
State of North Dakota
Information Technology Department



STAGEnet Education Upgrade 2009
Project Plan

Version: *Draft 1.1*

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Version Control

Once this document is formally approved, changes should be tracked and reviewed by the assigned individual in the table below:

Date	Author	Change	Reviewed and/or Approved By
5/01/09	Dirk Huggett	Original Draft	ESC
5/15/09	Dirk Huggett	Updated budget, schedule, team list, communication plan	

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INTRODUCTION

Purpose of this document

The purpose of the Project Plan is to define the project scope, schedule, budget, and quality expectations of the project, and to provide a comprehensive strategy for managing the project.

Background

The North Dakota Statewide Technology Access for Government and Education network (STAGEnet) was created by the 1999 legislative session. STAGEnet provides broadband connectivity, Internet access, video conferencing and other networking services.

In 2007 the core backbone of the network was upgraded to a four-node redundant fiber ring. This project will upgrade the endpoints at most of the K12 and Higher Education facilities.

Project Assumptions and Constraints

Assumptions:

- There will be no more disaster events that require the network services team to respond.
- Agencies will not require any major mandatory network changes during this project timeline. (For example, setting up a new office space.)

Constraints:

- The project must be completed by August 21, 2009 in order to avoid impacting registration at Higher Education institutes and other preparation activities in the K12 system.
- For cash flow reasons, the project needs to spread out the procurement of hardware across multiple months. This has a couple of implications on the project.
 - The project will need to upgrade the Bismarck and Fargo core infrastructure to a level that will support the May/June rollouts by May 22nd. The project must have Grand Forks and Minot's core infrastructure updated by July 11th. The rest of the Bismarck and Fargo infrastructure upgrade must be complete by August 21st.
 - The endpoints need to be broken up by region to align with the core upgrades.
- The Iron Triangle priority is: Quality, Schedule, Scope, Cost

List of related documents

The following documents are important to this project and provide additional information for review. They can be found in the agency's file share (P drive) under GR12\Stagenet2009.

- [STAGEnet Upgrade Business Case-FINAL.docx](#)
- [Project Charter STAGEnet Upgrade 2009 V1.docx](#)

SCOPE MANAGEMENT

Scope Management involves the identification of all the work required, and only the work required, to complete the project successfully.

Project Scope Statement

This project will convert most K12 and Higher Education facilities from ATM technology to Ethernet technology. Some libraries and tribal locations will also be included in the upgrade of technology. This project must occur during the summer downtime of most of these facilities and needs to have a minimal impact to ITD's customers.

Product Description

This project will upgrade the endpoints at most of the K12 and Higher Education facilities.

IN SCOPE

- Backbone Upgrade
- 175 K12 facilities
- 25 Higher Education facilities
- 9 State Libraries
- 7 Tribal facilities

OUT OF SCOPE

- State Government/PSD

Scope Control

Scope control is concerned with influencing the factors that create scope changes, determining that a scope change has occurred, and managing the actual changes when and if they occur.

The project manager (PM) will manage changes to the scope through the Integrated Change Control procedure. When a stakeholder identifies a change in scope, they will use the following process:

- The project manager (PM) will document the change request and confirm the accuracy with the requestor.
- The PM reviews the request with the appropriate project team members for impact assessment.
- If the impact fits into the minimum requirements noted in the Budget & Schedule Control sections, (budget <10% of risk up to 50%, schedule < 1 week) and does not impact quality, the PM may approve the change if it is in the best interests of the project. Any change outside those parameters will be sent to the Executive Steering Committee (ESC) for approval. The PM will document the change and report it in the next normal reporting period.
- If the impact is outside those parameters, the PM will implement the Integrated Change Control process.

Acceptance Management (Deliverable Acceptance Process)

The project sponsor will accept the project plan and post implementation review. The Telecomm Architect will accept all of the other deliverables. If, after 2 iterations, a sign-off can't be accomplished, then the deliverable will be raised to the Executive Steering Committee.

Deliverable Acceptance Log

Deliverable Name	Sent for Review (Date)	Sent for Acceptance (Date)	Action and Comments (Accept/Reject)
Final Plan			
K12 Sites			
Higher Ed Sites			
Library Sites			
Tribal Sites			
Post Implementation Review			

TIME MANAGEMENT

Project Time Management includes the processes required to ensure timely completion of the project.

Schedule

The chart below illustrates the high-level project schedule. The full schedule will be maintained in Primavera.

Phase/ Deliverable/Milestone	Start Date	End Date
<i>Project Start</i>	3/16/09	
Training 1	4/8/09	4/9/09
Training 2	4/28/09	5/1/09
Core Upgrade Phase 1	5/4/09	5/15/09
Endpoint Conversions	5/25/09	8/14/09
Core Upgrade Phase 2	7/1/09	7/11/09
Core Upgrade Phase 3	7/1/09	8/14/09
Closeout	5/15/09	9/16/09

Schedule Control

The PM will monitor the schedule using Primavera. The PM will control changes to the schedule using the Integrated Change Control procedure. When the PM identifies a change in schedule may be required, he will use the following process:

- The project manager (PM) will document the schedule slippage required and review the request with the appropriate project team members for assessment.
- The PM will make adjustments if the project can accommodate the slippage without changing a milestone date by more than one week. The PM will document the adjustment and report it in the next normal reporting period.
- If a milestone date will need to move more than 1 week, the PM will implement the Integrated Change Control process.

Implementation and Transition Plan

Many of the training courses are to train the staff on supporting the products after implementation. Once a circuit has passed acceptance testing, that circuit is then turned over to the production staff. All trouble tickets would then be managed using standard operating procedures. Project staff are usually part of the normal escalation procedures so would become involved with a major issue automatically.

COST MANAGEMENT

Project Cost Management includes the processes required to ensure that the project is completed within the approved budget.

Budget

The chart below illustrates the high-level budget. A detailed budget will be maintained in an MS Excel spreadsheet. This budget does not contain any allocated costs. All costs are being reallocated from the current budget.

	Direct Project	Staff Transfer	Total
Project Costs			
K12 Endpoint Hardware	\$304,000		\$304,000
HECN Endpoint Hardware	\$146,000		\$146,000
Library Endpoint Hardware	\$43,000		\$43,000
Tribes Endpoint Hardware	\$36,000		\$36,000
Misc. Endpoint Hardware	\$35,000		\$35,000
Core Hardware	\$1,516,727		\$1,516,727
Core Software	\$52,811		\$52,811
Initial Software Support	\$18,411		\$18,411
Training	\$60,000		\$60,000
Project Management		\$13,000	\$13,000
Install Staffing	\$14,400		\$14,400
Staff-ITD		\$544,320	\$544,320
Travel	\$39,000		\$39,000
Miscellaneous			
Training Discount	(\$60,000)		(\$60,000)
Risk Contingency	\$30,000	\$82,000	\$112,000
Project Total	\$2,223,579	\$639,320	\$2,862,899
Management Reserve	\$42,000	\$0	\$42,000
Budget Total	\$2,265,579	\$639,320	\$2,904,899

Cost Control

The PM will monitor the budget using Primavera and the Variance spreadsheet. The PM will control changes to the budget using the Integrated Change Control procedure. When the PM identifies a change in budget may be required, he will use the following process:

- The project manager (PM) will document the budget adjustment required and review it with the appropriate project team members for assessment.
- If the change is in the best interests of the project and the project can accommodate the change, the PM will make adjustments if the amount of any single change is less than 10% of the risk contingency for that category and the total amount of risk contingency used is less than 50%. The PM will document the adjustment and report it in the next normal reporting period.
- If the change is outside the parameters above, the PM will implement the Integrated Change Control process.

QUALITY MANAGEMENT

Project Quality Management includes the processes required to ensure that the project will satisfy the needs for which it was undertaken.

Quality Planning (Standards)

- ND Project Management Guidebook is the project management standard to which the project will adhere.

Quality Assurance (Processes)

- Each site must pass a quality test to check for connectivity and bandwidth

- Schedule and cost variance will be calculated weekly
- The stakeholders will identify quality issues during the test or review periods. The PM will control changes to the quality using the Integrated Change Control procedure. When the PM identifies a change due to a quality issue may be required, he will use the Scope/Schedule/Cost control process as appropriate. The ESC must approve any changes to actual quality.

Quality Control (Measurement of Process)

- Schedule and cost variance will not exceed 20%
- All sites pass quality tests

INTEGRATED CHANGE CONTROL

Integrated change control is concerned with a) influencing the factors that create changes to ensure that changes are agreed upon, b) determining that a change has occurred, and c) managing the actual changes when and as they occur. Changes to the project can impact a variety of areas including Cost, Scope, Schedule, and Quality. Changes to the project that impact one or more of these areas must be approved via the change control process. The PM will track changes, whether pending, accepted, or rejected, using the Controls spreadsheet.

The change control procedure is as follows:

- Requests for change will follow the processes found in the Scope, Schedule, Cost and Quality control sections found earlier in this document.
- If the project manager (PM) does not have the authority to approve the change he will escalate to the Executive Steering Committee (ESC) for approval
- Based upon the input of the project team, the PM, and the ESC, the project sponsor will provide final sign-off on any escalated change.
- All changes are documented in the Change Control Log by the PM.
- All approved changes are returned to project team for implementation.

HUMAN RESOURCES MANAGEMENT

Project Human Resources Management includes the processes required to make the most effective use of the people involved with the project.

Team Directory

The following is a list of all team members on the project.

Role	Name	Phone Number	Email Address
ESC Member	Lisa Feldner	8-3193	lfeldner@nd.gov
Project Sponsor and ESC Chair	Mike Ressler	8-1001	mressler@nd.gov
ESC Member	Duane Schell	8-4360	dschell@nd.gov
ESC Member, Telecomm Architect and Technical Project Manager	Glen Rutherford	8-2489	grutherford@nd.gov
Project Manager	Dirk Huggett	8-1998	dhuggett@nd.gov
Voice Services SME	Darin Wald	8-1988	dlwald@nd.gov
Technical Manager and Provision Backup	Curt Wahl	8-1021	cgwahl@nd.gov

Project Coordinator	Ryan Kramer	8-4655	rkramer@nd.gov
Project Administration	Robin Vesey	8-1002	rvesey@nd.gov
Inventory	Kim White	8-4675	kwhite@nd.gov
Circuits and Install Backup	Rod Erickson	8-3242	rmerickson@nd.gov
Ordering	Brandy Peterson	8-1888	blpeterson@nd.gov
Provision Backup	Bryan Barnes	8-2066	bsbarnes@nd.gov
Install Backup	Craig Zander	8-2121	czander@nd.gov
Provisioning	John Glaser	8-2180	jglaser@nd.gov
	Jason Wald	8-2196	jwald@nd.gov
	John Alvarez	8-1222	jalvarez@nd.gov
Special Site Installer	John Sheldon	8-2015	jsheldon@nd.gov
	Bruce Fuerstenberg	8-2008	bfuerste@nd.gov
	Tim Hagen	8-4455	thagen@nd.gov
Team A Installers	Stu Rifas	8-3195	srifas@nd.gov
	TBD		
Team B Installers	Jeremy Skjod	8-3310	jskjod@nd.gov
	TBD		

Responsibility

Role	Name, Position	Formal Review	Informal Review	Provide Information	Supply Resources	Assist	Perform
Executive Sponsor	Mike Ressler, Deputy CIO		X	X	X		
Executive Steering Committee	Lisa Feldner, CIO	X					
	Mike Ressler, Deputy CIO	X			X		
	Duane Schell, Network Bus Consulting Mgr	X		X			
	Glen Rutherford, Telecomm Architect	X					
Project Manager	Dirk Huggett	X	X			X	
Subject Matter Experts (SMEs)	Glen Rutherford		X	X			
	Darin Wald		X	X			
	Tony Aukland		X	X			
	Tim Frederick		X	X			
Author	Dirk Huggett			X			X

Staffing Management Plan

The Project Sponsor must authorize any changes to staffing. New team members will meet with the project manager to review the project status and cover the role they are expected to play in the project. The project manager will handle any performance issues that require escalation through the direct supervisor.

As noted in other sections, several team members will receive training as part of this project.

COMMUNICATIONS MANAGEMENT

Project Communications Management includes the processes required to ensure timely and appropriate generation, collection, dissemination, storage, and ultimately disposition of project information.

Communications Management Plan

Most communications for this project will be handled via e-mail. When necessary, the Project Manager will schedule a meeting to discuss a specific issue. Meeting materials will be sent out a day in advance, if possible, and a meeting summary, if necessary, will be e-mailed to attendees within 1 day.

One important part of the communications plan is making sure the ITD Service Desk, ITD Network Operations Center (NOC) and the EduTech Service Desk are aware of the status of the project as things occur. The proposed process to manage this is as follows.

The main communication site will be at <http://info.stagenet.nd.gov/>.

On this page anyone can find the sites, rollout dates, and a real-time status. They can look at the Higher Ed, Library or Tribal sites by clicking on the appropriate heading on the left of the page.

Anyone can sort the page by clicking on the heading of the columns. The sites are color-coded.

- Blue indicates that the site has not been updated
- Yellow indicates that the site is scheduled within a day.
- Red indicates that the site is overdue.
- Green indicates that the site is completed.
- Purple indicates the site has been rescheduled more than a week in the future

If someone wishes more information about the site, they can expand the appropriate heading on the left of the page and click on the site they wish to see. Under the Event heading you will see more information, including if the site was scheduled for the morning or afternoon.

EVENTS:

2009 Educational Network Refresh Project (2009-06-17)

Customer Group: K12

Current Connection: ATM-MidState

New Connection: 10M Ethernet

Address Allocation: 10.130.2.0/23 - No Change

Quadrant: Bismarck

Notes: None

Time: Morning

There is other technical data on this page as well.

If one of the service desks receive a call regarding a network issue at a site, they should consult this web page.

- If the site is blue, they should handle the call using standard operating procedure (SOP). The "Current Availability" column should help with troubleshooting. That is a live monitoring process between the endpoint equipment and the state's core equipment.
- If the site is yellow, they should confirm (using the website) the time of the upgrade. If the time does not match, they should handle the call using SOP. If the time does align, they should inform the customer of the project and let them know that the site should be operational again that afternoon (or the next morning for PM installs).
- Any other conditions should be escalated to the Network Operations Center using normal escalation processes.

NOC Guidance

As sites are converted (you can see the schedule from the portal) the installation team will call the provisioning team to complete any install steps and verify operability. Once they have established that the site is operational the provisioners will notify the NOC that the site is in production.

The NOC should then do these things:

- 1) Activate monitoring (and de-activate monitoring the old gear)
- 2) Notify the following that the site is in production;
 - a. Customer (see the attached spreadsheet for contact info)
 - b. Dave Skogen at EduTech (701)231-1091
 - c. Cora @ DCN 250-8655
 - d. Rod Erickson 8-3242

At that point the site is considered production. If the NOC receives calls on any sites that are converted and in production, we will troubleshoot as normal. If the resolution of the problem involves ANY changes to the new gear we are to notify the Command Center by sending e-mail to sncc@nd.gov. They will evaluate and make any changes necessary to the new gear so they know if the issue is an aberration or if something in the base configs needs to change.

The Command Center will notify the NOC via e-mail regarding any rescheduled site with the date and a brief explanation of the issue.

The following table is a list of other communications. The project will have a website at <http://www.stagenet.nd.gov/projects/> to give all stakeholders access to project documents such as the Business Case, Charter, and Status Reports.

Communication Tool	Description	Content	Frequency	Responsible	Recipient(s)	Location	Approval Required
Meeting	Executive Steering Committee Meetings	Convey project information or for the Sponsor to receive assistance on a project decision	Quarterly and As Needed	PM	Sponsor, Executive Steering Committee, PM	As scheduled	No
MS Word	Executive Steering Committee Meeting Agendas and Minutes	Content will be dependent upon the meeting purpose	As performed	PM	Sponsor, Executive Steering Committee	Document Repository; Project Website	No
MS Word	Status Report	<ul style="list-style-type: none"> • Schedule • Milestones: Accomplished, Missed, Upcoming, At risk • Budget • Variance • Staffing • Changes • Risks • Issue Metrics • Issues/Decisions made • Issues/Decisions upcoming • Action Item Metrics • Tasks accomplished during last week/ upcoming for the week 	Weekly by EOB Tuesday	PM	Sponsor, Executive Steering Committee, Project Team via e-mail all stakeholders via website	Document Repository; Project Website	No

Meeting	Verbal Status Update	Provide a brief summary of project progress	Weekly at Monday P&P staff meetings	PM	Lisa, Mike, Policy and Planning staff	As scheduled	No
http://www.stagenet.nd.gov/projects/EdUpgrade2009/	Extended Stakeholder Website	Project documents, status reports and other important stakeholder communications	As documents are created	PM	All stakeholders	Document Repository; Project Website	No
www.info.stagenet.gov	Website containing schedule and status information	Contains schedule, timing, and site status information	As needed	Project Command Center Team	All stakeholders	NA	No
E-mail	Reschedule of Site	Site name, original install date, new install date, brief note regarding cause of reschedule	As needed	Brian Barnes	Network Operations Center	NA	No
E-mail	-Grp-ITD STAGEnet Command Center (sncc@nd.gov)	Email group address for the following team members: Glen Rutherford, John Glaser, Bryan Barnes, Jason Wald, John Alvarez, Curt Wahl, Ryan Kramer, Robin Vesey	As needed	NA	STAGEnet Command Center team	NA	NA

RISK MANAGEMENT AND ISSUE MANAGEMENT

Risk Management is the systematic process of identifying, analyzing, and responding to project risks. It includes maximizing the probability and consequences of positive events and minimizing the probability and consequences of adverse events to project objectives.

Risk Management Plan

The project team identified a number of project risks during the planning period but they were not scored. The schedule/budget contains risk activities and funding.

The PM will create and review a register weekly to identify if any risk has become active. Any stakeholder can identify a new risk. They should submit it to the PM. Any new risks identified during the project time line will added to the register and the team will review and determine if further analysis or planning is necessary.

If a risk on the register becomes active, the risk owner will be expected to implement the contingency plans and manage the risk until closed. If a risk on the risk list or a previously unidentified risk becomes active, the project manager will respond and own the risk until reassigned or closed.

The risk list and risk register will be managed in the *Controls* spreadsheet.

The “Install Backup” and the “Provision Backup” totaling \$92,232 are risk dollars.

Task A1125 is a week of schedule risk and \$10,080 of risk dollars.

Issue Management Plan

Issues differ from Risks because an Issue already exists; Risks are only a potential event. If a Risk occurs, it can become an Issue, and conversely, a new Issue can generate new Risks.

An issue is defined as a question or problem that requires a decision or research in order to be resolved. An issue control log is located in *Controls* spreadsheet. Any stakeholder can raise an issue. The Project Manger will manage issues using the following process.

- The project manager (PM) will document the issue and confirm the accuracy with the requestor.
- The PM reviews the issue with the appropriate project team members for impact assessment and/or response.

- The Project Manager (PM) enters all issues identified into a issue control log.
- If the issue can be resolved without impact to CSSQ, the project manager will monitor and close the issue as appropriate.
- If the issue's resolution will impact CSSQ or if the issue cannot be resolved at the project level, the PM will escalate the issue to the ESC.

PROCUREMENT MANAGEMENT

The project will use existing contracts for all procurement activities. Brandy Peterson will be responsible for all procurement tasks.

PROJECT PLAN APPENDIX

Appendix I – Project Schedule