

Northland Community and Technical College  
East Grand Forks  
Thief River Falls



Master Technology Plan 2005-2007

[http://www.northlandcollege.edu/vision2010/plan\\_technology.pdf](http://www.northlandcollege.edu/vision2010/plan_technology.pdf)

Developed by Members of Technology Subcommittees:

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Action Plan FY 2009

**Technology Utilization– Goals, Objectives, and Strategies****(Infrastructure)****FY09****An employee team dedicated to researching and recommending future direction for technology infrastructure for the college.****Updated 4/16/08**

<b>GOAL: #1</b>	<b>To provide adequate internal and external bandwidth to the College.</b>	<b>Responsible Team/Ind.</b>	<b>Resources</b>	<b>Timeline</b>	<b>Measurable Outcome</b>
<b>Objective: 1a----</b>	Provide an adequate external connection to the Internet				
<b>Strategies:</b>	1a1 - Work with MnScu to ensure external data line is sufficient for our needs 1a2 - Monitor bandwidth use for levels above 50% consumption	ITS Staff, MnSCU IT Staff	MnScu	Ongoing	Adequate bandwidth is provided with enough for future growth.
<b>Objective: 1b----</b>	Mentor and enforce appropriate use of Computer Technology policies to maximize college network bandwidth.				
<b>Strategies:</b>	1b1 - Educate students/employees regarding appropriate use of computer technology. 1b2 - Research and potentially implement strategies to develop virus removal and other malicious files from student computers.	ITS Staff, Scott Foss	ITS Staff Open Source software	Ongoing	<ul style="list-style-type: none"><li>• Network outages due to bandwidth consumption (caused by viruses/undesired use is kept to a minimum.</li><li>• Available bandwidth for intended use.</li></ul>
<b>Objective: 1c----</b>	Maximize college network resources.				
<b>Strategies:</b>	1c1 - Attempt to ensure that all computers have current and adequate Antivirus Software. 1c2 - Attempt to ensure that all computers are up-to-date with their OS Patches (Windows Updates) 1c3 - Continuous monitoring of network for infected computers and quick removal from network. 1c4 - Monitor and remove illegal downloads and	ITS	Antivirus Software, Windows Updates	Ongoing	Fewer infected computers

	file-sharing.				
<b>Objective:</b> 1d----	Provide hardware and wiring to provide adequate bandwidth.				
<b>Strategies:</b>	1d1 - Maintain minimum of 100Mbps to the desktop, 54Mbps for wireless, and Gigabit for the backbone. 1d2 – Update and improve closet Wire management. 1d2.1 - Relocate switch closets 1d2.2 - Secure closets	ITS Staff	Budget	Ongoing	Adequate bandwidth is provided with additional bandwidth for future growth.
<b>GOAL:</b> #2	<b>To ensure network data integrity and safety.</b>	<b>Responsible Team/Ind.</b>	<b>Resources</b>	<b>Timeline</b>	<b>Measurable Outcome</b>
<b>Objective:</b> 2a----	Back-up all data stored on servers.				
<b>Strategies:</b>	2a1 – Perform daily backups of servers.	IT Staff	Budget Backup Exec	Ongoing	All data is backed up.
<b>Objective:</b> 2b----	Keep all data on servers safe from viruses.				
<b>Strategies:</b>	2b1 - Run Antivirus software on each server, with scheduled scans (currently done weekly on Sundays). 2b1.1 - Renew yearly maintenance agreement and license for antivirus software for college owned computers.	Director of Technology	Budget Antivirus Software	Ongoing	Servers are protected from viruses, resulting in fewer opportunities for data or individual computers to become infected or damaged.
	2b2 - Provide free Antivirus software for all students and employee computers. 2b2.2 - Renew yearly maintenance agreement and license for antivirus software for students computers. 2b3 - Provide information about safe computing to help educate users about viruses.	ITS Staff, Director of Technology, Emerging Tech	Tech Fee Budget, Budget, Antivirus Software	Ongoing	Fewer opportunities for data or individual computers to become infected or damaged.

	2b4 - Scan all inbound and outbound email for viruses. Block certain file attachment types that are known to be used by viruses via email. 2b4.4 - Renew yearly maintenance agreement and license for GWAVA.	Director of Technology, Scott Foss	Budget GWAVA	Ongoing	Viruses, and other malicious files, attached to email are blocked.
	2b5 - Remove infected computers from the network as quickly as possible.	ITS Staff	ITS Staff	Ongoing	Fewer opportunities for viruses to spread.
<b>Objective: 2c----</b>	Ensure stable environment for all “mission critical equipment.”				
<b>Strategies:</b>	2c1 - Provide adequate ventilation (A/C) in server room (MDF) and wiring closets (IDFs) to prevent overheating.	ITS Staff, Maint Staff	Budget	Ongoing Review	Servers and networking equipment are kept from overheating, lessening the chance of equipment failure or shorter life span.
	2c3 - Provide adequate power requirements for equipment, to include backup power via UPS or backup generator.	ITS Staff, Maint Staff	Budget Electrician	Ongoing Review	ITS Staff has enough time to properly shutdown servers in the event of a power failure, resulting in fewer opportunities for data corruption due to an immediate loss in power.
	2c4 - Stay informed of any security vulnerabilities and patches that may be needed.	ITS Staff	Workshops, conferences	Ongoing	Limit opportunities of exploiting vulnerabilities in operating systems of servers and desktops, along with other network equipment.
	2c5 - Ensure MDF and IDFs are secure. 2c5.1 - Locked doors to rooms. 2c5.2 - Locked cabinets for racks in “unsecured” areas. 2c5.3 - Security camera’s as needed.	ITS Staff, Maint Staff	Budget Maintenance	Ongoing	Prevent unauthorized personal from gaining access to the network equipment.
<b>Objective: 2d----</b>	Ensure wireless data integrity and operation				

<b>Strategies:</b>	2d1 – Provide security via authentication and encryption for wireless network.  2d2 – Provide adequate wireless coverage.	IT Staff	MnSCU Wireless Policy & Procedure  Budget  Occasional survey of wireless coverage and signal strength.	Ongoing	Wireless network is available to students and employees. With employee's having a secure, encrypted connection.  Coverage and signal strength is adequate for requested areas.
<b>GOAL: #3</b>	<b>To continually review infrastructure related documentation for accuracy.</b>	<b>Responsible Team/Ind.</b>	<b>Resources</b>	<b>Timeline</b>	<b>Measurable Outcome</b>
<b>Objective: 3a----</b>	Review the Infrastructure Technology Plan at least twice per school year.				
<b>Strategies:</b>	3a1 - Review once during Fall Semester, and once during Spring Semester.	Infrastructure Committee	Action Plan and inventory	Ongoing/Fall and Spring	Action Plan is kept current.
<b>Objective: 3b----</b>	Maintain a well documented inventory of network hardware for infrastructure planning.				
<b>Strategies:</b>	3b1 - Keep a centralized spreadsheet/database for all equipment. List of items that should be tracked: 3b1.1 - Model number 3b1.2 - Serial number 3b1.3 - Purchase date 3b1.4 - Contract number 3b1.5 - Asset number 3b1.6 - Location (site and room) 3b1.7 - Device name 3b1.8 - IP address 3b1.9 - MAC address	Director of Technology, Scott Foss, ITS Staff	Spreadsheet	Ongoing	An accurate list of all network equipment is available.
	3b2 - Maintain spare devices in case of equipment failure.	Director of Technology, Scott Foss	Budget	Ongoing	Rapid replacement of failed equipment.

	3b3 – Maintain Network Hardware Inventory Recycle Program 3b3.1 - 5 year recycle program on switches. 3b3.2 - 4 year recycle program on servers. 3b3.3 – 8 year recycle program on core switches	Director of Technology, Sue Dalager	Budget	Ongoing	Equipment is up-to-date
	3b4 - Renew yearly Cisco Maintenance agreement	Director of Technology	Budget	Annually	Equipment is covered on Maintenance agreements
	3b5 - Create and maintain network maps.	Scott Foss	Diagramming Software	Ongoing	An accurate list and map of all network equipment is available.
<b>GOAL: #4</b>	<b>Ensure use of up-to-date and stable desktop systems and software.</b>	<b>Responsible Team/Ind.</b>	<b>Resources</b>	<b>Timeline</b>	<b>Measurable Outcome</b>
<b>Objective: 4a----</b>	Conduct ongoing exploration of desktop operating systems and software.				Stay current with operating systems and software
<b>Strategies:</b>	4a1 - Review Operating Systems that are being developed and what is being sold on new computers. 4a2 - Coordinate with each campus Technology Committee for software packages such as Office.	ITS Staff	Software	Ongoing	Current software and operating systems on news and existing computers

<b>Technology Utilization - Goals, Objectives, and Strategies (classroom)</b>					<b>FY09</b>
<b>An employee team dedicated to making recommendations for the continuous improvement of classroom instructional technology.</b>					<b>Updated 4/16/08</b>
<b>GOAL: #1</b>	<b>Enhance instruction through use of technology and optimal classroom configuration.</b>	<b>Responsible Team/Ind.</b>	<b>Resources</b>	<b>Timeline</b>	<b>Measurable Outcome</b>
<b>Objective: 1a---</b>	To provide faculty with necessary classroom technology.	Technology Committee and Classroom sub-committee	Budget funds, faculty input	Ongoing	Classrooms and labs identified through faculty survey equipped and wired to meet faculty needs
<b>Strategies:</b>	1a1 - Utilize survey to assess classroom technology needs	Technology Committee and Classroom sub-committee	Committee members, ITS	Annually	Results from Survey

	1a2 - Work with faculty and various vendors as needed to keep faculty current with emerging technology	Committee and various vendors	Emerging Tech Spec., Budget IT vendors	Ongoing	Recommendations
	1a3 - Evaluate current classroom environments for use of technology				
	1a4 - Work with administration to leverage funds for classroom technology	Committee and appropriate administrators	Business office for available funds to be leveraged	Ongoing	Budget Expenses
	1a5 - Maintain recycling/replacement plan for projectors, other classroom technology (Master Technology Plan)	Committee	ITS, building supervisor	Annually	Recycling Plan
	1a6 - Research Emerging Classroom Technology trends and ideas.	Committee, Emerging Tech Specialist	Workshops, conferences	Ongoing	New Ideas
<b>Objective: 1b---</b>	Identify classrooms and faculty that would benefit from enhanced technology	Technology and Classroom sub-committee, Vendors	Budget, Vendors, ITS, faculty	Annually	Prioritized equipment list of classrooms and faculty that would benefit from enhanced technology.
<b>Strategies:</b>	1b1 - Determine appropriate and affordable levels of enhanced technology available	Committee, Vendors	ITS, Vendors, budget	Annually	
	1b2 - Provide faculty with access to information about available advanced technology, such as Camtasia for D2L	Committee, Vendors	ITS	Ongoing	
	1b3 - Coordinate with existing technology and faculty development groups to provide orientation to interested faculty on enhanced technology	Technology Committee and Classroom sub-committee	Emerging Tech, technology and faculty development groups, budget	Ongoing	
	1b4 - Survey faculty after enhanced technology orientation about its possible use in classrooms	Committee	Sub-committee	Ongoing	
	1b5 - By using survey results, develop plan with faculty for “Smart” classrooms	Committee	ITS, Committee	Ongoing	
<b>Objective: 1c---</b>	Identify, obtain, and maintain up-to-date classroom technology for instructional use in	Tech Committee, Chair, Classroom	Budget, ITS	Annually	<ul style="list-style-type: none"> <li>College Inventory Lists</li> <li>Recycling Plans</li> </ul>

	regular classrooms, ITV rooms, and labs	Sub-committee and Director of Technology			
<b>Strategies:</b>	1c1 - Identify existing classroom technology in regular and ITV classrooms and labs	Committee	Sub-committee, ITS	Annually	
	1c2 - Develop a process for faculty to provide input on classroom technology needs and desired upgrades	Committee	Faculty, ITS, Survey	Annually	Survey Results
<b>GOAL: #2</b>	<b>Enhance instruction by promoting training in emerging classroom technology trends and ideas.</b>	<b>Responsible Team/Ind.</b>	<b>Resources</b>	<b>Timeline</b>	<b>Measurable Outcome</b>
<b>Objective: 2a--</b>	Assess faculty training needs by survey, interview, observation, and evaluation of training requests in consultation with other faculty development and technology training committees	Technology Committee and Classroom sub-committee	Faculty, ITS, other faculty development/training committees	Ongoing	<ul style="list-style-type: none"> <li>• Prioritized list of technology training needs</li> <li>• records of training opportunities</li> <li>• evidence of increased awareness</li> <li>• participation in training</li> </ul>
<b>Strategies:</b>	2a1 - Solicit input on classroom technology training needs	Committee	Faculty dev. Emerging Tech	Ongoing	Input
	2a2 - Identify and meet with other faculty groups providing technology training	Committee	Other faculty development training committees	December 05	
	2a3 - Provide input into technology training calendar	Committee Emerging Tech Spec.	Other faculty development training committees	Ongoing	Post Training calendar on the web
	2a4 - Provide Classroom technology resource site on the web for tutorials and “how to” pieces, links to and from D2L Faculty Support Center	Emerging Tech Spec., Webmaster, D2L Faculty Mentor	Emerging Tech Spec., Webmaster, D2L Faculty Mentor	Ongoing	Resources on the web
<b>Objective 2b:</b>	Identify and seek funding for “train the trainer” workshops and conferences.	Committee	Faculty, ITS, Budget, CTL funds	Ongoing	<ul style="list-style-type: none"> <li>• List of available “train the trainer” opportunities</li> <li>• record of attendance at conferences/workshop</li> <li>• evidence of sharing training experiences through available forums</li> </ul>



<b>Strategies:</b>	2b1 - Identify appropriate technology conferences, workshops focusing on “train the trainer” techniques	Technology Committee and Classroom sub-committee	Faculty, ITS	Ongoing	
	2b2 - Inform interested faculty of training opportunities	Committee	Classroom committee	ongoing	
	2b3 - Seek funding for those interested in “train the trainer” workshops and conferences	Committee	Budget, CTL Funds	ongoing	

## Technology Utilization Goals, Objectives, and Strategies (Professional Development)

**FY09**

**An employee team committed to maximizing employee use of technology by offering on-campus professional development opportunities, and making recommendations for continuous improvement of technology utilization.**

**Updated 4/16/08**

<b>GOALS: #1</b>	<b>Promote employee professional development to maximize technology utilization.</b>	<b>Responsible Team/Ind.</b>	<b>Resources</b>	<b>Timeline</b>	<b>Measurable Outcome</b>
<b>Strategies:</b>	1a1 - Secure input regarding technology training and resources.	Emerging Tech	Survey Email	Ongoing	Training Sessions
	1a2 - Conduct hands-on employee technology training sessions.	Emerging Tech	-Library Class -Laptop Cart -Computer labs	-Bi-monthly training - Emails as needed	Employee training evaluations Attendance records at sessions Punchcard program
	1a3 - Provide short-informative technology tips via e-mail and the web	Emerging Tech	-College Web -GroupWise	-On-going /weekly	Emails sent as needed Publish in Pioneer
	1a4 - Develop “Frequently Asked Questions” section on the college website for employee access.	Emerging Tech Webmaster D2L Faculty trainers Karleen D Web Committee	Webmaster Faculty/Staff	-On-going	Create section on Web Incorporate a “Hit” counter on “Frequently Asked Questions” section Feedback on utilization of source
	1a5 - Encourage and promote employee use of the Technology training request resource	Emerging Tech	Emerging Tech -GroupWise -College Web	Ongoing	Track number of e-mails received regarding technology training requests. Create a centralized location for receiving Technology training requests
	1a6 – Research new and emerging technologies that could be used by	Emerging Tech Users group?	Emerging Tech Faculty/Staff	Ongoing	Initiate dialogue among users each semester

	employees.	IT staff Faculty/Staff	IT employees		Brainstorm and recommend new technologies to purchase on a trial basis.
	1a7 – Research an incentive program in conjunction with the Testing Center to promote outside training opportunities.	Jennifer Sundberg	Testing center ACT Online courses	Spring semester	Recommendations to the subcommittee
	1a8 - Monthly contact and reminders to division/department heads regarding technology needs of the department and training available.	Emerging Tech Division Chairs	GroupWise	Implement Summer Session - Ongoing Monthly	Response through e-mail from division/department heads. Training sessions will be setup based on requests.
<b>GOAL: #2</b>	<b>Coordinate/Cooperate with other professional development efforts at Northland and in the MnSCU system.</b>	<b>Responsible Team/Ind.</b>	<b>Resources</b>	<b>Timeline</b>	<b>Measurable Outcome</b>
<b>Strategies:</b>	2a1 – Coordinate with other entities to create a master calendar of all college professional development activities available to employees each semester.	Emerging Technology Specialist CTL reps D2L faculty reps		On-going	Create a master calendar that is updated as needed with new activities.
	2a2 – Meet with the faculty D2L training representatives and CTL representatives each semester to schedule training sessions.	Emerging Technology Specialist CTL reps D2L faculty reps		Prior to each semester On-going	Scheduled training sessions for semester with varied activities.
	2a3 – Advertise/disseminate technology related training opportunities to employees that are offered through MnSCU.	CTL reps D2L faculty reps Emerging Tech		On-going	Include activities in master calendar Emails to employees with information.
<b>GOAL: #3</b>	<b>Maximize and improve the use of ITV /Video Conference technology for college-wide instruction and communication.</b>	<b>Responsible Team/Ind.</b>	<b>Resources</b>	<b>Timeline</b>	<b>Measurable Outcome</b>

<b>Strategy:</b>	3a1 - Maintain image-based instructions for both Video Conference and ITV.	Holly Deschene David Olsen Terry Wiseth Joanne Bachmeier	-Create and update ITV Employee Handbook for each campus	On-going	Faculty/Staff Evaluation of Training Poly-comm Documents are completed Maintain handbook and update as needed through yearly review of documents
	3a2 – Maintain and update laminated cards with quick instructions for ITV and Video Conference rooms.	Emerging Tech	-Digital image diagrams of ITV consoles	On-going	-Solicited feedback from employees. -Final ITV and Poly-Comm documents for distribution to employees, posted in ITV rooms and posted to college website
	3a3 – Continually research /review additional Video Conference setup and bandwidth needed for campus communications.	ITS	-Dave Olson and ITS staff	- On-going research on additional equipment and bandwidth	Purchase 2 <sup>nd</sup> complete unit for EGF 2 <sup>nd</sup> Unit purchased for TRF
	3a4 - Conduct Training for employees on the technical aspect of ITV delivery and Video Conference use.	Emerging Tech	Emerging Tech Training Documents ITS Staff	Every semester	Training Sessions Employee Evaluations Training Attendance Rosters
	3a5 - Research “New” and “Innovative” delivery technologies in education.	Emerging Tech	-Employees -ITV admins from other schools -Jeff Sinks - Crookston	-On-going research technology	Research recommendations and take to larger committee.