NAVAJO NATION

Information Technology Plan

"*Digital Navajo Nation*"

by

The Department of Information Technology

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Introduction

The Navajo Nation strategic Information Technology (IT) roadmap is a high-level documentation. The intent for this roadmap to be utilized in management, implementation and IT development within the Navajo Nation. An overall mission and goals are defined by some derived guiding principals. The guiding principles are focus on a better service delivery to the Navajo Nation citizens. The strategic goals will be measured by our achievement that we accomplish from quarterly and yearly basis.

Although the Navajo Nation is new to the Information Technology age the rapid influx of technology implementing has prompt us to pave a roadmap. The Navajo Nation is behind in making total use of IT due to lack of understanding of "Best Practice", thus many are using "Best Effort ". This has caused many developed databases unable to integrate with other information resource and the cost of revamping is very high. The initial intent of sharing information is to assist in making wise informed management decision(s). Incomplete information derived from data stores lacking data integration with other data stores can mislead management decisions and be costly.

All entities within the Navajo Nation government involve in IT must start to work cooperatively and collaboratively to lay the correct foundation in order to achieve maximum return on their investments. This roadmap will include other plans such as the *Navajo Nation Architecture Plan.* The architecture plan can be used to determine how we can articulate our strategies and implementation of IT to achieve our goals. Another use of this plan is to realize where we are now and also to make plans to shorten the gap that exist today. The gap analysis could be related to funding issues and learning issues. Although these constraints exist today we can certainly produce plans to overcome these obstacles in the shortest time possible.

Technology changes on a rapid time scale. This overall Navajo Nation Strategic Roadmap will be dynamic enough to change as technology changes.

The Navajo Nation will be striving to realize the great promises of IT achievements where it will enable our citizens to make use of technology to reach out to the global environment. Many resources will become available as we become a *Digital Navajo Nation*. The intent is to be a valuable resource to our citizens and inspire public confidence and trust in our government.

Other plans such as the Plans of Operations for the Department of Information Technology will layout the resolutions passed by our legislative body. These resolutions are part of our guiding principals and must be abided by.

Another Navajo Nation resolution(s) is the Integrate Criminal Justice resolution, CAP-30-02, created to achieve working relationship between other departments to implement IT within the Division of Public Safety. This resolution will be part of our guiding principals. As we strive towards a Digital Navajo Nation government other guiding principals will be realized.

Content of the Plan

The Navajo tradition and culture has much to do with laying the values and assumptions that will drive what we want to achieve in IT implementation. From Chapter Houses to the central government Navajos still integrate traditional prayers in hopes of acquiring the best for our people. Values generated by our way of life will be the driving mechanism in this plan. Values integrated with current technology will also drive the implementation of IT.

The guiding principals created based on our values defines are mission and goals. Strategic goals are then created from the guiding principals. Although our goals will be in a broad sense and some in a more focus since the intent is to bring forward those that are considered with higher priority.

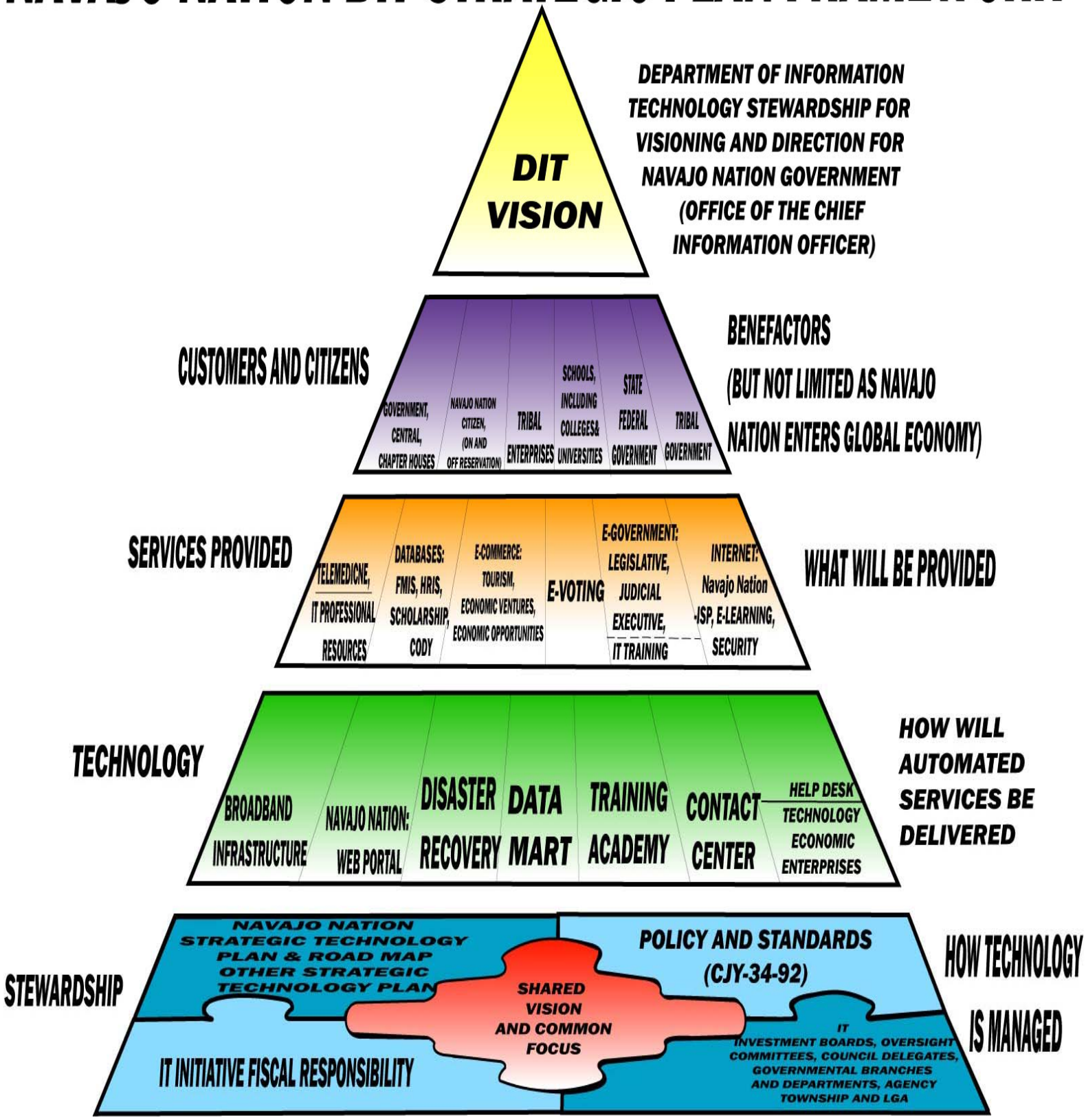
As the Navajo Nation Architecture is developed it will depict the gap that is between where we are now and where we should be. The Navajo Nation needs to plan very efficiently to catch up as rapidly as possible because technology advances will continue to increase in a linear fashion as we strive to shorten the gap. Although we may try to shorten the gap it will never disappear. Much of the effort to shorten the gap must be realize by all Navajo Nation governmental branches, divisions and departments. The gap analysis must be revisited on a continual basis to make ourselves IT aware.

The Department of Information Technology (DIT) will serve as the primary leader in setting enterprise wide policies and procedures for the Navajo Nation government. The plan of operations includes the *"Open Information Environment Act"*, CJY-34-92, that will provide specific technical policies. These specific policies must be dynamic enough to change as new technology is introduced or new laws are introduced that require changes in policies.

Navajo Nation DIT Strategic Plan Framework

DIT's strategic plan framework for technology is depicted below. This framework includes all aspect of how we do business. The fundamental underlying framework is connecting the puzzle that includes; IT strategic plans, policies and standards, IT fiscal responsibility, governmental branches and most importantly *shared vision and common focus.*

NAVAJO NATION DIT STRATEGIC PLAN FRAMEWORK



Need for "*Government IT Enabling*"

The leadership of the Navajo Nation needs to make the government *"Information Technology-Enabled".* The Navajo Nation Council has passed the resolution, CJY-34-92, in 1992 so that the flow of governmental information from the Chapter House to the central government and back could be achieved *using modern information techniques and methods*.

Other department such as the criminal justice department has also passed the Integrated Criminal Justice System resolution and was passed by the Navajo Nation Council to achieve a cooperative technology implementation between Public Safety, Judicial, and Prosecutor's office.

The Office of the President/Vice-President also must make IT as a priority in order to make the government "*IT Enabling*". All priorities indirectly make IT a priority.

Education on technology for all our government personnel would benefit the understanding of modern techniques and methods.

The key behind a successful implementation and use of today's technology is doing *IT* the right way. Technology can be implemented in many different configurations to achieve the desired results. As specific policies are created that can be followed as a roadmap it will enable our government to implement technology in a proper way or where it will be most beneficial with cost savings. A team such as a creation of a *Navajo Nation Technology Investment board* would determine if the technology is in the best interest of the Nation and deter wasteful spending and redundant efforts. Such boards are usually created under the *Office of the Chief Information Officer*.

Another key to a successful creation of the Navajo Nation IT Strategic roadmap is to include involvement from senior executives from all branches, divisions, departments, other Navajo Nation IT entities, other agencies, Chapter House officials, Colleges and Universities within the Navajo Nation. The private sector should also be allowed to have input because the private sector can meet the needs of technology infrastructure. *The Department of Information Technology strategic plan to hold the annual Navajo Nation IT Summit will be a key to the successful creation of the government wide strategic roadmap.*

Aligning IT with Business Plan from the Office of the President

The Navajo Nation business plan from the Office of the President/Vice-President should be provide to align technology strategies. *The business need will drive the implementation of IT and not the other way round.*

The business need for our Navajo Nation government to use technology is so far behind any technology implementation is a positive advancement. But using the correct or most efficient modern technique and methods need to adhere to.

The Department of Information Technology may need to derive IT needs from the President's priorities where IT initiatives are not clearly define. For example, current administration list education as a high priority. Education uses technology in every school and is used by all students from pre-school to Universities. Using this as a guiding mechanism DIT can align its short-term and long-term goals to achieve the desired results.

Another initiative is Public Safety. Governmental technology network can no longer be totally separate from the Navajo Nation citizens. All Navajo Nation citizens need technology access to the governmental network and information. Citizens need access to life-saving information and mechanism from the government.

Navajo Nation Values Driven Planning for Technology

The Navajo Nation culture and values will help shape the strategic plan, and provide guidance in developing, implementing and making use of modern information technology within the Navajo Nation boundaries and beyond. The integration of values from our Nation combined with the intersecting states government will even provide a stronger use of technology.

- The Navajo Nation government and it's citizen to embrace the use of information technology (IT) to improve the quality of life;
- The Navajo Nation government must strive to provide reasonable access to all government information that is public information in nature;
- All IT initiatives must be customer focus to deliver useful, accurate, and timely information resource for all;
- IT decisions must be derived on cost-benefit analysis and must be cost efficient, business driven, beneficial in long-term, enterprise solution in mind;
- IT infrastructure must be implemented to promote access from citizens within the Navajo Nation as well as the outside private sector and to break barriers to

economic development, social life style improvements, and governmental information red tape;

- IT must be viewed by all as a resource asset such as land, water and minerals. This valuable resource must be used to make important government decisions where it will increase the efficiency and effectiveness of doing business;

- IT resource and implementation must help streamline processes to provide a more efficient government, increase our knowledge, broaden our reach to the outside world for all citizens of the Navajo Nation;

- The Navajo Nation must use innovation in developing and implementing technology to make our work and lively hood better;

- All important non-public information must be secure and protected with complete confidence using modern techniques to prevent fraud, misuse of information, protect privacy acts, and Navajo Nation sovereignty;

- All electronic information must be shared based on business needs between governmental departments, branches, divisions, and other agencies;

- IT strategies and business plans between the executive level, divisions and departments must be aligned to achieve a most efficient result.

IT Strategic Planning

The Department of Information Technology (DIT) works with the three governmental branches, divisions, departments, agencies and other entities that encompass the Navajo Nation as a whole. DITs strategic visioning is broad in scope. The broader scope of the Navajo Nation strategic roadmap includes the vision, goals, and objectives that are set for enterprise wide solutions.

The Navajo Nation strategic roadmap is formulated as the Nation grows to embrace new technologies and is recognized as the roadmap for technology guidance.

The Department of Information Technology seeks to:

Educate our government personnel and citizens by providing an environment that support life-long learning opportunities, increase occupational skills, provide young Navajo students to achieve their maximum potentials.

Strengthen our economic opportunities for all the Navajo Nation citizens and help implement positive regulatory systems.

Build a cooperative involvement between overlapping states, Navajo Nation government and other IT entities to achieve an IT infrastructure that will support and provide a wide spectrum of opportunities for all Navajos.

Prepare ourselves to meet the technical challenges of tomorrow, so that we can enter the global information arena, today.

Promote technology in such a way to so that information technology and the implied understanding of the use of technology and become a valuable social asset.

Protect the sovereignty of the Navajo Nation at the same allowing enough access to strengthen and broaden our minds to enter the age of information technology globally.

Local IT Planning at the Window Rock Campus

The Department of Information Technology has created a short-term three year strategic IT plan (Attachment A). The local IT planning is the current technology infrastructure in the central government including the agencies. The immediate solutions that is necessary to bring the technology infrastructure up to speed so that the employees can utilize the technology to communicate and better serve the citizens of the Navajo Nation. The IT infrastructure is lagging in the use and implementation of the most current technologies. The short-term IT planning will address the areas where IT implementation is most needed. As the short-term IT planning is implemented by an increment of a year, the next year will only build upon the previous year.

Most solutions can be depicted from many private and governmental entities. The Navajo Nation is lagging so far behind that we need to seek successes from other entities where proven solutions have been implemented. *The Navajo Nation also does not have the budget to seek its own solutions to determine if it will work. Using proven methods from other entities and seeking the shortest and proven path of success must be used to succeed.*

Global Navajo Nation IT Planning

The broader vision of the IT Plan for the Navajo Nation intersects with three states, New Mexico, Arizona. Colorado borders the northeastern portion of the Navajo Nation that still has to be included due to the unique four (4) corners region. The users of IT within the boundaries of the Navajo Nation and the satellite communities Tohagiilee, Ramah and Alamo are under the broader IT planning.

The major constraint visible is the distance between each of the communities. The cost associated with IT infrastructure is very costly. Making cooperative alliances with other

Navajo Nation IT entities, other agencies, the states, and the private sector is needed to achieve connecting these communities.

One method to create alliances through meetings and generating an understanding of shared vision and focus. The collaborative efforts will enable all available resource to be channeled to these areas. The Department of Information Technology's strategic short-term plan is to hold the Navajo Nation IT Summit annually that will allow for such interactions.

The long-term IT planning will be mostly determined by the availability of funds. Long-term solutions in IT planning will focus on enterprise solutions. Although the long-term missions, goals and objectives will be the focus but it has to be dynamic and flexible enough to change according to technology changes.

The bordering states offer assistants in formulation our own IT roadmap and we will absorb the proven successes.

The long-term vision:

Integration and interoperability must be the underlying factor for all IT initiatives.

1. Plan ahead five years on a continually basis.
2. Implementation of a primary network backbone for the Navajo Nation.
3. Plan to expand the second portion of the network from the primary backbone to reach the citizens at home.
4. Plan on viable application solutions to enhance government solutions such as database application(s), web portals, e-government, etc.
5. Plan for telemedicine and distance learning network capabilities to all parts of the Navajo Nation including the satellite communities.
6. Plan for a Navajo Nation technology center to house all IT activities for the Navajo Nation. This will include a training academy, IT project management office, software development, technology contractual services, Geographic Information Management center, skilled IT personnel resources, contact center and etc.
7. Continually support IT initiatives that can benefit the citizens of the Navajo Nation where the government will become digitize. Allowing e-government to be utilized for realistic business purposes.
8. Pursue President Bush's broadband initiative to implement broadband technology by year 2007.

Digital Navajo Nation

The Navajo Nation citizens, in large scale, live in remote areas on the reservation in a geographical area of 27,000 square miles. The local government Chapter Houses allows for government activities to be carried out locally. A major percentage of governmental transactional activities are done in paper form.

The cost of driving to Chapter Houses, agencies and the central government for citizens that have limited financial resources is a huge barrier to governmental information access.

The Department of Information Technology will support, promote and nurture web portal(s) to achieve a *Digital Navajo Nation* e-government and make driving a lesser option.

The Financial Information Management System (FMIS) is one example of how personnel with proper access can perform governmental financial activities from remote locations which in turn saves time and cost of travel. The result is a more productivity workplace.

How to Become the Digital Navajo Nation

The Department of Information Technology must advise, promote, and nurture ideas that will enable governmental processes and services to become web enabled. All information that is allowed for public access should be slated for potentially becoming web enabled. Some private and secure information must be protected from misuse, fraud and protection of sovereignty issues.

DIT will also promote projects that are already in process that will implement web portal technology. Define the definition of the internet, intranet and extranet need to be defined and understood by all.

DIT will need to bring together state governments, Navajo Nation government, agencies and other IT entities to help with funding resources to implement the network infrastructure.

DIT will also follow President Bush's broadband initiative to implement broadband to all in the continental US that is accessible and affordable. This initiative includes the Navajo Nation. DIT will pursue as much funding resource as possible to implement the broadband technology by year 2007.

Moving towards e-government to make all Navajo Nation governmental services online and making it available 24 hours a day can increase services to the Navajo citizens and reduce costly driving time.

Mission Statement and Statement of Purpose of Information Technology

The Department of Information Technology's primary purpose in Information Technology is to pursue establishment of a stable, reliable, and readily accessible technology infrastructure to sufficiently meet the Nation's needs in regards to service provision for the people, competitiveness with similar entities, and implementation of progressively advancing technology. Given the variables involved in rapidly changing technology, DIT will make changes to its three year strategic plan to align its goals and mission to that of the President and Vice-Presidents directions.

Statement of Purpose

The Department of Information Technology (DIT) was established, within the Division of General Services, Executive Branch. The General Services Committee (GSC) of the Navajo Nation Council provides legislative oversight for the Department of Information Technology. The plan of operations outlines the specific duties of DIT.

DIT is a non profit entity solely responsible for many Navajo Nation technical requirements and services needed by the Navajo Nation government. The scope of duties include the whole Navajo Nation geographic are totaling 27,000 square miles.

<u>The key areas of activities are:</u>

1. To carry out the directives of the Navajo Nation Council Resolution CJY-34-92, as amended which specifically mandates the creation of an "Open Information Environment" among the governmental entities of the Navajo Nation, and to assign responsible parties to coordinate the use and development of computer technology to achieve an open information-sharing environment.

2. To implement an overall computer information strategy which provides quality and timely computer related services to the programs, departments, divisions and branches of the Navajo Nation government.

3. To achieve distributed processing of selected financial transactions to the Agency and Chapter levels of the Navajo Nation government via computer technology.

4. To allow Agency and Chapter access to various Navajo Nation government data and information via computer technology.

5. To allow Agency and Chapter access to the "Internet" via computer technology.

6. Use modern computing techniques and methods to implement the latest technology.

7. Provide technical services to all Navajo Nation governmental processes and businesses.

8. Provide visioning, direction and leadership on Information Technology for the Navajo Nation as a whole.

9. Strategically implement and help all Navajo Nation governmental branches, departments, programs, and implement technology to achieve cost savings.

10. Coordinate with other department and agencies to implement Navajo Nation Council mandated resolutions to achieve desired results.

Guiding Principals

- Using technology, increase access to all governmental information for all Navajo Nation citizens and private sector, while protecting our sovereignty and privacy.

- Use information technology to improve all areas of the Navajo Nation business processes to increase efficiency and effectiveness.

- Use modern technical techniques to change and enhance the way we do governmental business.

- Become a social asset to the Navajo Nation and make contribution to increase our economic prosperity for all Navajos.

- Increase educational opportunities for all Navajo Nation citizens using technology; strive to implement distance learning for all.

- Use technological infrastructure to provide life-saving mechanism for all citizens of the Navajo Nation.

Key Strategic Goals

DIT strives to align the key goals with the Office of President/Vice-President's business plan. One of the priorities from OPVP is public safety and education. The fundamental infrastructure of today's education is network and computers. Having the infrastructure such as video conferencing to all schools; distance learning and building computer skills is possible.

1. **Goal 1: IT Reorganization.** An organization with the size of the Navajo Nation needs an enterprise IT structure where a comprehensive direction from a Chief Information Officer or a structure where authoritative IT initiative is disseminated.
   - 1.1 Current IT organizations, Department of Information Technology
   - 1.2 Current IT legislation, CJY-34-92
   - 1.3 Other IT legislations, Integrated Criminal Justice System.
   - 1.4 DIT reorganization.
     - 1.4.1 DIT reorganized to a Divisional level.
     - 1.4.2 DIT reorganized as an Office of the Chief Information Officer.
   - 1.5 Amend the Plans of Operations for DIT.
   - 1.6 Amend the CJY-34-92.

2. **Goal 2: Broadband Infrastructure Implementation.** The global technology is moving to broadband. Broadband is the fundamental IT structure necessary to access participation in the global economy.
   - 2.1 Cooperative groups between the Chief Information Officers of the four bordering states and the Navajo Nation.
   - 2.2 Broadband primary backbone.
   - 2.3 Broadband secondary backbone.
   - 2.4 Private entities participation.
   - 2.5 Rights of Way (ROW)
   - 2.6 Communication infrastructure ownership.

3. **Goal 3: Sever Consolidation, Enterprise Agreements & Standardization:**
   - 3.1 Education the Divisions, departments, programs on IT methodologies.
   - 3.2 Initial scope of consolidation.
   - 3.3 Implement redundant environment at DIT computer room.
   - 3.4 Centralized network storage solution.
   - 3.4 Provide additional certified training to IT employees.
   - 3.5 Increase network up time to 99.9%.
   - 3.6 Build PCs internal to standardized.
   - 3.7 Purchase Enterprise Agreements.

4. **Goal 4: Security:**
   - 4.1 Implement a secure security infrastructure at DIT.
   - 4.2 Secure NN information to protect intrusions.

4.3 Protect the NN sovereignty.
4.4 Amend NN security policies as technology changes.
4.5 Implement modern security techniques.

5. **Goal 5: Disaster Recovery Implementation:**
   5.1 Educate Branches, Division, departments, programs, Executive offices.
   5.2 Mission Critical servers and applications.
   5.3 Protection of sovereignty related information.
   5.4 Legacy paper environment.
   5.5 Conversion to digital.
   5.6 Disaster Recovery (DR) site.
   5.7 DR policy.
   5.8 Time of Recovery.

6. **Goal 6: Government Web Portal:**
   6.1 Introduce legislation for the Navajo Nation web portal.
   6.2 Offer a comprehensive suite of government and non-government services on the internet using the Navajo Nation web portal.
   6.3 Start projects to develop governmental service(s) portlets.
   6.4 Implement internet and intranet applications to streamline processes.
   6.5 Identify all areas of governmental processes to be slated for online projects.
   6.6 Develop a secure mechanism for intranet information.
   6.7 Ensure all web portal and portlets development are integrated.
   6.8 Create with the most current web methodology and techniques.

7. Goal 7: Voice Over Internet Protocol (VoIP)
   7.1 Implement the network infrastructure with Quality of Service.
   7.2 Educate Branches, Divisions, departments and programs on cost benefits.
   7.3 Adopt standards for VoIP.
   7.4 Train skilled workers to control and provide VoIP services to the NN.
   7.5 Share resources with agencies and other entities to leverage infrastructure.
   7.6 Adopt new laws and regulation(s) from FCC regarding E-911 services.

Goals, Strategies and Methods

1.0 **Goal 1: IT Reorganization.** An organization with the size of the Navajo Nation needs an enterprise IT structure where a comprehensive direction from a Chief Information Officer or a structure where authoritative IT initiative is disseminated.

1.1 Current IT Organization, Department of Information Technology.

1.1.1 Analyze new form(s) of governmental organizational structure that will have proven successful track records in other organizations with emphasis on technology.

1.1.2 Continually seek ways to improve the service delivery to the citizens of the Navajo Nation.

1.1.3 Restructure the IT organizational structure to achieve accountability. DIT needs to have authoritative direction where IT initiatives and policies are followed. Non-compliance of IT policies within the Navajo Nation government should be implemented to achieve an overall given direction where the Navajo Nation IT roadmap is followed.

1.1.4 Implement sub committee to develop standards and policies, oversee the approval of new IT initiatives, data stewardship groups, IT professional groups, etc.

1.1.5 Structure the IT organizational structure where IT organization can be self supporting. Acquire funds for assessments on the sustainability of different IT structure such as a Navajo Nation IT Enterprise, Office of the Chief Information Office and Division of Information Technology. Implement a fund management account where the IT entity can:

- charge for services,
- make and sell PCs to the governmental departments and to the private sector as well,
- become an ISP provider and sell internet services to the governmental departments and the private sector as well,
- provide professional IT services to the all governmental entities and private sector as well,

- implement a Point of Presence (POP) to generate funds from internally and externally and keep the funds within the Navajo Nation,
- hire Navajo Nation professional IT personnel to provide services and build up the IT skills of the Navajo people,
- not limited to the above list.

1.2 Current IT legislation, CJY-34-92

1.2.1 Analyze the current legislation, CJY-34-92. Amend the Open Information Environment resolution to reflect current organizational structure of the Navajo Nation government. Amend the resolution to fit an IT organizational structure where the core concept remains in tact while the underlying policies and *concept of information sharing and the use of modern methods and techniques* procedures are dynamic where it will keep up with the rapid changes of technology. Underlying policies and standards should change as technology changes that should be the under the control of the Chief Information Officer.

1.2.2 Amend the resolution to emphasize *the use of modern methods and techniques.* Strive to implement the "Best Practices" in technology but being aware cost.

1.2.3 Amend the resolution so that non-compliance of the resolution has accountability and consequences.

1.2.4 Amend the resolution so that sharing resources, coordination between branches, divisions, departments and programs, and cost savings is emphasized.

1.2.5 Amend the resolution to eliminate redundancy in purchases, IT projects, IT centers and IT personnel resources.

1.3 Other IT legislation(s), Integrated Criminal Justice System.

1.3.1 Coordinate with other Navajo Nation legislation(s) that was created by the council that directly have implications or implementation of Information Technology.

1.3.2 Provide professional service(s) to achieve the intended outcome(s) for other branches, divisions, departments and programs. Strive to implement solution(s) that are long-term and enterprise level.

1.3.3 Strive to use modern methods and techniques to help save time and money, utilize or maximize existing infrastructure, implement best-practices and help improve government services by stream-lining services using technology.

1.4 DIT reorganization. Implementation of organization change is long-term. The lack of funding for assessments and analytical evaluation of sustainability is a constraint. Utilizing existing internal resources, previous IT assessment(s), input from the end-users of technology, Navajo Nation IT summits, external resource(s) will initially form a starting point to analytical process.

1.4.1 DIT reorganized to a Divisional level. This option will reorganize DIT to be parallel with other Divisions. This will only be viable if the Plans of Operations (POO) or legislation allow DIT to acquire directive authority on technology issues.

1.4.1.1 Assessment is needed for viability and sustainability. Constructing the POO and other Navajo Nation legislation and the content will determine the outcome to be viable.

1.4.1.2 Analytical models and assessments are needed. Successful business model(s) and governmental IT reorganization will be helpful to increase the success of the new IT organization.

1.4.1.3 Analytical projections of sustainability are needed. Analytical projections would not be based on a financial aspect but more in the mechanism of carrying out the require activities in the POO. The projection would show the amount of man power needed to meet the needs and demands.

1.4.1.4 Navajo Nation council approval process. It would be the council delegate final approval and mandate the reorganization of IT. An amended CJY-34-92 would be the key and fundamental structure. All important IT organizational structure with all the proper IT committees and groups needs to be developed.

1.4.1.5 Funds for assessments and evaluations are needed. The reorganized IT organization would and should have ample funding to obtain IT assessments to properly direct its operation.

1.4.2 DIT reorganized as an Office of the Chief Information Officer. Many governmental organizations have implemented an Office of the Chief Information Officer and are very successful.

1.4.2.1 Definition and Understanding of the Office of the Information Officer (OCIO).

CIOs (Chief Information Officer) are senior executives responsible for all aspects of their companies' information technology and systems. In this case it will be for the Navajo Nation. The CIO would direct the use of IT to support the Nation's goals with the use of many subcommittees. For example, a *Navajo Nation Information Technology Investment board* to decide which technology is in the best interest for our government. With knowledge of both technology and business process and a cross-functional perspective, the CIO would manage aligning the Nation's technology deployment strategy with its business strategy from the Office of the President/Vice-President. The CIO would oversee technology purchases, implementation and various related services provided by the Department of Information Technology (DIT). All IT related project must be manage by DIT to submit to the CIO. The CIO would delegates many of the tactical and operational issues to a "trusted person" like a Technology Deputy in order to focus on more strategic concerns for the Nation.

The "information" part of the CIO's job is very important. The effective and strategic use of common enterprise-wide information requires a cross-functional perspective. The CIO will take the leadership role in reengineering the governmental business organizational business processes and the underpinning IT infrastructures to achieve more productive, efficient and valuable use of information within the Navajo Nation. Another major role is to take leadership role in knowledge management and the valuation of intellectual capital.

CIOs usually report to the CEO, COO or CFO and in this case it will be a oversight committee when it is under the Office of the Chief Information Officer. The CIO will have a seat on executive steering committee to have first hand on the direction and implementation of IT matters.

1.4.2.2 Office of the Chief Information Officer (OCIO)

Develop the proposal to implement a OCIO. Use the resolution CJY-34-92 as the core resolution and place the DIT under the OCIO.

Create the POO, policies and standards for th OCIO.

1.5 Amend the Plans of Operations for DIT.

1.5.1 Amend the Plans of Operations for DIT to reflect the current organizational structure. The CJY-43-92 was passed by the Navajo Nation Council in 1992. DIT was Computer Services when the resolution was passed. The new organizational structure needs to reflect the content of the resolution and POO.

1.6 Amend the CJY-34-92. IT organizational structure with proper content such as IT committees and proper language for use by all government branches, divisions, department, programs and agencies needs to be added. The core content of the resolution should stay in tact and allow the attached policies and standards to change as technology changes. Other means and directives changes occur from global IT changes and changes in laws.

2.0 Goal 2: Broadband Infrastructure Implementation. The global technology is moving to broadband. Broadband is the fundamental IT structure necessary to access participation in the global economy. Voice, video and data will be transmitted over the broadband infrastructure. Voice over Internet Protocol (VoIP) would save much needed funds and all calls would be transmitted over the Internet Protocol with no fees, video conferencing for telemedicine, distance learning, e-government and global economic opportunities can be realized.

Navajo Nation Quad-State Broadband Executive Group's Mission Statement and Goals

To promote broadband technology within the Navajo Nation for use by all citizen living in and the surrounding area. To help conjoin and link states encompassing the Navajo Nation with entities within the Navajo Nation.

Goals

- *Work with State Governors office to strategically make progress.*
- *Work with Navajo Nation entities and IT consortiums to create partnerships and strategic alliances.*
- *Increase access to world-wide intellectual knowledge for all Navajos.*

- *Increase economic opportunities to the global economy for all Navajos.*

Year 2004

- Navajo Nation IT Summit 2004 to include broadband topics.
- Meet with the four (4) state Governors office and discuss Navajo Nation proportional section on current state-wide projects. Discuss cost sharing, resource sharing and partnership.
- Meet with Navajo Nation IT entities and discuss cost sharing, resource and partnerships.
- Obtain a consultant group to work with the Executive Group for professional services.

Year 2005

- Navajo Nation IT Summit 2005 to include the Quad-State Broadband initiative focus group.
- Obtain funds for project planning and assessment through cost and resource sharing.
- Initiate a Navajo Nation wide infrastructure assessment for the RFP in the first quarter.
- Conduct resource sharing and cost sharing with the Executive Group, Office of the President and Navajo Nation entities in the first quarter.
- Submit the RFP for the broadband initiative.
- Select a vendor for the broadband initiative.
- Create a Navajo Nation IT Consultant group to work with the vendor of choice for the broadband initiative.
- Creating the infrastructure backbone.
- Obtain a Disaster Recovery (DR) plan and 10 acre site acquisition north of Gallup.

Year 2006

- Navajo Nation IT Summit 2006 to include the Quad-State Broadband initiative focus group.
- Assess the primary infrastructure backbone to target goals in the first quarter.
- Continuously seek and obtain funding for the project from Federal, State, Tribal government, E-Rate, and other entities.
- Light up and test a corridor.
- Develop the Navajo Nation (NN) Technology center with the Disaster Recovery center.
- Connect a high bandwidth from the NN Technology center to the nearby high speed telecommunication access along I-40.

Year 2007

- Navajo Nation IT Summit 2007 to include the Quad-State Broadband initiative focus group.
- Light up and test as many corridor in a joint effort across the Navajo Nation and externally to the Universities.

2.1 Cooperative groups between the Chief Information Officers (CIO) of the four bordering states and the Navajo Nation. The Navajo Nation must interact with the CIO office to acquire and obtain resources.

2.2 Broadband primary backbone. Obtain a broadband communication infrastructure across the Navajo Nation to be used by all. Create partnerships and strategic alliances to share resources to implement broadband. The amount of bandwidth must be enough to meet the needs of all the citizens of the Navajo Nation. Technical assessment to ascertain projected needs for the future is required. The type of equipment would be terrestrial infrastructure such as fiber, radio and wireless access points.

The infrastructure will be a majority owned and managed by the Navajo Nation people. Memorandum of Agreements between other federal, state and tribal entities would be necessary to achieve interoperability.

Voice, Video and data transmission will be transmitted on the infrastructure. This should meet the needs of all schools, colleges, central government, agencies and chapter houses.

2.3 Broadband secondary backbone. This is the last leg implementation to reach the people living on the Navajo reservation in remote areas. As MOA's between different entities are made it will become possible to reach the people along with other funding. Funding the last leg to reach the people should always be planned in all projections.

Radios, wireless access points and fiber should be used.

2.4 Private entities participation. Private entities can offer other means to acquire broadband from its owned services they provide. Private entities can also enter into collocation of its resources to assist in the implementation of broadband.

2.5 Rights of Way (ROW). ROW is a constraint that deters the implementation of broadband services to the citizens of the Navajo Nation. Stream lining the ROW process is a key goal to achieve a shorter time line to acquire terrestrial infrastructure.

2.6 Total Cost Ownership. One of the key goal would be to lower the Total Cost Ownership (TCO). The Return on Investment (ROI) must be realized to successful operate our government successful. Lower the cost and saving much needed funds is ideal.

External sources must be limited and increasing our technical resources to manage the broadband infrastructure is ideal.

3. **Goal 3: Sever Consolidation, Enterprise Agreements & Standardization:**

3.1 Education the Divisions, departments, programs on IT methodologies. Provide proper education to all governmental branches, divisions, departments, programs and agencies on IT methodologies by providing educational opportunities. One way is to hold the Navajo Nation IT summit yearly and hold other IT meetings to provide opportunities to learn new technology from external entities such as companies, universities, federal and state governments.

3.2 Initial scope of consolidation. The south and east campus of the Navajo Nation government has fiber network. The three branches, majority of division, many departments and programs have access to the fiber network. DIT's computer room facility has ample sample to house all tribal department and programs servers. Servers such as email servers, file servers, application servers, web servers can be relocated in DIT's computer room facility.

Centralizing and consolidating servers will save much needed funds, consolidate the management of servers, housed in a safe environment with proper protection from fire, water and other external unforeseen environmental dangers.

All servers will be protected by a redundant firewall against virus and intrusions.

3.3 Implement redundant environment at DIT computer room facility. DIT's purchase and implementation of the FATPIPE technology provides fast, redundant and reliable network to provide a combine bandwidth with load balancing.

Three external T-1 lines with load balancing and fail-safe configuration allow 99.9% up time.

Redundant servers (firewall, switches, application servers, web servers, etc.) with fail-over provide continuous connectivity without interruptions.

3.4 Centralized network storage solution. DIT will provide a Internet Protocol Storage Network Appliance (IP SAN) solution. The network storage appliance will can be located on the Navajo Nation fiber network apart from the hardware (servers). Terabytes of storage can be configured to houses all Navajo Nation data in a central place.

A SAN solution will provide a fail-safe environment. If a server completely crashes the data will not be harmed and will be on-line in a matter of seconds if a fail-over hardware (server) is configured.

The SAN solution will also allow for a Disaster Recovery configuration in another remote location and provide a quick backup mechanism.

3.5 Provide additional certified training to IT employees. Meet current training needs by bringing IT training courses to the Navajo Nation and sharing cost. Create a permanent IT training academy and possibly have native personnel become trainers.

3.6 Build PCs internally to standardize. Build all PCs by the Navajo Nation to save much needed funds, provide and implement standardization by building the same type of PCs. All tribal branches, departments, programs, agencies and chapter houses would be required to purchase these PCs internally.

Navajo Nation employees would provide the Service Level Agreements to maintain and service all the hardware and software to strengthen our IT skills endowment and provide economic opportunities.

3.7 Purchase Enterprise Agreements (EA). Enter into EAs to save much needed monies. Purchase EAs for:

- Microsoft OEMs
- Anti-virus software license
- Microsoft SQL Server license
- Server licenses
- Oracle Database Licenses
- Firewall license
- MS Development Software Licenses
- Datamart licenses
- GIS software Licenses
- Internet ISP
- Etc.

4. **Goal 4: Security: All Navajo Nation data must be protected and secure. The Policy and Standards on security is part of the Navajo Nation policy.**

4.1 Implement a secure security infrastructure. Firewalls must be installed and configured correctly to protect the Navajo Nation data from any misuse from external intrusion and unauthorized access internally.

4.2 Secure NN information against intrusions. Install firewalls to protect against external intrusions and install intrusion detection mechanisms. A procedure to continually check the procedure(s) on intrusion detection and hardware including the firewall software.

4.3 Protect the NN sovereignty. All methods and procedures to protect Navajo Nation information must be taken. This includes information on email servers, application servers and file servers. Other critical servers that store any NN data must be protected from external sources to protect the NN sovereignty.

Unauthorized access can obtain information such as legal documents and executive information. All NN stored on any type of server must be kept within the Navajo Nation internal network.

4.4 Amend NN security policies as technology changes. Hardware and software changes that effect the control of programs on hardware for security requires constant monitoring of security policies.

4.5 Implement modern security techniques. Obtain must current information from security technical committees, federal agencies, state agencies and security bulletins.

5 Goal 5: Disaster Recovery (DR) Implementation: DR is essential to protect mission critical information.

5.1 Educate Branches, Division, departments, programs, Executive offices. Provide technical education programs on a continuous basis for all NN employees.

5.2 Mission critical servers and applications. All critical information that must be used to operate the NN government without interruption must have a DR plan in place. Information loss that can disrupt the operation of the NN government should be defined as mission critical. Financial and Human Resource Information systems are critical applications.

A backup and recovery must be in place for all servers such as email servers, file servers, application servers, web servers, etc. The backup and recovery plan must be tested on a continuous basis.

An enterprise DR plan also must be implemented. A redundant off site storage mechanism must to develop. The DR recovery site must be able to have all the required hardware, security, power, technical personnel and service level agreements in place to restore all information require in a timely manner or provide a fail-over system within a matter of seconds. All fail-over systems must be tested to so that no data is lost.

5.3 Protection of sovereignty related information. All information at the DR site must be protected against unauthorized access. On line fail-over system must develop monitoring system at the application level to detect unauthorized access to any data.

5.4 Legacy paper environment. All critical information stored on paper format must start to develop plans to migrate to digitally store applications. This could be in the form of transactional databases or scanned documents stored into database.

5.5 Conversion to digital. Creating plans to digitize NN information is important. Digital information can be shared in many ways to make our government more efficient. Digital stored information can be placed in a DR center and restore in a matter of seconds and be made available for use.

5.6 Disaster Recovery (DR) site. An enterprise DR site for the NN is essential and important to recovery any loss information. All DR site have:

- Secured building
- Redundant network
- Technical resources available 24 hours x 7 days week x 365 days per year.
- Service level agreements (SLA) in place to restore any system, data or information in a matter of seconds.
- SLA to provide fail-over systems at all times for all mission critical systems and applications.
- Redundant power
- Etc.

5.7 DR policy. A NN DR site must in develop with policies and procedures. It is critical to create DR plans and policies for the NN Financial Management Information System (FMIS) and the Human Resource Information System (HRIS). All other mission critical information or servers must be covered by the DR policy.

5.8 Time of recovery. It is important to test the fail-over systems at a DR site. The time of recovery must be tested to guarantee a successful fail-over without any loss of data. FMIS and HRIS servers should fail-over to a DR site and provide immediate access without any disruption of service. The fail-over should take place in a matter of seconds.

Other system and application may allow the time of recovery more time even though they are critical but SLAs needs to be in place. But the recovery of information must be guaranteed.

6. Goal 6: Governmental Web Portal

6.1 Introduce legislation for the Navajo Nation Web Portal

6.1.1 Create legislation for the "Official" use, and authentic representation of the Navajo Nation Government, its services and products.

6.2 Offer a comprehensive suite of government and non-government services on the internet using the Navajo Nation Web Portal.

6.2.1 Develop an integrated "User-Friendly", web-based information portal that is easily assessable to all project web-based applications and information resources. The customized portal will feature a secure, web-based administration function to manage all parts of the portal system.

6.2.2 Establish Web-hosting services for the Navajo Nation.

6.2.3 Web portal application includes E-commerce, E-government, E-job search/bank, E-training, E-voting, E-Learning, computer systems & internet security, distance learning, and video broadcasting.

6.3 Develop a Data Mart for data storage and repository.

6.3.1 Establish a center for data storage and repository management.

6.4 Start projects to develop governmental service(s) portlets.

6.4.1 Create mini-portal links for content information and management in the areas of health, housing, education, employment, business, tourism, cultural, maps/driving direction, natural resources,

election info/voting (national, state, local), rural/urban planning (LGA), Infrastructure (utilities, telecommunication, transportation), child care, elderly care, special needs care, agricultural (animals & farming), and to buy or sell items.

6.5 Implement internet and intranet applications to streamline processes.

6.5.1 Governmental information access includes public information, internal communications, data resource sharing, forms servicing, interdepartmental document sharing, contract administration, grants administration, training, technical assistance, laws, resolutions, regulations, and codes.

6.6 Identify all areas of governmental processes to be slated for online projects.

6.6.1 Design departmental websites, e-government applications, and databases capable of on-line sharing of information amongst other governmental entities and to the general public.

6.7 Develop a secure mechanism for intranet information.

6.7.1 Develop and maintain a secured user access point to protect confidential information.

6.7.2 Data Mart to follow strict confidentiality policies in regard to information, adhering to all security level access plans.

6.8 Ensure all web portal and portlets developed are integrated.

6.8.1 DIT shall recommend, create, and develop Departmental and Program links that are compatible to the Web Portal.

6.8.2 Links from the Web Portal to outside websites to be included.

6.9 Create with the most current web methodology and techniques.

6.9.1 A design and structure of a “User-Friendly” customized Web Portal has been complete, funding procurement to develop the Web Portal is currently underway.

7. **Goal 7: Voice over Internet Protocol (VoIP).** VoIP is changing the way we live today globally. Traditional telephones are being replaced by VoIP. VoIP is a way of transmitting voice over the internet. The same internet we use for

our computers. The communications line to use VoIP is connected globally. DIT is strategically working with other Divisions where VoIP is being implemented. The intent is to implement the same type of hardware and software for VoIP. At some point in time, as each division acquires VoIP they will be connected with the Call Centers.

As the citizens of the Navajo Nation get connectivity to the homes much needed voice communication becomes possible. Traditional telephone lines entails constraints on high cost and rights of way issues. VoIP can be brought to homes their radios, fiber and satellite communications vs the traditional terrestrial lines.

6.1 Implement the network infrastructure with Quality of Service (QoS). In order to implement VoIP the hardware must meet QoS. This is to allow voice, video and data to be transmitted over the internet.

6.2 Educate Branches, Divisions, departments and programs on cost benefits. The cost of having traditional telephones on a monthly basis is high for the Navajo Nation government. A cost benefit analysis can easily show that implementing VoIP will provide a return on investment (ROI) in a single budget year. The budget allocated for telephones can be used to purchase and implement VoIP equipment and service at the beginning of the year. The monthly incurred cost will be eliminated and saved, thus a cost savings on a large scale will be realized.

6.3 Adopt standards for VoIP. New standards for VoIP are appearing on a daily basis. Current VoIP carriers maybe required to provide services for E-911. Navajo Nation IT professionals must be IT aware on such issues on a frequent basis.

6.4 Train skilled workers to control, manage or provide VoIP services to the NN. The intent should be to train and acquire NN IT professionals to acquire knowledge on VoIP. NN IT workforce must be a focus to help grow our own economic opportunities.

6.5 Share resources with agencies and other entities to leverage infrastructure. VoIP is global. Working with other agencies such as the federal, state and city government is essential on broadening VoIP implementation. The access on VoIP to the external world from the NN it will become apparent for the need. The cost savings is high and even more if shared resources are possible.

Significant IT Strategic Accomplishments

Department of Information Technology

- Navajo Nation Information Technology Summit 2004. Much of the accomplishments for calendar year 2004 derived from this event.
- Installed and configured FAT PIPE technology and other components required to achieve a redundant environment for the DIT computer room, uptime for the system is now 99.9%. This also increases uptime for all NN Programs that use the network infrastructure. www.fatpipe.com.
- Refinement of the Navajo Nation IT Roadmap and IT policies.
- Upgraded the Heating Ventilation and Air Conditioning in the DIT computer room. This allows DIT to house more servers in a safe, secure environment. The floor in the computer room was also revamped to accommodate the expected growth of NN IT infrastructure.
- The Workman's Compensation Program has already located a SQL server at DIT.
- Refine and enhance the DIT three year strategic plan.
- Reroute, install and configure the wireless network from Admin I to the Civic Center with high bandwidth connectivity. This allows more utilization of NN owned telecommunications infrastructure, cutting down the cost of monthly charges being paid to external vendors.
- Installed high-speed T-1 connectivity for the Department of Child Enforcement. These lines go out to the agencies and have a connection to the Arizona Child Enforcement.
- Upgrade all agency connectivity links to T-1 speed.
- Installed T-1 connectivity to Dilkon PD.
- Worked with Legislative to configure and implement a fiber network that goes from the east Navajo Nation campus to DIT.
- Ongoing project with the Quad-State Broadband initiative. The ultimate goal is to establish connectivity that spans the entire Navajo reservation and have multiple links to the external global communications infrastructure.
- Help convert the legacy FRS system to the new FMIS system. Provide one FTE at a 100% support for FMIS.
- DIT has a computer lab that will accommodate up to 12 people for training in IT oriented trainings.
- Workers Compensation/Risk Management/Safety Program – Set up the Department of Information Technology conference room for Claims software training that was held by David Corps. The setup consisted of installing and configuring four laptops with Windows XP and Claims Software, set up of a network printer, and network connectivity. The training was successfully completed.
- Revamped the network infrastructure at the offices of Workers Compensation/Risk Management/Safety Programs. All existing cables and hubs were removed and all LAN lines were replaced with category 5e cables. These cables were rerouted to the Administration Building I second floor wiring closet. A patch panel was installed and 25 LAN lines were punched down, 21 of the 25

cable lines were terminated with category 5e line terminators. 25 half-foot patch cables were crimped for connecting the patch panel to the Enterasys switch. Once this was completed, all cable lines were tested for failure free connectivity and installation of installation of the David Corps RenProd Client Software was done on all their systems.

- For added security measures, 4 surveillance cameras were installed in the DIT building. NetDvr Surviellance software was installed on a new Windows 2003 Server, All four cameras are online with the ability to archive up to 14 days.
- Migrated DIT's existing help desk software to new Windows 2003 server and installed MS SQL Server 2000 service pack 3 on the server.
- At the request of the NN Library, installed a Windows 2003 SE Server and migrated all domain users and computer accounts. DIT also installed Symantec CE 8 on the server and workstations, reinstalled Spectrum Server and Client Software, imported all patron account information from Spectrum to Active Directory using the Csvde.exe and Dsmod.exe tools. The NN Museum and the NN Library are located in the same building, at their request; we relocated the existing Cisco wireless equipment from the Library to the South side of the building for use by Museum Personnel.
- Installed and configured the Scholarship Oracle database to allow a streamlined process for the student scholarship award process.
- Installed a dual T-1 redundant load balancing connectivity to Osa Grande, the NN Internet services provider. The communication link to access the Internet was improved and made more reliable.
- Finished installation of a fiber network from DIT to the Police Department and connected many other departments and programs to the fiber network.
- DIT provided (6) certified Microsoft and (2) certified Oracle DBA training, (1) Access Database for many DIT IT personnel.
- A helpdesk application was designed, created, and implemented by staff at DIT. This application is now 100 % in use to track and monitor all service requests made by NN employees. Modifications and refinements are being done on a weekly basis. Interest by external organizations to use this system has been generated; it may be possible to share/lease this application to Entities, Companies, or other tribes.
- DIT applied for a SPIN number with the FCC, was granted a number and accordingly applied for E-Rate funds in the amount of 25 million dollars. This was a very competitive bidding process that involved many well known IT organizations. DIT has been award the grant.

Navajo Nation IT Summit

Inaugural Navajo Nation Information Technology Summit held last week "A SUCCESS" June 7-10th, 2004. (www.nnits.navajo.org)

Department of Information Technology

"Formulating the Navajo Nation Information Technology Strategic Roadmap"

Mr. Harold Skow
Director

DIT Summit Committee:

Shirley M. Barney - Chairperson
Alexander Largie - Webpage Design
Vangie Sandoval - Finance
Royetta Woodie - Registration
Julia Hardy - Registration
Donald Spencer - Sponsorship
Derrick Yazzie - Exhibit
Wilfred Keeto - Exhibit

Bringing together all Navajo Nation (NN) branches, departments, divisions, Chapter Houses, Entities and other Information Technology (IT) consortiums that have vested interest in Information Technology initiatives within the Navajo Nation.

With the advent of many forms of Information Technology implementation on the Navajo Nation in breaking the barrier of the "Digital Divide", it has become apparent that a holistic IT strategic direction needs to be established. Many Navajo Nation departments and other groups are being saturated with new technology that the Navajo Nation has never been exposed to. As each department and group implements technology to meet their needs they unknowingly created what is known as "IT Islands ". The Department of Information Technology (DIT) in collaboration with other NN IT professionals and other IT entities are strategically formulating a holistic IT road map for the Navajo Nation. The Navajo Nation IT summit is a critical part of the process in constructing such a roadmap. Another crucial part is the involvement of the stakeholders; all departments, Entities and IT Consortiums that work directly with technology within the Navajo Nation.

NN departments and other IT groups are currently implementing IT projects on the Navajo Nation that are large in scale and have cost figures that range into millions of dollars. The task to bring together all IT entities and align their efforts to a common mission and goal is a tremendous undertaking. All NN departments, entities and IT consortiums can meet, exchange strategies, and create a mutual working relationship that will benefit the Navajo Nation as a whole. The intent is to create Memorandums Of Agreement (MOAs), Memorandums Of Understanding (MOUs), determine how we can share network infrastructure and resources, and start reducing the cost of IT implementation. Another goal of the NN IT summit is to establish a consortium of persons/entities that have a vested interest in the positive growth and advancement of NN IT. To utilize this augmentation of IT to be competitive in all aspects of IT related functions for the Navajo Nation, to decrease the redundant expen dit ure of resources in IT related activities for the Navajo Nation, and ultimately to provide enhanced service delivery to the people of the Navajo Nation.

The output from the summit will put together the Navajo Nation Information Technology Business Case . The business case will contain the fundamental structure that corporate enterprise level environment use for their IT organization. The content will include a cohesive IT organizational structure under the direction of a Chief Information Officer (CIO) to provide visioning and direction.

Finanacial Management Information System (FMIS)

The Department of Finance has purchased, install, configured and put into production the JD Edwards financial application on MS SQL. It was a difficult road implementing such a large scale financial system for the Navajo Nation. There were many problems but the FMIS was able overcome the problems and continued to do production business.

The FMIS technical team has been updating the system and software to

The Office of the Speaker – Legislative Branch Fiber Project

The Office of the Speaker, legislative technical team and the Department of Information Technology have collaboratively and cooperatively configured fiber connectivity to the Navajo Nation Council Delegate chamber, Legislative offices, Office of the President/Vice-President and all of the departments on the east campus of Window Rock governmental compound. The project was in 2004-2005.

ATTACHMENT A:

Department of Information Technology's Three Year Strategic Plan.

DIT's strategic plan is in accordance with the President and Vice-President's "Give Power Back to The People" plan.

Mission Statement:

The Department of Information Technology's primary purpose in Information Technology is to pursue establishment of a stable, reliable, and readily accessible technology infrastructure to sufficiently meet the Nation's needs in regards to service provision for the people, competitiveness with similar entities, and implementation of progressively advancing technology. Given the variables involved in rapidly changing technology, DIT will make changes to it's three year strategic plan to align its goals and mission to that of the President and Vice-Presidents directions.

Goals: FY-04

1. Implement a wireless communication infrastructure to allow instant mobile access to Navajo Nation data, the Internet, E-mail communication, and other information technology resources. This would encompass the following areas:
    - Window Rock campus
    - St. Michaels
    - Ft. Defiance
    - Tse Bonito

2. Upgrade the facilities at the Department of Information Technology (DIT) to provide an information technology infrastructure that will allow high availability and redundancy to all Users of the infrastructure.

3. Upgrade the existing Navajo Nation communication link that connects to the external infrastructure from a T-1 line to a DS3 communication line to increase the bandwidth available to access the available resources.

4. Install fiber optic connectivity components in the following:
    - Administration building 1
    - Administration building 2
    - Police Department
    - Public Safety

- Labor Relations
- Staff Development and Training
- Child Enforcement
- Education Center
- St. Michaels
- Karagen Professional Complex

5. Purchase and implement a Help Desk system to make service provision more effective and efficient.

6. Install a fiber optic communication link from DIT to the following Branches/Programs:
    - Council Chambers
    - Office of the President/Vice-President
    - Legislative Offices
    - Department of Justice
    - Natural Resources
    - Judicial Offices
    - Records Management
    - Vital Records
    - Public Defender
    - Fleet Management
    - Archaeology

7. Enhance the existing Payroll system

8. Coordinate a Navajo Nation Information Technology Summit to:
    - Bring together all Entities on the Navajo Nation who have a vested interest in the positive growth of information technology.
    - Disseminate information on the state of, and the proposed direction of Navajo Nation IT.
    - Identify resources available for assisting the Nation in its IT efforts.

9. Establish and implement a Navajo Nation Information Technology Standards Group to govern the growth of technology within the environment utilized by the Navajo Nation.

10. Transition the Voters Registration system onto a new operating environment.

11. Transition the Scholarship system onto a new operating environment.

12. Involve Chapter House level IT initiatives

Goals: FY-05

1. Completion of fiber optic communication link project from DIT to the following Branches/Programs:
    - Council Chambers
    - Office of the President/Vice-President
    - Legislative Offices
    - Department of Justice
    - Natural Resources
    - Judicial Offices
    - Records Management
    - Vital Records
    - Public Defender
    - Fleet Management
    - Archaeology
    - Public Safety to NN Inn, Parks and Recreation, Elections, NN Museum, Department of Transportation, Navajo Times, Retirement and Airport.

2. The Navajo Nation IT Core Team will develop a Navajo Nation IT road map.

3. Develop a standard Navajo Nation IT policy.

4. Initiate the planning of a Navajo Nation Point of Presence (POP) to serve as a gateway to the Internet.
5. Sponsor the second Navajo Nation IT summit.

6. Implement an enterprise agreement license for the utilization of the Navajo Nation, this will ensure:
    - Cost savings
    - Validity of licensed Users
    - Improved technical assistance

7. Continued Navajo Nation Network revisions and enhancements

8. Establish new positions within DIT in the following areas:
    - Web Development
    - Network
    - Desktop

9. Formulate and implement a disaster recovery/continuity plan for the Navajo Nation.

10. Involve Chapter House level IT initiatives.

Goals: FY-06

1. Implement the Point of Presence (POP) for the Navajo Nation

2. Acquire funding for the training of DIT staff and implement designated training

3. Establish new positions within DIT in the following areas:
    - Web Development
    - Network
    - Desktop

4. Increase the capabilities of the DIT Data Center.
    - Network
    - Data storage
    - Technical Support

5. Establish a Chief Information Officer (CIO), or create a Division of Information Technology.

Management's role in Achieving Goals and Objectives

- Coordinate timelines and project outlines
- Ensure User and higher level management buy-in by lobbying and doing presentations
- Make certain the Navajo Nation IT summit is a success
- Increase the skill level of DIT personnel.
- Designate and delegate roles and responsibilities to DIT staff to achieve the goals and objectives, monitor through project management tools, milestones, accomplishments, and the resulting performance appraisal standards and accompanying merit increases.
- Achieve and ensure customer satisfaction.
- Seek and secure outside funding sources (Grants)

Resources available

Internal

- DIT Staff
- General Funding
- Division Director

- Navajo Nation Telecommunications Regulatory Commission (NNTRC)
- Legislative Branch
- Emergency Management

External

- Grants-Federal, State, etc.
- Vendors
- GSA Federal Technical Group
- HIS
- States
    - New Mexico
    - Arizona
    - Utah

Potential Barriers in Achieving Goals and Objectives

Internal

- ONLR – Labor Relations
- Existing IT islands
- DIT Budget
- Politics
- Unsatisfied Users
- Employee Turnover
- Consultants
- Crucial equipment breakdown
- DPM Web training

External

- Private data center
- Federal Funding
- Warranties and contract expiration
- Businesses folding

Projected Budgets

FY-04

$1.4 million + $268,000 = 1.668 million

FY-05

$1.4 million + $256,000 = 1.656 million

FY-06
$1.4 million + $555,000 = 1.955 million

Staffing Needs

FY-04
Unchanged from form submitted to OMB

FY-05 **NEW**

- Web Development
- Network
- Desktop

FY-06 **NEW**

- Web Development
- Network
- Desktop

Staff Development and Training Needs

FY-04

- Helpdesk Technician
- Helpdesk Administrator

FY-05

- Wireless Technology
- Point of Presence (POP)

FY-06

- Point of Presence (POP)
- Implementing Security
- Managing and administering security

Strategies for Enhancing Services to Clientele

- Enhance customer service
- Increase system uptime, staff availability, and do presentations on the functions of DIT.
- Upgrade DIT data center
- In-house training
- Customer surveys
- Navajo Nation IT summit

Revenue Generating Plans and Projects

- Offer a Point Of Presence (POP)
- Charge departments for services offered
- Establish a continental United States wide hub center to house data for organizations

How Will Performance Standards Be Measured?

FY-04

Quarterly Reports
Budget and Finance performance criteria
Annual performance appraisals
Significant accomplishment reports
Agency profiles
Oversight committee reports
Audits

FY-05

Quarterly Reports
Budget and Finance performance criteria
Annual performance appraisals
Significant accomplishment reports
Agency profiles
Oversight committee reports
Audits

FY-06

Quarterly Reports
Budget and Finance performance criteria
Annual performance appraisals
Significant accomplishment reports
Agency profiles
Oversight committee reports
Audits

Attachment B: Navajo Nation Architecture Plan
Will be down loadable from our website or can be available upon your request. DIT website development in progress.