

Action Item # 7: Information Technology Plan

Web Services Plan for VIU

Includes 13 Action Items underneath 6 Initiative Topics

Prepared and Written By:

The Web Services Committee

WEB SERVICES PLAN

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1. Background of Strategic Plan

The Information Technology Plan, as part of the Integrated Planning Process at VIU identified 13 action items. This document is the culminating product for completion of Action Item # 7 – Develop a VIU Web Services Plan.

The work in this plan has been discussed, presented and consolidated by the Web Services Committee formed March, 2012 and completed in December 2012.

This plan arose out of discussions with the committee around developing a comprehensive web services plan that takes into account all administrative and academic activity that happens or is accessed via the Web such as social media and cloud computing, online learning, mobile technologies, any public facing websites (faculty and institutional), blogging, research, communications (web conferencing, Twitter, Facebook, email), web-based systems, library web access and online resources/books/journals, technology infrastructure, administrative and student information systems.

2. Mission Statement

Working in line with the Academic plan, the Web Services Plan is highly responsive, proactive, and forward-thinking for enhancing the learning experiences of students through deployment of innovative and integrated technology solutions as well as stable, robust and responsive work environments and enhanced community networks, by building, maintaining and supporting strong academic and administrative web-based services, systems and resources to VIU's community.

3. Terminology

Within this document when the phrase "VIU Community" is written this is meant to include all and every member of the entire community VIU encompasses (e.g., employees, faculty, staff, students, graduates, prospective students, digital and physically connected people, employers, research associates, etc.)

4. Guiding Principles

We kept VIU's institutional core values, referenced in the Academic Plan, in mind through our work. As well, through the development of the Web Services Plan, we adhered to these guiding principles:

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- **well-informed, thoroughly researched** decisions
- **high quality learning opportunities** for students through implementing and supporting evidence-based solutions offering a robust, current, integrative and engaging learning experiences and environments
- **high quality student experiences**, both inside and outside the classroom, in access to services provided and hosted by VIU, and in access to external services hosted outside of VIU
- **solutions over technologies** to strategically use selected technologies to meet identified communication, teaching, student interaction and other objectives rather than investing scarce resources in technologies for their own sake
- **innovation** and **support** through development of our people and ensuring that resources are allocated to this critical aspect side by side with mainstream operations and development efforts
- **maintain existing web services** to a high quality, while **looking to future applications of emerging technologies** in order to provide the highest quality learning opportunities
- **consistency** and **integration** of core services for students and all VIU employees
- **effective governance** to ensure that the VIU web presence remains continually relevant, limited resources are utilized effectively and the web services are consistent with VIU image
- **honour and respect** diversity in connecting locally, regionally, and internationally
- **flexible solutions** to address the needs of multiple users' needs, abilities and accessibility levels that come with support and management of the changes occurring across our institution
- web services promotes a **democracy of interests within the VIU community**, such that web resources can be used by students, faculty, staff, and administrators to coordinate our efforts in the areas of resource scheduling, access to informational resources, multi campus events, classes, and research activities and engagement to facilitate effective communications, relationships, and learning amongst all of the VIU community

5. SWOT Analysis

A SWOT analysis looks at Strengths (S), Weaknesses (W), Opportunities (O) and Threats (T) that are either internal or external to the unit. The centre's SWOT analysis follows.

Strengths

Internal Systems

1. **Customer service** for internal VIU systems in terms of response times, attending to requests, customization, etc.
2. **Use and appreciation** for many **internal VIU systems**
3. **Solutions for employee** use – VPN, administrative applications (FRS, SRS)

Website

1. Current **website** provides good consistency, photos and content
2. **VIU social networking** presence (e.g., Facebook page) is valuable and well maintained
3. The **current website** permits efficiencies in terms of student support by allowing students to register for classes, access research for essays, review academic documents (grades, program path, degree completion requirements), and to access marketing documents and events to learn about programs of interest.

Human Resources

1. **Experienced** and **innovative** employees and students with interest in the web and its effect on academic and administrative systems
2. Regional community with interest and support of what VIU does with web-based activity
3. There is a diverse environment at VIU to grow and support innovation in web activity

Weaknesses

Web Presence

1. **Current VIU web presence** requires updating, greater consistency in language and layout, ability to customize and include interactive components. It is cumbersome to navigate; resources and information are not easy to find; and content is not maintained with accuracy and currency.
 - **Main VIU website** should have login to LMS systems right off the main page
2. At the regional campus, the absence of a **local web resources (CMS, software)** diminishes the development of **local web** resources

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3. There are **few venues** for students to represent individual **website work**, resulting in a misrepresentation of the community

Internal Systems

1. **Administrative and student interfaces** require better integration between the systems
2. **Lack of system** to accommodate registration/payments for events/conferences, allows for ease in room booking and allows access for both internal and external applicants

Communication and Collaboration

1. **Communication processes and methods** so that everyone knows what web services are currently available, who to go to for access, policies and procedures around use and what is coming in the future
2. **Weak, transactional and sometimes reactive communication methods and processes with** prospective students to alumni. VIU could improve web presence, activity and communication relationship with pre post-secondary to post graduate students, as well as with professional development/continuing education offerings and activities.
3. Lack a **database of employee web strengths/talents** to search and build a community of learners with intuitive search tool

Infrastructure: Hardware and Software

1. **Bandwidth and network** capacity is limited and needs improvements (for example, access points to the network, within and around the learning environments)
2. **Desktop systems** are antiquated and need upgrading in order to make effective use of web (e.g., headsets, speakers, software downloads for communication, etc.) – ongoing planning, maintenance.
3. **Productivity tools and operating systems** need updating on all VIU computers
4. **Allowance for sandbox and research and development** areas for innovation and exploration (test environments, etc.) – in relation to IT and Academic Plans

Support: Human, Financial, Procedural

1. Lack of **financial resources** for technology purchase, implementation, systems development, and maintenance
2. **Low level of support for all web services** including training, funding for development, workload considerations, etc.
3. Lack of support, design, and availability of **apps, access, and tools for mobile devices** (e.g., smartphones, tablets, laptops)

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4. Lack of **policies, procedures, and standards** around web services, support and tools, social media, and cloud computing
5. **Lack of appropriate staffing levels** in web and computer system services for maintenance and new development
6. Increasing conflict between the demands for **new and innovative cloud services** as well as **student records** and the **legislated requirements** for protection of privacy applying

Curriculum and Technology

1. Localized use of **innovative and current web technologies** integrated into teaching and learning environments and opportunities
2. Low levels of **physical resources** for effectively **using technology in the classroom** to support student learning (e.g., data projectors, speakers, lecture capture systems, web cams, video conferencing units, etc.) and in faculty offices to develop learning materials (e.g., out of date desktop hardware and software, no mobile technologies to develop content and present, no subscriptions or access to royalty free photos, music etc.)
3. Weak engagement in the **community** (prospective and current students, faculty, internal and external community).

Opportunities

Enhance Student Engagement

1. Significant **improvements in student engagement** with web tools and processes through:
 - Personalized dashboard/portal for accessing all student services (student portal)
 - Use of social networking
 - Interactive media
 - Access to virtual meeting spaces
 - Online student services tools and information
 - Customized user experiences by leveraging available information
2. Build a “relationship” with students and use web technologies to connect students from pre-app to beyond life
3. By permitting more content development tools for the presentation of academic options, we can provide better support to students, and improve satisfaction rates.

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Increase Efficiency of Internal Web-Based Systems

1. Develop new internal web systems and **increase the efficiency of existing systems**, which will include time saving solutions, **improved training**, and the ability to easily update and enhance systems
2. Improve **staff and faculty effectiveness** through integration of back-end systems – single point of access and single password entry
3. Improved **access to educational and research** resources through better integration and accessibility to **Library services**
4. Choice of a robust **content management system** for ease in **coordinating** data, services, and resources for more consistent, flexible, and manageable elements to handling web data for pushing to interfaces both internally and externally on the web
5. Ability to access **integrated, aggregated data** in a user-friendly way (including VIU internal and external community stakeholders)

Improved Communication and Collaboration

1. Improved **abilities to integrate** and involve **all campuses** (within all campuses) through web technologies

Website

1. **Enhance website** content with new technologies, **interactive** components, and more **dynamic content**
2. Provide better **in-house expertise** to present content (e.g., web person at Cowichan)
3. With the **introduction of student content**, potential students can see examples of what they might create. This provides a generative climate, attractive to incoming students.

Teaching and Learning Supports and Resources

1. Enhancements to *access and availability* of **teaching and learning tools** that are in compliance with FIPPA, support online learning development, and provide instructors with training and effective use for integrating cloud computing and social media into classes
2. Opportunity to have **ubiquitous computing opportunities** for students from laptop/tablet programs, greater use of mobile technologies, outfitting of classrooms for more access to technology etc.

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Technology Education, Resources and Support

1. Provide training, support and tools for **enhanced skills and knowledge** with web technologies for every employee at VIU (e.g., Lynda.com for video resources, subscriptions to Prezi Educator, access to survey tools etc.)
2. Plan a **change transitional schedule** – sensitive to new learning and adjustments to change by employees.
3. **Integration with HR plan** re supporting employees to be current and knowledgeable

Be Innovative and Creative with Technologies

1. Be an **advance scout** for new technologies, processes, etc.
2. Provide opportunities for **student- created work** to be viewed, shown, accessed by many
3. **ePortfolios or associated services** for post graduate and pre applicant, fee based activity and traffic, communication with students, ongoing records, conversion/choice communication intro to campus life (e.g., know your roommate) webinars for high school, video, info etc.

Threats

Growth and Effect of New Technologies on Institutions

1. **Continual and escalating stream of new technologies** and web-based services requiring significant investment of human resources to monitor, assess and develop. Other job demands don't allow us time or energy to learn new technologies.
2. **Information overload:** resulting in important information being obscured
3. Increasing **demand and expectation of integration** of services imposes demands on back-end systems, and associated development effort but with limited funding and people resources to handle
4. **Bandwidth demands** are rising, possibly outstripping the capability of VIU's funding and people to accommodate it

Financial Restrictions

1. **Budgetary restrictions** and support from government for capital funds and infrastructure monies

6. Strategic Priorities, Initiatives and Target Dates

Action Items

Priority Level Criteria

- **Criticality** (Importance, Immediacy etc.)
- **Effort** (Longevity, Integration Needed etc.)
- **Cost** (No Cost, to High Cost)
- Number of **Institutional Core Values** Addressing in Academic Plan and related plans
- **Governance Process** (Progress requirement through a governance structure under development)

Possible Labels: (Overall Priority Levels)

1. **HIGH** = immediate, has to happen before others, highly important, meets many core values, undertaken within next 6 months, one of few top priorities
2. **MEDIUM** = very important, can happen after “HIGH” items or at same time, may take longer to fully complete, undertaken within next year, second set of priorities
3. **LOW** = somewhat important, definitely can wait to happen after HIGH and MEDIUM items are underway, may take much longer, or shorter to undertake but just not a top priority – but definitely still required, third set of priorities

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7. Priority Matrix

Initiative	Priority Flag ⁵		Strategic Alignment ² (35%)	Value Delivery ² (35%)	Cost ^{3,4} (30%)	Observations
Enhance Student Engagement and Success through Effective use of Web and Mobile Technologies						
Develop a student portal	2		Med	Med	Med	
Develop mobile applications	1.95		Med	Low	Low	Leverages the student portal
Enhance VIU's Presence and Accessibility via the Web						
Develop an action plan for VIU's web presence	2.65		High	Med	Low	
Develop a plan to become more web and mobile centric	2.35		High	Med	Med	
Develop Employee Capacity for Effective Use of the Web						
Develop policies and procedures	2.25		None	High	Very Low	
Develop a database of expertise	1.95		Low	Med	Low	
Improve Employee Effectiveness through Web-Based Access to Information and Services						
Develop an employee portal	1.65		Low	Med	Med	
Develop employee search capability	1.65		Low	Med	Med	
Improve Back-End Systems to Enable Quality User-Facing Web Services						
Implement a content management system	2.35		High	Med	Med	Required for the student and employee portal initiatives
Comprehensive evaluation existing information architecture	2.35		Med	High	Med	Overseen through IT Governance
Improve the IT Infrastructure to Support Use of the Web						
Develop/improve evergreen plan	2		Med	Med	Med	Overseen through IT Governance
Improve Internet connection capacity	1.65		Med	Low	Med	
Improve wireless network capacity	1.35		Med	Low	High	Supports mobile and web-centric initiatives

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Notes:

1. Possible strategic alignment measures include:

- # of Academic Plan action items supported
- support for other initiatives

2. Possible value delivery measures include:

- Department and institutional effectiveness
- Number of user impacted – students and employees

3. Cost measures include:

- Initial investment requirement
- On-going cost of operations
- Human resource requirements
- Significance of Low, Med, High values are opposite to other columns

4. Weighted averages based assuming:

- Bright green = 4
- Pale green = 3
- Yellow = 2
- Pale red = 1
- Bright red = 0

8. Initiative: Enhance Student Engagement and Success through Effective use of Web and Mobile Technologies

Short-Term Actions

None

Mid-Term Action Items

1. **Develop a Student Portal:** By implementing a portal, students will have increased connectivity and integrated use of all VIU student systems (learning management, grades, applications, registration, graduation, extra-curricular, communication/messaging, financial, health, etc.) utilizing a single sign-on process (SSO) to provide ease of access and requirement for one log on and password for authentication.

Initiatives Required to Complete Action Item:

- a. Conduct a needs assessment (and focus group) with students (current and prospective) and representatives from key areas such as Registration, and Student Services
- b. Consider potential solutions, considering:
 - Cost assessment
 - Current capacity
 - Solutions and best practices employed beyond British Columbia
 - Validation by students
 - Should have access to people, e.g., chat, concierge, problem solving tools
 - Possible phased implementation as new capabilities are accommodated through development of administrative systems.
 - Known requirements:
 - i. Develop a system that would save email messages sent to students in their Online Student Record as an ongoing log of communication with a specific student. *Links to Enrolment Management Plan Action Item #21: Communications Support.*
 - ii. Develop automated “Verification of Enrolment” documents for students, which they can access on a self-serve basis through their Online Student Record. These documents are required by various organizations (like banks) for proof that a student is enrolled at VIU. We currently produce them manually in the Registration Centre. Other PSIs have done this. *Links to Enrolment Management Plan Action Item #4: Midstream Support & Retention Programs.*
 - iii. Develop a link from the Online Student Record to the Bookstore so that students can generate a customized list of textbooks they require based on the courses they have registered in. *Links to Enrolment Management Plan Action Item #3: First Year Support & Retention Processes.*

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- iv. Give students the ability to deactivate goals through their Online Student Record. For example, if they have determined they no longer want to do an English Major, they could “un-declare” that goal themselves. *Links to Enrolment Management Plan Action Item #4: Midstream Support & Retention Programs.*
- v. Create the ability for students to complete personal profiles through their Online Student Record for admission to any program that requires a personal profile. This has already been done for the Bachelor of Education program and is working well but we do not have the resources in Information Systems to complete it for all other programs. *Links to Enrolment Management Plan Action Item #1: Applicant to Registrant Processes.*
- vi. Modify the way in which students see prerequisite information in their Online Student Record. Right now they have to register for a course before they are told whether or not they meet the prerequisite. It would be better if the system could check based on their selection of the courses before they actually register fully. *Links to Enrolment Management Plan Action Item #3: First Year Support & Retention Processes, and Action Item #4: Midstream Support & Retention Programs.*

Linked to:

- Review of Web Presence
- Comprehensive evaluation of VIU’s information infrastructure/architecture
- Content Management System

Action: The Chief Technology Officer, with a working group of employees and students will complete this task by: **Summer 2013**

Long-Term Action Items

1. **Develop Mobile Application Capability:** Through an academic and administrative systems supported environment allow for growth, use and integration of mobile applications to augment browser-based access to information and services

Initiatives Required to Complete Action Item:

- a. Conduct a needs assessment with students, faculty and staff and develop a prioritized set of development requirements
- b. Assess available technologies against user needs for performance and interaction
- c. Validate applications with a representative set of users and device types
- d. Engage students in mobile application development

Action: The Chief Technology Officer, with a working group of staff members from Communications and Public Relations, the Information Technology Department, and the Centre Innovation and Excellence in Learning will complete this task by: **Spring 2014**

9. Initiative: Enhance VIU's Presence and Accessibility via the Web

Short-Term Actions

1. **Develop an Action Plan for VIU's Web Presence:** Develop an action plan for improving VIU's web presence.

Initiatives Required to complete Action Item:

- a. Develop for the broader community, including students, prospective students, alumni, regional, and international users
- b. Formal review of existing web presence--the institutional "image"
Note that an audit has been done of the international component. Consider:
 - Institutional branding focus
 - Review for consistency of branding, usability, accessibility, fitness for mobile display and interaction
 - Conduct a focus group of students (approximately 30-60 minutes in length) to ascertain current and relevant information about information technologies and how students see them in supporting their learning
- c. Reputation management: identify issues & platforms, who's posting, building of infrastructure to monitor reputation chatter & respond.
- d. Create a workflow to bring together print & web presence to consolidate branding: e.g. dept. gets new brochure & images--need to update site & images.

Action: The Executive Director, University Relations, with a working group of members from University Relations, the Centre for Innovation and Excellence in Learning, Information Technology and a representative group of faculties and departments should begin this by: **January 2013** for completion by: **Summer 2013**

Mid-Term Actions

1. **Develop a Plan to Become More Mobile and Web-Centric:** Develop a plan for becoming a mobile and web-centric institution that allow for seamless and integrative uses of the Internet and through a variety of mobile devices.

Initiatives Required to Complete Action Item:

- a. In consultation with a representative group of faculty, develop a prioritized set of requirements. Consider:
 - with improved wired and wireless infrastructure, laptops/tablets replacing desktop computing for faculty connectivity and use in teaching and learning,

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- mobile tablet/laptop carts for instant labs for student learning
 - lecture capture classrooms with streaming video applications
 - laptop/tablet initiatives for certain programs
 - more data projectors in rooms etc.
- b. Allow for the growth of a faculty and staff web presence
- c. Develop and submit through the IT Governance process, a plan for rolling out identified systems, including costs, infrastructure requirements and support resources

Action: The Director, Centre for Innovation and Excellence in Learning and the Chief Technology Officer will complete this task by (milestones for various stages of plan): **Summer 2014**

Long-Term Actions

None

10. Initiative: Develop Employee Capacity for Effective Use of the Web

Short-Term Actions

None

Mid-Term Actions

1. **Develop Policies and Procedures:** In order to guide staff and faculty in proper application of web technologies, a variety of policies and procedures are required for effective use of the web at VIU.

Initiatives Required to Complete Action Item:

- a. Create a policy regarding protection of privacy of student and employee information
- b. Update acceptable use and conduct guidelines
- c. Develop and deliver training for faculty and staff

Action: Facilitated by the Director, Centre for Innovation and Excellence in Learning and the Chief Technology Officer, a working group of interested faculty and staff will complete this item by: **Summer 2013**

Long-Term Actions

1. **Develop a Database of Faculty Expertise:** Compile and make easily accessible a database of existing capacity of technology-related expertise in house through building a community of practice around cross-collaboration and sharing of knowledge.

Initiatives Required to Complete Action Item:

- a. Consider creation of an “information officer” who has the info on all systems available
- b. Consider supports for a community of practice such as user groups, seminars and regular meetings
- c. Collect information and maintain a database

Action: Facilitated by the Director, Centre for Innovation and Excellence in Learning and the Chief Technology Officer, a working group of interested faculty and staff will complete this item by: **Spring 2014**

11. Initiative: Improve Employee Effectiveness through Web-Based Access to Information and Services

Short-Term Actions

None

Mid-Term Actions

None

Long-Term Actions

1. **Develop an Employee Portal:** By giving faculty connectivity and integrated use of all VIU employee systems (payroll, human resources, finance, vacation, library, professional development, classifieds, communication/messaging, IT support, teaching and learning support, sharing expertise across institution, accessing institutional data etc.) utilizing a single sign-on process (SSO) to provide ease of access for all employees

Initiatives Required to Complete Action Item:

- a. Conduct a needs assessment with faculty and staff community and representatives from key areas such as Information Technology, Academic and Administrative Service departments
- b. Consider leveraging the previously implemented student portal solution

Action: The Chief Technology Officer, with a working group of employees should complete this by: **Fall 2014**

2. **Develop Employee Search Capability:** Design a system so that employees have access/strong search abilities along with ease of **integration to pull and use institutional data** for program and faculty activity, new program design, marketing and communication etc.

Initiatives Required to Complete Action Item:

- a. Develop a statistical data model
- b. Develop an institutional dashboard (which could integrate portal)
- c. Develop an employee portal
- d. Undertake a training plan
- e. Develop standardized reports for Coordinators, Deans, and Administrators to run via a web interface including data about admissions, enrolment, and graduates.

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Links to Academic Plan action item #3: Identify strategies to improve enrolment planning and management. **Links to Enrolment Management Plan action item #20:** Integrated Data Management.

- f. Create a system for Deans and Department Chairs to obtain email address lists for students in their Faculty or Department so they may communicate more easily with their students. **Links to Enrolment Management Plan Action Item #21:** Communications Support

Action: This requirement should be addressed as a general Administrative Systems issue, overseen through the IT Governance process. The Chief Technology Officer should bring this to the attention of the Administrative Systems Advisory Committee of the planned IT Governance framework by: **Spring 2013**

12. Initiative: Improve Back-End Systems to Enable Quality User-Facing Web Services

Short-Term Actions

1. **Implement a Content Management System:** Select and implement a **content management system** (for shared internal workspace, consistency and organization of documents for website, access and organization of all content, management of materials, resources, for many web components etc.)

Initiatives Required to Complete Action Item:

- a. Develop a complete list of requirements through direct involvement or surveys of all major user groups, students and faculty, incorporating requirements flowing from all initiatives in this plan.
- b. Identify potential solutions and estimate resource requirements to acquire, implement and maintain. Elements may include:
 - Evaluate compatibility with current content to facilitate transferring existing content
 - Test proposed CMS tools at the department level (e.g. Financial aid clerk), to ensure users can intuitively use and update the content.
 - Formal review of current systems

Action: The Chief Technology Officer, with a working group of staff members from Centre for Innovation and Excellence in Learning, Communications and Public Relations and other stakeholder groups will complete this task by: **January 2013**

2. Comprehensive Evaluation and Requirements Definition of Existing Information

Architecture: Undertake a **comprehensive evaluation** and requirements definition of VIU's **information infrastructure/architecture**

Initiatives Required to Complete Action Item:

- a. Identify areas and undertake an analysis **as related to the priorities within this plan** (with deliverables and outcomes). Consider where the information is used, where it goes next and who uses it? To be done at a macro level and focused on integration elements.
- b. Potential areas for investigation:
 - all internal information/communication systems used
 - the type of data housed
 - who is responsible for maintaining each
 - who is responsible for maintaining/editing the

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- information in each
 - identify the usage level
 - how people use/want to use the data
 - identify integration potential--with other internal systems,
 - build bridge to portals
 - survey departments (e.g. Writing Centre uses online
 - booking system for students; campus recreation; self-built, Fluid
 - Surveys, find out about external systems being used, etc.)
 - Visually map the process/workflows of the systems
 - Develop a survey tool to determine user case scenarios--students,
 - employees, alumni, potential students; this would inform
 - integration/portal decision
 - Cost benefit/analysis for further steps to be taken

- c. Identify projects that are in progress and the resources required for completion (for example, the Program Management System, which will enable automated production of the Online Calendar content outlining program requirements).

- d. Identify projects that are outstanding (i.e. where a system may have already been reviewed and departments have determined a need for enhancements but do not have resources to initiate them).

- e. Develop guidelines and process for software purchases to ensure that new acquisitions interoperate with existing systems and are a good fit with planned directions.

Action: This requirement should be addressed as a general Administrative Systems issue, overseen through the IT Governance process. The Chief Technology Officer should bring this to the attention of the Administrative Systems Advisory Committee of the planned IT Governance framework by: **Spring 2013**

Mid-Term Actions

None

Long-Term Actions

None

13. Initiative: Improve the IT Infrastructure to Support Use of the Web

Short-Term Actions

None

Mid-Term Actions

1. **Develop/Improve Current Evergreen Plan:** Create a plan that reduces refresh time on all employee and student technologies to less than 5 years and in line with use and type of equipment so as to provide acceptable technology tools for all VIU employees and students

Initiatives Required to Complete Action Item:

- a. Determine costs and resource requirements for upgrade the existing technology refresh cycles
- b. Consider prioritization based on specific user needs vs. efficiencies of system-wide standard
- c. Make a recommendation through the IT Governance process (under development) for the necessary improvements
- d. Implement the upgraded refresh process

Action: This requirement should be addressed as a general IT infrastructure issue, overseen through the IT Governance process. The Chief Technology Officer should bring this issue to the attention of the appropriate committee(s) of the planned IT Governance framework by: **Spring 2013.**

Long-Term Actions

1. **Improve Internet Connection Capacity:** Investigate and implement improved performance and capacity for web through Internet.

Initiatives Required to Complete Action Item:

- a. Investigate all potential Internet connection options including:
 - Direct connection to the British Columbia high speed research network (BCNet)
 - Alternatives to the Government network for higher performance access to the Internet
 - Alternatives for higher performance links between campuses
- b. Implement high performance links to the BC research network, to the Internet and between campuses
- c. This need is identified in the IT Plan and implementation will be overseen through the IT Governance process

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Action: This issue is addressed through the IT Plan recommendations 9 and 12, implementation of which will be overseen by the IT Governance process. The Chief Technology Officer should bring this issue to the attention of the appropriate committee(s) of the planned IT Governance framework by: **Spring 2013**.

2. Improve Wireless Capacity: Provide ubiquitous wireless service throughout all campuses and sites, with performance characteristics consistent with current user expectations and adequate to meet the needs identified in this plan.

Initiatives Required to Complete Action Item:

- a. Investigate current wireless network solutions. Consider:
 - Higher speed access technologies such as 802.11n
 - Seamless roaming
 - Efficient administration systems for improved support and responsiveness
- b. Upgrade the data network for adequate capacity to support new wireless network needs
- c. Upgrade and expand the wireless service

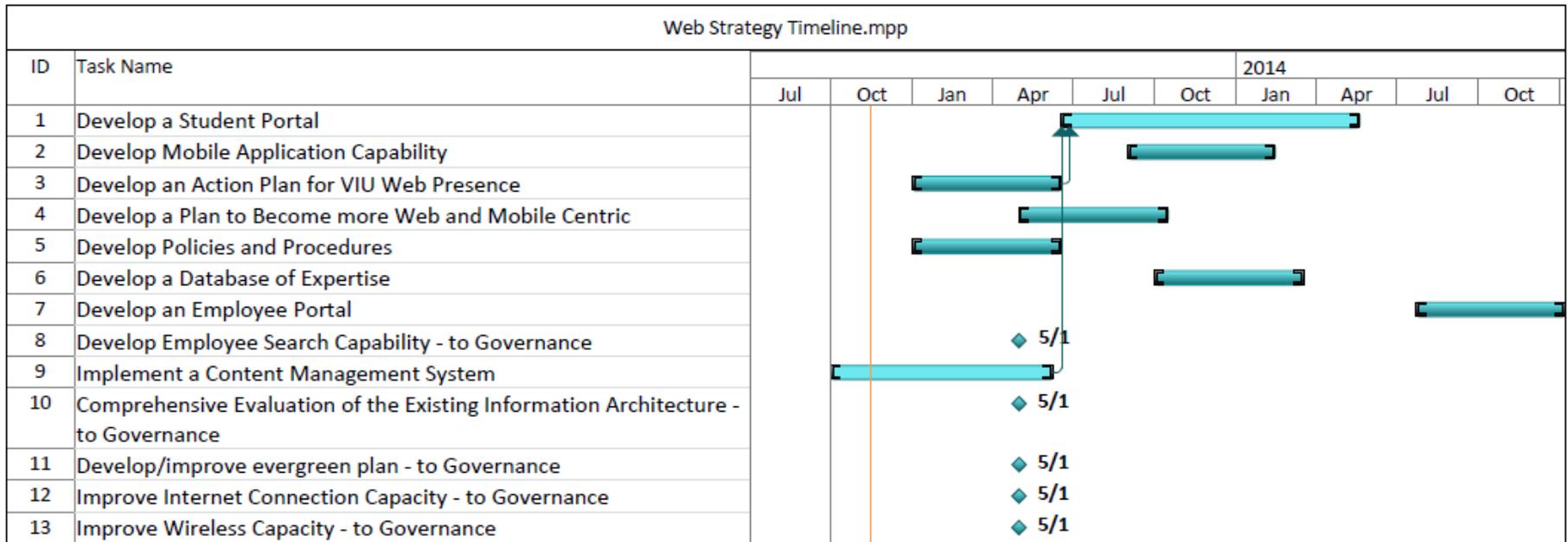
Note that an initiative is currently underway to upgrade all network components, including the wired data network, telephone systems and wireless at all campuses and sites. Upgrade of the wireless service is expected to be completed over a period of two years, beginning in three to four years.

Action: This requirement should be addressed as a general IT infrastructure issue, overseen through the IT Governance process. The Chief Technology Officer should bring this issue to the attention of the appropriate committee(s) of the planned IT Governance framework by: **Spring 2013**.

WEB SERVICES STRATEGIC PLAN

14. Web Strategy Timeline Overview

This is a brief timeline of the 13 Action Items (under 6 Initiatives) and where their respective start and end dates might occur.



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