, Storage, and Network	Continue to build out a redundant, highly available virtual environment, including servers, storage, data network, and automated monitoring and management.	Michael Thorson *SAN Roadmap* *VSS Roadmap* *Data Centre Roadmap*
Enterprise Architecture	Develop and deploy Enterprise Architecture principles, policies, and procedures both within and beyond UBC IT.	Paul Hobson *EA Roadmap*
Identity and Access Management Services	Deploy and integrate Identity and Access Management services, including group management and directory services.	Oliver Grüter-Andrew *IAM Roadmap*