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Department of Administration

INFORMATION POLICY OFFICE

1994-95 Information System Funding Recommendations

February 1993

STATE OF MINNESOTA

Department of Administration

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1994-95 Information System Funding Recommendations

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Executive Summary

Among its responsibilities, the Information Policy Office (IPO) reviews state agency information system investment plans and makes funding recommendations to the governor and legislature. Because rational decisions about investments cannot be made without extensive preparation, IPO emphasized the quality of planning efforts when reviewing 1994-95 budget requests. A total of 25 proposals were reviewed; 20 ask for new funding and five seek reallocations of existing budget resources.

Agency Planning Better, But Some Areas Need Improvement

The review process is an opportunity to assess how the state manages its information resources. IPO found that, overall, agency information resource management efforts are improving. However, more agencies need to adopt agency-wide strategic planning processes and improve their project-specific planning. Additionally, agencies must expand their thinking beyond their organizational boundaries and address several issues that are critical to successful information resource management.

Some agencies are basing information system plans on the results of agency-wide strategic business and strategic information plans. As a result, some budget requests are well defined and clearly support the agency's mission. Agency-wide and project planning are advanced enough to show that all proposals are potentially good solutions to business problems. However, most proposals require additional work to ensure success. In all but a few cases, the proposals lacked an essential element: a completed life cycle analysis.

A life cycle analysis is a fundamental business planning tool. Properly completed, it will estimate costs, benefits and risks of any project over its life span. With this knowledge in hand, management can make rational decisions about balancing the costs and risks of the project against its benefits. Without the knowledge generated by the life cycle analysis, it is impossible to make a sound business decision.

For proposals that do not have a completed life cycle analysis, IPO recommends that funding be contingent upon completing the life cycle analysis and other planning needs.

Some Issues Require Special Emphasis

Several planning issues need more emphasis by agencies if the state is to achieve the potential offered by information technology.

- **Data sharing within and among agencies.** Information is an important state government resource. It is imperative that agencies share that resource as effectively and efficiently as possible.
- **Identifying and participating in data communities.** Data communities are organizations with a shared need for specific pieces of information. To improve data sharing and reduce redundant investments, agencies must learn to identify and participate in appropriate data communities.
- **Moving toward open systems environments.** Open systems allow the free flow of information among systems without regard to who made or sold them. To improve data sharing, agencies must begin planning for eventually moving their hardware and software to open systems environments.
- **Re-engineering work processes to fully exploit the potential of technology.** Fundamentally redesigning and restructuring how the work is done is essential to realizing the promise offered by technology.

Extensive Information Resource Planning is Essential to State Government's Success

State government is an information intensive business. Much of government's energy is dedicated to acquiring, processing, disseminating, storing and disposing of data. Laws, eligibility requirements and highway maps are all recognizable as products or services that impart information to citizens. In fact, with few exceptions, the state's primary products and services are really information distributed in varying formats.

Information Must Be Managed as a Strategic Resource

Managing information is an important challenge facing state agencies. In the past, three basic resources received the bulk of management attention: money, material and labor. Organizations understood that managing those resources effectively was critical to success. Inadequate control of any of the three could cause the organization to fail.

Information has now emerged as the fourth basic resource to be considered during business planning. Managers are recognizing that they must view information strategically if the organization is to succeed. It is especially important for government, with its information-intensive operations, to adopt a strategic point of view when managing information.

Technology is playing an increasingly important role in delivering this resource to Minnesota's citizens. Proper use of information technology requires extensive, thorough planning. To get the most out of the investment, agencies must understand their businesses, envision goals, and develop strategies that will lead to success. The strategies must include a comprehensive planning process that links technology projects to specific business problems and guides investments as effectively and efficiently as possible.

The Role of the Information Policy Office

A goal of the Information Policy Office (IPO) is to make government more responsive, efficient and closer to citizens by helping state agencies plan for and use information systems. IPO works from both statewide and project-specific perspectives to guide agencies in the management of their information resources. Strategies are emphasized that encourage the development of systems that best meet the needs of agencies and Minnesota's citizens.

The office selects appropriate standards and develops policies and management tools for use by all agencies. It provides education and training; reviews technology budgets, project plans and system performance; and reviews technology contracts and procurement.

Biennial Budget Review

IPO is required by law to review state agency information system investment plans and make funding recommendations to the governor and legislature. For the 1994-95 biennial budget, 25 proposals were reviewed totalling $103,575,479. Twenty requested new funding and five seek reallocations of existing funds.

Because rational decisions about investments cannot be made without extensive preparation, IPO emphasized the quality of planning efforts when reviewing 1994-95 budget requests. Each agency was asked to answer questions about its planning strategies and techniques. The answers and follow-up

interviews provide a picture of how well agencies understand the importance of both agency-wide and project-specific planning.

Agency-Wide Planning and Multi-Agency Cooperation Are Vital

State agencies have historically thought, acted and spent money as isolated entities. Their planning efforts were narrow in scope and limited to specific projects. For accounting purposes, the individual projects were lumped together and often presented as an agency-wide spending plan, but in reality few agencies conducted any real agency-wide business or strategic information planning. Planning almost never considered the potential impact of the projects on stakeholders outside their organizational boundaries. Cooperative planning and investments among agencies were even more rare.

The need to make government more responsive, efficient and closer to citizens is forcing planners to break out of that isolation. Motivated by the need to make government work better, information system planning by some state agencies is evolving and becoming more sophisticated.

Some agencies are beginning to see the benefits of adopting a big picture approach toward meeting their information system needs. They have expanded the scope of their planning by developing agency-wide goals and strategies. There is more cooperation among internal units and less emphasis on individual initiatives. Specific projects are now viewed from an agency-wide perspective and judged by how they will support the agency's mission.

However, most state agencies have not successfully completed agency-wide planning. If state government is to become as efficient and productive as possible, agencies must recognize the value of planning and allocate adequate resources to the task. Only through agency-wide planning can they build a strategy for managing their business needs.

Another step is also necessary: agencies must expand their vision and extend their planning beyond their own organizational boundaries. If

Planning is an Essential Management Tool

To ensure the successful use of information technology, IPO recommends a systematic, common sense planning approach:

Agency-wide strategic business planning defines the business, illustrates business problems and establishes realistic goals. Agencies should adopt a strategic business planning process before designing and implementing systems. At the end of the process, an agency should understand its mission and the steps necessary to reach business goals.

Strategic information planning builds on the business plan. It shows how technology can support business goals. Information needs are identified and technology solutions are determined. Strategic information planning is a critical, necessary step that links a project to business goals.

Life cycle analysis estimates the costs, benefits and risks associated with specific projects over the course of their predicted life spans. Costs are identified, benefits defined in measurable terms, and risks associated with a system, including the risks of not implementing the project, are revealed. Without a complete life cycle analysis, it is impossible to make a sound business decision.

Project-specific planning establishes a management structure that includes stakeholders, envisions well-defined and reachable goals, includes a mechanism to measure progress, provides adequate resources and identifies a system development methodology to guide the process.

redundant and wasteful investments are to be reduced and government performance improved, agencies must reach out to form partnerships with other organizations who share a common need.

This does not mean central planning. It does mean that each agency must view itself as part of a larger whole that adheres to standards when it does information system planning and collaborates with appropriate partners to create and operate the most effective and efficient systems possible. This emphasis on interagency planning offers the best return on investments and greatly improves the ability of government to meet both agency and citizen needs.

Agency Planning Is Better, But Some Areas Need Improvement

The quality of agency information system planning continues to improve. Strategic business planning, once rare, is becoming accepted as a critical business tool. Some agencies have shown a willingness to work together when common objectives are identified. Other agencies are learning to better manage their data and their information systems, and to re-engineer their work processes when appropriate.

However, to ensure the success of their information technology projects, more agencies need to adopt agency-wide strategic planning processes and improve their project-specific planning. Additionally, agencies must expand their thinking beyond their organizational boundaries and address several data sharing issues that are critical to successful information resource management.

The most common project planning weaknesses found during the budget review process were:

- **Incomplete or non-existent life cycle analyses.** Without a completed cost, benefit and risk analysis a sound business decision cannot be made.
- **Allowing technology to drive the planning.** This is analogous to getting the cart before the horse. Planning must determine information needs before considering what technology to buy. It is essential that planners let information needs drive the planning.
- **Failing to link project planning to agency-wide planning.** The project's rationale often did not show how the proposal would support the agency mission. Without such a link a need for the project cannot be established.
- **Failing to involve stakeholders.** Involving internal and external stakeholders in planning is crucial to meeting their needs.
- **Not addressing the importance of open systems.** Most agencies do not demonstrate an understanding of the importance of open systems. Few have addressed moving their hardware and software to open systems environments that will facilitate data sharing. It is important for agencies to realize that standards set by a single vendor are not open systems standards.

Ensuring Project Success

In general, agencies should take several steps to ensure that their information system projects succeed:

- Complete a strategic business plan to define business goals and problems.
- Complete a strategic information plan to show how information technology can support business goals and solve business problems.
- Ensure that any proposed project addresses a known business problem.
- Let information requirements — not technology -- drive the project planning.
- Consider data sharing needs inside and outside of the organization.
- Do a re-engineering assessment of work processes.
- Complete a life cycle analysis to estimate the costs, benefits and risks of each project.
- Involve stakeholders in planning.
- Develop project-specific plans that include a management structure, systems development methodology, and a progress review mechanism.
- Complete an information asset security plan.
- Identify and participate in appropriate data communities.
- Plan for moving hardware and software to open systems environments.

Some Agency Efforts Commendable

Several agencies have demonstrated leadership that should be noted.

The *State Arts Board* submitted an excellent budget request. This small agency devoted significant resources to planning its project and produced a request that can serve as a good example for all small agencies.

The *Department of Labor and Industry* was the only large agency that attempted to meet all IPO requirements and provide supporting information. The agency's request was thoroughly prepared and presented well in advance of the deadline.

The *Department of Transportation* is a state agency leader in strategic business planning and involving stakeholders. The department understands how information technology can support its mission and is reorganizing functions while developing a state-of-the-art system planning and implementation process. MnDOT's geographic information project is adopting a strategy that is consistent with the data sharing goal of the statewide architecture.

The *Department of Human Services* is a large agency administering very large programs with the aid of some of the state's most complicated information systems. The department has shown a commitment to agency-wide strategic planning even though the process is difficult and complex.

The *Pollution Control Agency* is re-examining the way it does business. Thorough agency-wide and project planning has positioned the agency to fundamentally improve operations.

Some Planning Issues Need Special Emphasis

If information is to be managed as a strategic resource, agencies must expand their vision and look outside their organizational boundaries when planning. This will require adopting a statewide perspective and considering a number of issues that affect many or all agencies. It may require forming partnerships to plan, implement and operate systems.

Data Sharing

Information is a resource that must be appropriately shared by all state agencies. To do this effectively, agencies must make three basic adjustments in their thinking:

- **They must let data drive their thinking when considering information technology projects.** Data should be the force that guides information system planning. By beginning with the idea of information as the resource to be managed, agencies will take a giant step toward improving their performance. Just as a plumber decides where and in what form water is needed before buying pipe, information system planners must analyze their data needs before making decisions on technology. This will help ensure that the finished system will meet the data needs of the organization and its stakeholders.
- **They must assume the data will be shared.** By assuming that data will be shared, agencies will adopt a perspective that is vital to making state government more effective. They will understand that stakeholders who may need data must be included in planning so their needs are met. And they will know that system design must allow efficient movement of the data to stakeholders who may use different equipment and be in different locations; in other words, the system must have an open systems design.
- **They must extend their vision beyond organizational boundaries.** A natural result of basing planning on data needs and of thinking of data as a resource to be shared is understanding that planners must look beyond their own organizational boundaries. It is critical to reducing redundant and wasteful investments and to improving the quality of government that agencies reach out to form partnerships with other organizations who share a common need.

Data Communities

Data communities consist of organizations or groups within organizations that have a shared need for specific pieces of information. To improve data sharing and reduce redundant investments, agencies must learn to identify and participate in all appropriate data communities.

Several data communities are already recognized in Minnesota. The data sharing and analysis requirements of the 1992 Minnesota Care Act affect the Departments of Health, Human Services, Commerce, Employee Relations and other agencies. The Departments of Corrections and Public Safety, the Sentencing Guidelines Commission and the state court system have formed a data community to share criminal justice information. The Public Utilities Commission, Department of Public Service, Attorney General and Administrative Hearings Office routinely share information being considered by the commission. Other potential data communities exist, such as an energy and environment community, and a tourism community.

The importance of data communities has been enhanced by the availability of information technology. Paper-based information systems are difficult to manage. Accurate summary information is hard to compile. Data sharing can require enormous personnel and time resources. Making, mailing and

storing copies can also drain an organization's resources. Redundant data collection is common: studies have shown that data is replicated an average of 10.8 times in an organization.

Information technology offers solutions to those problems, but offers its own set of management challenges. The systems are expensive to own and operate. Incompatible systems can severely limit the sharing of important data and can require expensive solutions to overcome the incompatibilities. Redundant data collection can still be commonplace.

Because of these potential problems, it is imperative that agencies form data communities and begin jointly planning and managing their investments. However, since data communities are outside the traditional agency-oriented structure of state government, their successful management will require different management and funding procedures.

Open Systems

IPO is developing the statewide information architecture. The architecture consists of standards, policies and guidelines that support information management. The most important goal of the architecture is to facilitate data sharing among agencies. A key central concept is the idea of open systems that allow the free flow of information among systems without regard to who made or sold them.

Open systems have several identifying characteristics. Their design is not controlled by a single vendor. Their interfaces are developed through a formal and open process that is not dominated by a single vendor. They have common functions that are present across the spectrum of vendors. And they are available from more than one vendor.

To improve data sharing, agencies must begin planning for eventually moving their hardware and software to open systems environments. There is no need to do this instantly. Indeed, agencies must proceed toward open systems with considerable caution and deliberation. They must be pragmatic because they may need significant additional investments in hardware and software, and because there is no single path to open systems environments.

Re-engineering Work Processes

The needs of Minnesota's citizens are best met not by automating the way the state government does business, but by changing the way it does business. Computers and other information technology resources are routinely used to automate existing business processes. While automation can improve productivity, merely automating an existing process is a poor use of the technology. The best productivity gains are achieved by adapting technology to business processes that have been re-engineered — redesigned and restructured from the ground up.

Successful re-engineering requires a thorough understanding of an organization's goals, resources, processes and needs. Such knowledge can only be achieved by instituting an extensive, multi-faceted planning effort. But the most important single key to success of any re-engineering effort is active, vigorous support by top management personnel. Re-engineering is a fundamental transformation of an organization's daily operations. All aspects of an organization are evaluated: structures, processes, strategies, personnel and technology. Re-engineering can add stress to an organization by introducing new, unfamiliar and evolving ways of doing business. Managing the changes caused by re-engineering requires planning, training and communication. Such a comprehensive undertaking cannot work without top management that champions the process.

Government can especially benefit from re-engineering. State agencies are faced with problems that cannot be solved by using the old strategy of simple automation. Agencies must provide new, higher

quality services to citizens at a lower cost while also improving service delivery. To do this, they need to re-engineer the procedures and organizational structures they have carried over from earlier years.

Other Important Issues

Three other important issues were identified during the budget review process. All will require planning and preparation by many state agencies.

Meeting Citizen Needs With Information Technology

Agencies are exploring new ways of using information technology to meet citizen needs. Before extensive investments are made, however, several issues should be considered:

- Agencies must determine what Minnesota's citizens want and how they want to receive it. It is possible that information technology is not always the best solution.
- If using technology is appropriate, the method of citizen access to products and services should be consistent throughout state government, regardless of agency or program. A standard interface and appropriate technology and data standards are needed.
- There is potential for redundant, conflicting technology investments if agencies do not cooperatively plan and implement information systems. Because agencies in general have limited experience with cooperatively planning and managing projects, they need to learn when and how to work together, and how to manage and participate in projects that involve multiple units of government.

Impact of the Statewide Systems Project

Sponsored by the Departments of Finance, Employee Relations and Administration, this project would replace existing statewide accounting, purchasing, payroll and personnel systems. In 1991, $1.8 million was appropriated to pay for planning, a needs assessment and a request for proposals. A consultant has identified many problems with existing systems and concluded that replacement systems are needed.

State government as a whole has not yet planned to manage the changes the project may cause. State agencies should begin planning now for the future implementation of the project's phases. The impact of the technology on agencies should be assessed. To fully realize the project's potential, agencies may need to re-engineer their work processes.

Agencies may also face substantial costs not reflected in the project budget. New equipment may be necessary to take advantage of new features. Existing agency systems may need new programming to interface with the statewide systems. Some agency systems will no longer be required.

Statewide Telecommunications Access and Routing System

The planned Statewide Telecommunications Access and Routing System (STARS) will be a unified, statewide voice, video and data network. STARS is strategically important to Minnesota. It will be a fundamental part of the statewide information architecture that will enable government units and educational organizations to effectively and efficiently share data.

The project is a collaborative effort between the public and private sectors. STARS is designed to be a competitive enterprise that will compete for business with other service providers. It will be self-supporting when fully operational.

STARS is expected to integrate approximately 35 video networks and 15 data networks into a single larger, faster and more cost-effective network. The network will link agencies into workable data communities. Educational institutions, government agencies, local governments and other public sector users will use advanced telecommunications technologies to bring products and service closer to citizens.

STARS will require agencies to adopt a statewide perspective when they need network services. While a few individual agencies may find it more expensive to use STARS, state government as a whole will operate more cost-effectively. In some cases, the legislature may need to adjust agency budgets so that they can maintain their same level of operations.

Budget Request Evaluation Process

IPO budget review requirements were significantly increased for the 1994-95 biennium. This reflects IPO's view that information technology projects require significant planning if success is to be ensured.

Because of the increased requirements, IPO's recommendations are more detailed than in past bienniums. For the first time, IPO is asking that requirements be written into the appropriation to ensure that agencies adequately plan and manage their investments.

All Requests Demonstrated Merit

IPO reviewers found that all requests had merit. Agency-wide and project planning was sufficiently advanced to show that the proposal was the right step to take; all projects have the potential to solve business problems. Most require additional planning and preparation to ensure success.

In most cases a life cycle analysis must be completed before final decisions are made. Where needed, outside consultants are recommended to help agencies perform critical tasks. Periodic performance reviews, re-engineering assessments, and development of records management and data practices policies and procedures are recommended where appropriate.

Review Process

Agencies were asked to supply evidence of successful planning by answering a series of questions. The answers presented a picture of each agency's approach to both agency-wide and project-specific planning. The answers demonstrated each agency's commitment to achieving their missions by adopting sound business policies. Also asked were questions concerning how information is managed to safeguard the public interest, conformance to the Minnesota Government Data Practices Act and information asset security.

Agencies were instructed to complete and submit a completed life cycle analysis for each funding request. They were encouraged to submit any other supporting documentation that demonstrated planning activities, including a strategic business plan, strategic information plan, information asset security plan and a plan detailing how they will move toward an open systems environment (sometimes called a migration plan).

Agency responses were studied by three IPO staff evaluation teams. In most cases, follow-up interviews were conducted to solicit additional information. Each question was scored individually by evaluation team members, reconciled in team meetings and considered again in meetings that included all three teams and IPO management. The final scores represent the consensus opinion of IPO staff and management.

All questions were assigned a weighted value and placed in categories: planning, re-engineering and quality improvement, architecture, life cycle analysis and overall. The overall category is an average of the agency-wide and project-specific scores.

Figure 1 shows how the request and evaluation results are shown in the recommendations section beginning on page 15. The source of requested funds is at the top of the table (general fund, special revenue fund or reallocation of existing resources), followed by the biennial request and the amount recommended by IPO. Ratings in each category are given from both an agency-wide and project perspective. Overall agency-wide and project scores are presented. In the weighted system used for this process, 45 percent is the lowest possible score.

The box at the bottom of the chart indicates if the project requires agencies to identify and participate in a data community.

A breakdown of the categories and questions can be found in Appendix D.

Planning

Is a formal agency-wide planning process in place? Does it define the agency's business and establish realistic goals? Are stakeholders involved? Will there be partnerships with other agencies? How are individual projects planned and how do they relate to agency-wide planning? How does the agency ensure that projects succeed?

Re-engineering and quality

Is the concept of re-engineering understood? Has re-engineering of work processes been attempted? Is a quality improvement program in place?

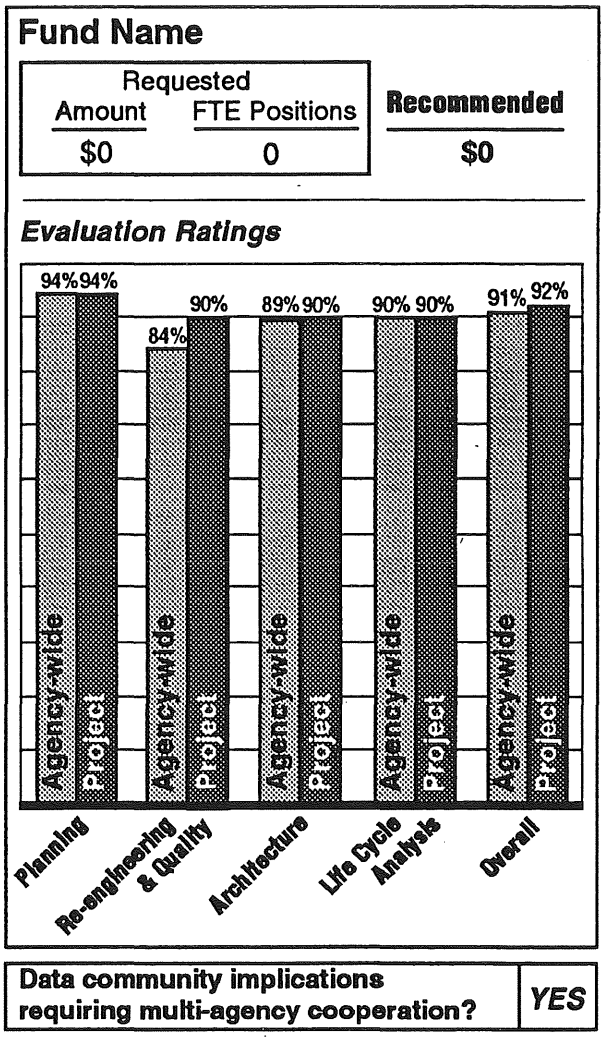
Architecture

Do agency policies and information systems allow effective data sharing? Will this project aid data sharing? Has work on agency-wide information system standards, guidelines and policies been initiated? Have security, data sharing and data administration needs been addressed?

Life cycle analysis

Has a life cycle analysis been completed? Was it submitted as required? How well does it document costs, benefits and risks? Does the agency know how much it spends on information systems?

Figure 1: Ratings Chart



Overall

Represents an average of the agency-wide and project-specific category scores. It is not an estimate of success potential. Because of different requirements, the score should not be compared to the overall score contained in the FY 1992-93 budget reviews.

Planning for the 1996-97 Biennium

Because strategic business plans, strategic information plans, life cycle analyses and information asset security plans are essential management tools, they will be required for the 1996-97 biennial budget review process. Agencies are encouraged to be developing the plans as soon as possible.

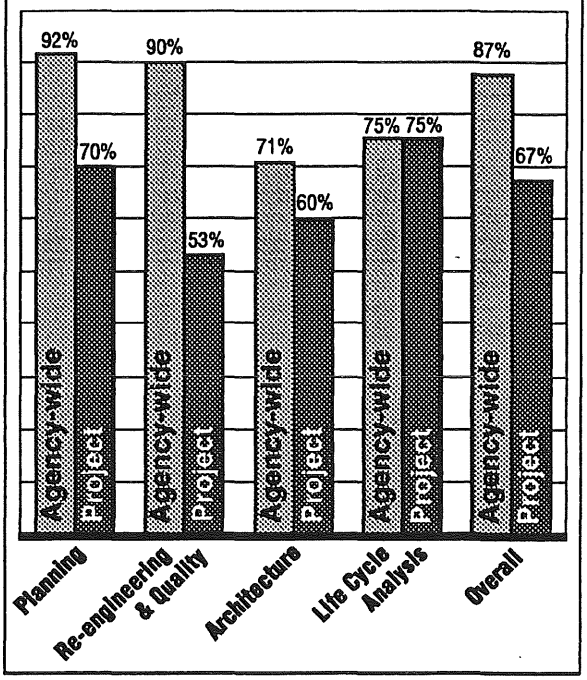
Agency Information System Funding Requests and Recommendations

Department of Administration: *Electronic Data Interchange*

General Fund

Requested Amount	Requested FTE Positions	Recommended
$842,000	3	$842,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Implement electronic data interchange for state contract purchasing.

Background

Electronic data interchange (EDI) conducts business transactions between computers using standard formats and without human intervention. Orders are entered into an EDI system by a purchasing agency and transmitted electronically to vendors. Purchase orders, order acknowledgment and receipt, shipping verifications, invoice receipt and payments can all be accomplished electronically.

This project would be managed by the Department of Administration's Materials Management Division (MMD) and would implement a statewide EDI contract purchasing system. A total of 12 contracts with vendors would be converted to EDI during the biennium. The existing Purchasing Automated Logistics System (PALS) would be enhanced.

Evaluation

A cost, benefit and risk analysis has not been completed. Implementation costs are defined and benefits identified, but other costs and potential risks need further definition.

Among the identified costs is a $208,000 investment in PALS. The statewide systems project will include a purchasing system and at this time it is not known if PALS will be integrated into the new statewide purchasing system or if it will be replaced. It is not known if the EDI software used to enhance PALS for this project will be usable for the long term. The uncertainty about the future of PALS makes it impossible to know if the EDI investment sought for this project will ultimately support the statewide systems project. It is possible that the investment in PALS would be lost.

Cost savings of $2 million are predicted for the biennium. This figure represents the estimated dollar value of personnel time savings. Because time would be used more efficiently, but the number of personnel would remain the same, overall agency operating expenses would not be reduced. This reflects a common experience with EDI: while it will create a more efficient business operation if properly implemented, it may not reduce operating costs. The time efficiencies created by EDI are mostly attributable to work process re-engineering and are often best exploited not by reducing staff, but by reassigning personnel to do more strategic work.

Experience in other organizations has shown that EDI's greatest value lies in its potential to spark work process re-engineering. In preparation for the technology, but before it is implemented, agencies

can re-examine the way they do business, remove inefficiencies, and create organizations that allow personnel to make better decisions and do more valuable work. For this process to succeed, it is critical that a re-engineering assessment be conducted and a re-engineering implementation plan be developed before technology is applied.

EDI is also a part of the statewide systems project. The statewide systems EDI effort will be more comprehensive than the Administration project. Along with purchase orders, the statewide systems project will implement EDI invoice receipt and vendor payments. Extensive coordination is essential to reduce the risk of conflicts between the needs of the statewide systems project and the results of this project. Among the issues that require joint planning are questions about the EDI commodity code structure and statewide re-engineering of purchasing processes.

MMD has little experience with EDI. To reduce the risk of failure, a detailed project work plan is needed that includes a schedule, effectiveness measurements, and a detailed project management structure and process. All planning should include appropriate stakeholder involvement. The statewide systems project steering committee needs to assume responsibility for ensuring that the Department of Administration EDI project supports, and does not conflict with, the statewide systems project.

EDI is important to improving state government. The Department of Administration project can be a valuable prelude to the statewide systems EDI work by helping personnel gain experience in re-engineering work processes and implementing technology. Of particular merit would be development of policies and procedures to manage trading partner agreements.

The department has completed a thorough strategic planning effort. The department needs to make the strategic planning results available to project planners so projects can be assured of supporting agency-wide goals and strategies. The department needs to continue working in the areas of life cycle analysis, data administration, information asset security, data practices and open systems migration.

Recommendations

This project is recommended if money is available and if requirements are met. Additional planning is critical to the success of the Department of Administration EDI project. The Information Policy Office requests that the following requirements be written into the appropriation:

- The statewide systems project steering committee should be responsible for ensuring that the Administration EDI project supports, and does not conflict with, the statewide systems project.

Before purchasing and implementing technology, the department should:

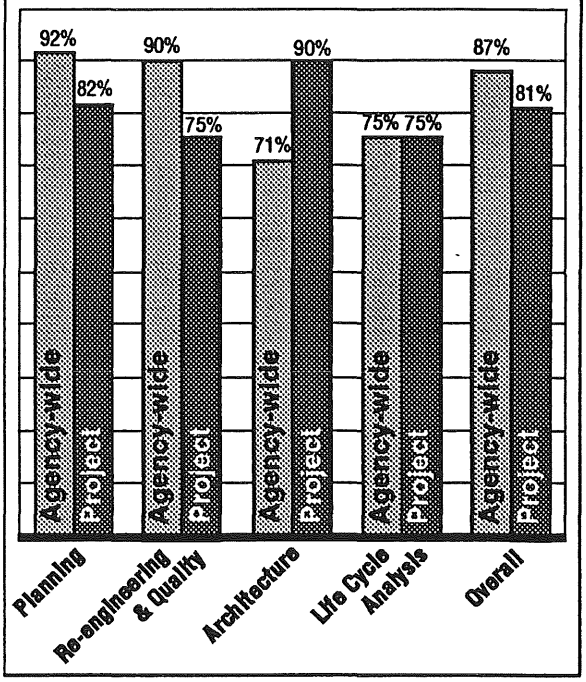
- Engage in joint planning with the statewide systems project to determine how the statewide systems project will be supported by this initiative, and address the statewide purchasing re-engineering and commodity code issues.
- Hire a consultant to help conduct a re-engineering assessment of MMD purchasing processes and develop a re-engineering implementation plan.
- Develop policies and procedures to manage trading partner agreements.
- Develop a plan to involve stakeholders.
- Complete a life cycle analysis and develop a technology implementation plan that includes a schedule, effectiveness measurements, and a detailed project management structure and process.
- Submit all plans, policies and procedures to the Information Policy Office before technology is purchased and no later than March 1, 1994.

Department of Administration: *Statewide Telecommunications Accessing and Routing System*

General Fund

Requested Amount	Requested FTE Positions	Recommended
$3,450,000	4	$3,450,000

Evaluation Ratings



Technology community implications requiring multi-agency cooperation?	YES

Purpose

Accelerate implementation of statewide video and data network.

Background

The planned Statewide Telecommunications Access and Routing System (STARS) will be a unified, statewide voice, video and data network. STARS is a collaborative effort between the public and private sectors. STARS is designed to be a competitive enterprise that will compete for business with other service providers. It will be self-supporting when fully operational.

STARS was previously approved and funded by the legislature with a $3.9 million loan to be repaid from revenues by June 1993. The network's major goals are improving services to citizens and reducing government costs.

This project would accelerate STARS implementation by:

- Establishing a technology research center to provide public sector employees with improved telecommunications skills that will lead to improved service delivery.
- Installing high-speed digital communications lines connecting St. Paul to 12 sites around the state to provide customers with high speed telecommunications services.
- Purchasing hardware and software necessary for a network operations center that would manage the network and assure effective service delivery.

Evaluation

Project costs are based on estimates. A detailed cost analysis is not yet available. Benefits and risks are identified.

STARS is a strategically important concept. It is a fundamental part of the statewide information architecture that will enable agencies to effectively and efficiently share data. STARS is expected to integrate approximately 35 video networks and 15 data networks into a single larger, faster and more cost-effective network. The network would provide a link between agency data communities. Educational institutions, government agencies, local governments and other public sector users would use advanced telecommunications technologies to bring products and services closer to citizens. STARS will help facilitate agency work process re-engineering.

Stakeholders have been involved in project planning.

The department has completed a thorough strategic planning effort. The department needs to make the strategic planning results available to project planners so projects can be assured of supporting agency-wide goals and strategies. The department needs to continue working in the areas of life cycle analysis, data administration, information asset security, data practices and open systems migration.

Recommendations

This project is recommended if money is available and if requirements are met.

The Information Policy Office requests that these requirements be written into the appropriation; the department should:

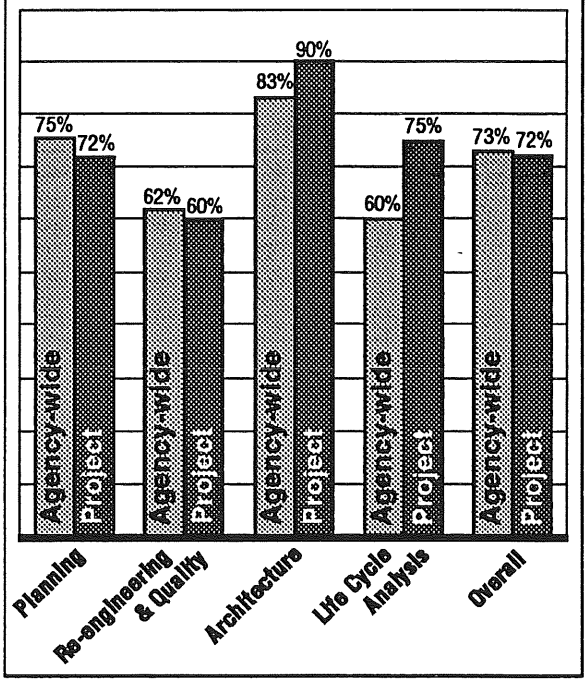
- Complete a life cycle analysis to document all costs, benefits and risks of the STARS project and submit it to Information Policy Office for approval by March 1, 1993.
- Complete work plans for the technology research center and the network operations center and submit them to the Information Policy Office by Oct. 1, 1993.
- Develop a process to help agencies identify network service alternatives and determine optimal solutions to their business needs.

Department of Corrections: *Minicomputer Upgrade*

General Fund

Requested Amount	Requested FTE Positions	Recommended
$500,000	0	$1,100,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Purchase storage and processing upgrades to allow existing software to operate on correctional facility minicomputers.

Background

The Department of Corrections operates ten correctional facilities, with central administrative offices in St. Paul. Eight of the facilities use minicomputers purchased in 1980. Some facilities run applications on local area networks. The central office uses a minicomputer and the state's mainframe computer.

To replace its aging minicomputers, the department purchased nine new minicomputers and a relational database management language with programming and report generation capabilities in 1989. Some department programs were rewritten in the new language, but did not run well on the replacement computers, which did not have enough capacity as initially configured. The department has continued to use the old minicomputers to run its business applications. The new minicomputers are used primarily to manage telecommunications between correctional facilities and St. Paul pending resolution of the capacity problem.

This request would buy memory and storage upgrades to allow the new computers to run the rewritten applications. The request assumes the upgrades would be paid for over a five-year period at $250,000 a year. The total cost of the upgrades would be $1.25 million if the five-year contract is used.

The department is an active participant in the criminal justice data community.

Evaluation

A cost, benefit and risk analysis has not been completed. Benefits and risks are identified, but the total cost of this project is unknown at this time. Tests conducted by the vendor on similar minicomputers equipped with the proposed upgrades have not to date shown that the rewritten applications will run efficiently. At present it is not known how much system capacity is required to successfully run applications; it is possible additional hardware expenses will be incurred. It is possible that the minicomputers cannot be successfully upgraded.

A comparison between the original request, which would pay for the upgrades over a five-year period, and paying for the upgrades now, indicates that $150,000 could be saved by not stretching payments out over five years.

Planning for this project has focused on technology and not on the organization's data needs. More stakeholder involvement is needed. A re-engineering assessment of work processes has not been conducted.

The relational database language can be used on other hardware platforms, which is consistent with state open systems goals. Planning for eventually moving all applications to an open systems environment is needed, which will facilitate information sharing with other members of the criminal justice data community. A capacity planning function to track system use, establish performance measurements, allow system tuning and predict future demand is needed.

The department developed a five-year strategic information plan in 1987. The plan was a good example for other agencies. No formal strategic business or information planning has been conducted since 1987. An agency-wide quality improvement program has not been implemented. Project management and application development policies and procedures are needed.

Recommendations

This request is recommended if money is available and if requirements are met.

The Information Policy Office requests that these requirements be written into the appropriation:

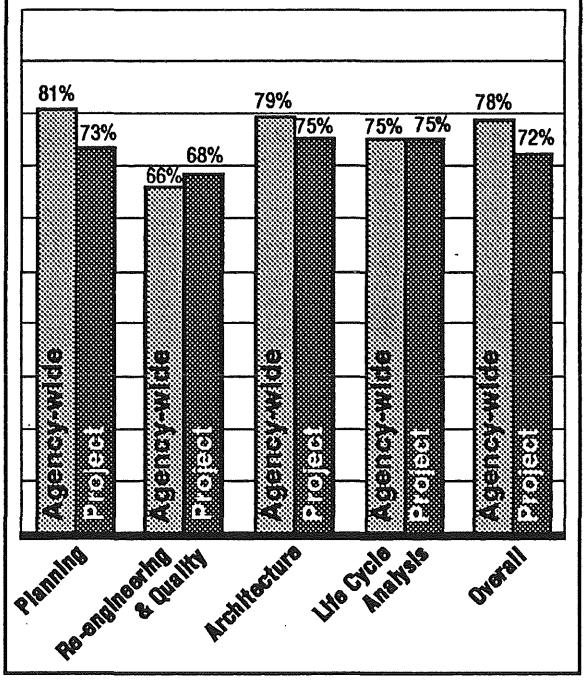
- $1.1 million should be appropriated for this project for outright purchase of the upgrades.
- Before entering into a purchasing agreement, the department should conduct tests to demonstrate conclusively that the upgrades are sufficient to allow department applications to run successfully. Test results should be submitted to the Information Policy Office as soon as possible, but not later than July 1, 1993.
- If tests do not conclusively demonstrate that the current minicomputers can be successfully upgraded, the money should be returned to the general fund.
- If the upgrade tests are unsuccessful, the department should determine if there are alternatives to the minicomputer environment, including distributed computing, determine if replacement minicomputers are needed, conduct a work process re-engineering assessment, and return to the legislature for funding when planning is complete.
- If the upgrade tests are successful, the department should complete a project life cycle analysis to identify costs, benefits and risks and submit it to the Information Policy Office by July 1, 1993.
- If the upgrade tests are successful, the department should explore the cost-effectiveness of buying vendor-certified used equipment.
- The department should establish a capacity planning function to track system use, establish performance measurements, allow system tuning and predict future demand. A report on the capacity planning function should be submitted to the Information Policy Office by Jan. 1, 1994. The report should contain an analysis of how office automation, new applications and predicted demands will affect the system.
- The department should conduct formal strategic business and information planning with the leadership and involvement of top management by January 1994.
- The department should plan for moving all applications to an open systems environment.

Board of Electricity: *Licensing System Expansion*

Special Revenue Fund

Requested Amount	Requested FTE Positions	Recommended
$50,000	0	$50,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	NO

Purpose

Expand existing licensing system to improve compliance with state laws.

Background

The board uses a personal computer network to automate electrician and telecommunication licensing, record inspection requests, do accounting and correspondence, and compile mailing lists.

This project is designed to improve the delivery of an important service to citizens by ensuring that installations are safe and license holders are competent. The current system slows complaint processing and completion of necessary enforcement follow-up procedures and record keeping.

Existing software would be customized to allow additional automation. Enhancements would integrate several record-keeping functions and manage licensee continuing education information. Complaints will receive quicker attention, and enforcement follow-up procedures will be completed more promptly. Compliance with laws and regulations will improve. Licensees will improve their knowledge of code changes and requirements.

Without system improvements, follow-up procedures will become backlogged.

Evaluation

A cost, benefit and risk analysis has not been completed. Cost estimates provided by a potential vendor cover only development and implementation expenses. Ongoing operational expenses are not defined. Potential risks are not fully defined.

Project planning has identified several success measurements. A re-engineering assessment of work processes has not been conducted.

To comply with state policy, an individual should be named to assume agency-wide responsibility for information asset security.

Recommendations

This project is recommended if money is available from the special revenue fund and if requirements are met.

The Information Policy Office requests that these requirements be written into the appropriation; the board should:

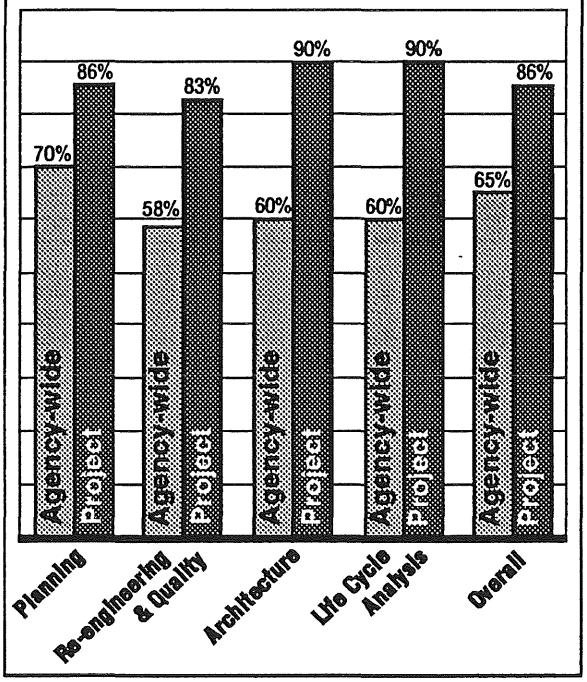
- Complete a life cycle analysis to identify costs, benefits and risks and submit it to the Information Policy Office by June 1, 1993.
- Name an individual responsible for agency-wide security.

Department of Finance: *Statewide Systems Project*

General Fund

Requested Amount	Requested FTE Positions	Recommended
$20,267,000	7	$20,267,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Continue work toward implementing new statewide accounting, personnel, payroll and purchasing systems.

Background

In 1991, $1.8 million was appropriated for this project, which is sponsored by the Departments of Finance, Employee Relations and Administration. A project team was formed to cooperatively plan, conduct a needs assessment and prepare a request for proposals. A steering committee and five work groups were formed. A consultant was hired to help project staff and to prepare a report to the legislature. The consultant identified many problems with the existing systems and concluded that replacement systems are needed.

This project would replace the state's accounting, personnel, payroll and purchasing systems. The project will have state government-wide impact because it will effect all state agencies. System life expectancy is predicted to be 20 years with an overall cost estimated to be $163 million. The project will be implemented in phases. The proposed completion dates in the request for proposals were: accounting, July 1994; purchasing, January 1995; payroll, April 1995; personnel, January 1996.

Evaluation

Costs, benefits and risks are identified for the predicted 20-year life of the system.

The project is focused on implementing technology. A skilled manager with experience with projects of similar size and complexity is providing leadership at the project level. The project is structured to provide stakeholder involvement to allow for effective decisions. Some issues identified during the budgeting process relate to agency-wide and statewide planning processes that are the responsibility of the Department of Finance and the project steering committee; the project itself is well-managed. The major project issues are:

- State government as a whole is not yet prepared to manage the changes the project may cause. A need exists to assess the impact of the technology on state agencies and to develop plans for managing it. To fully realize the project's potential – and not duplicate its functions – agencies may need to re-engineer their work processes and/or invest in new technology. They should begin planning now for the future implementation of the project's phases.

  This preparation effort needs guidance from the three sponsoring agencies through their

participation on the project steering committee. A high-level individual is needed to work with agencies to help them re-engineer their work processes and manage any changes the re-engineering and/or new technology cause in their organizations. The project steering committee should lead this effort.

- In addition to organizational and work process changes, agencies may need to plan for costs not reflected in the project budget. New equipment may be necessary to take advantage of new features. Existing systems may need new programming to interface with the statewide systems.
- Joint planning is needed to ensure cooperation between the statewide systems project and the Department of Administration electronic data interchange project. The project steering committee needs to assume responsibility for ensuring that the Department of Administration project supports, and does not conflict with, the statewide systems project.
- An interface between the local government financial system and the statewide systems is needed.
- Open systems migration should be addressed.
- Data administration needs attention earlier in the process than is now planned.

The Department of Finance needs to continue its agency-wide strategic planning and address: administration of computerized information; implementation of agency-wide re-engineering and quality programs; creation of an agency-wide strategic information plan; development of an information asset security plan; and creation of formal data practices policies and procedures.

Recommendations

This project is recommended if money is available and if requirements are met.

The Information Policy Office requests that these requirements be written into the appropriation:

The steering committee should:

- Assume responsibility for ensuring that the Department of Administration project supports, and does not conflict with, the statewide systems project.
- Appoint a high-level individual to consult with agencies and help them re-engineer their work processes in preparation for the new statewide systems.

Project management should:

- Submit security and data administration plans to the Information Policy Office as soon as possible.
- Participate in joint planning with the Department of Administration's electronic data interchange project.
- Prepare for migrating to an open systems environment.
- Incorporate into the project an interface with the local government financial system.

The Department of Finance should continue its strategic planning and:

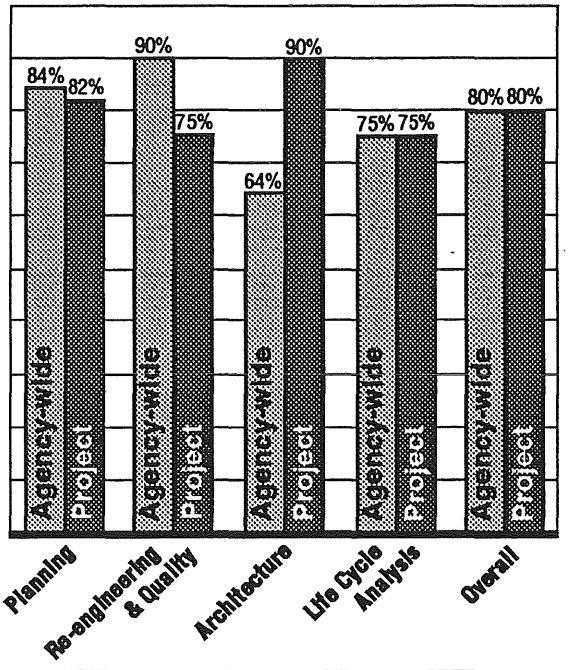
- Improve administration of computerized information.
- Implement agency-wide re-engineering and quality programs.
- Develop an agency-wide strategic information plan, an information asset security plan, and a data practices policies and procedures manual.

Higher Education Coordinating Board: *Statewide Video Network*

General Fund

Requested Amount	Requested FTE Positions	Recommended
$1,669,499	1.5	$1,669,499

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Establish a statewide digital educational video network.

Background

Minnesota has several educational video networks. Most are used at the elementary, secondary and technical college levels. Opportunities to use video technology at the college and university level are limited. Existing networks are regionally based and have not been linked into a coordinated statewide network.

This project is the result of a joint planning group composed of representatives from the University of Minnesota, State University System, Community College System, Technical College System, Private College Council, and the InterTechnologies Group. The board will function as the network's coordinator and facilitator.

The Statewide Telecommunications Accessing and Routing System (STARS) will be used to create an interactive digital video network for higher educational instruction. STARS will link 10 sites and provide a potential connection with the existing technical college analog video network. Other regional networks could be linked through STARS. Sites could originate or receive programming from any other site on the system. The system would allow full-time audio to and from all sites, and voice-activated or instructor-switched video. The 10 proposed sites are:

- Wadena
- Crookston
- Hibbing
- Duluth
- Mankato
- Marshall
- Morris
- Rochester
- St. Cloud
- St. Paul

Evaluation

Costs and benefits for the biennium are identified. Ongoing operational costs and risks are not defined.

The strategically important STARS network will be supported by this project. Post-secondary educational opportunities outside the Twin Cities area will be improved.

Non-educational governmental and citizen uses of the video network need exploration.

Formal policies and procedures for information asset security, data management and computerized records management that apply to internal HECB operations are needed.

Recommendations

This project is recommended if money is available and if requirements are met.

The Information Policy Office requests that these requirements be written into the appropriation; the board should:

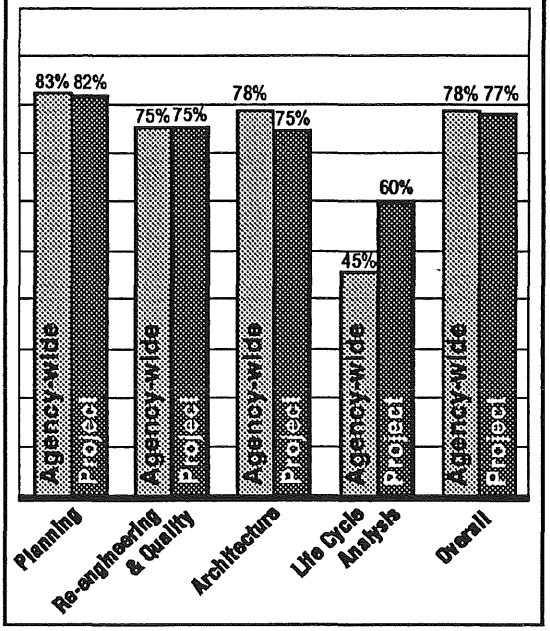
- Complete a life cycle analysis to identify costs, benefits and risks and submit it to the Information Policy Office by Dec. 1, 1993.
- Work with stakeholders to explore how additional non-educational government and citizen uses of the network can be incorporated into the project.
- Establish agency-wide information system policies and procedures for information asset security, data administration and computerized records management.

Department of Human Rights: *Information System Enhancement*

General Fund

Requested Amount	Requested FTE Positions	Recommended
$125,000	0	$225,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Enhance information system to improve compliance tracking, affirmative action plan monitoring, and evaluation of the equal employment opportunity program.

Background

The department promotes and enforces compliance with the Minnesota Human Rights Act. The Legislative Auditor has cited the department for not effectively monitoring the implementation of affirmative action plans.

This project addresses the legislative auditor's report. It would purchase hardware and software, develop a disaster recovery plan, and hire a consultant or staff person for one year to do programming.

The project is designed to improve:

- Investigations.
- Monitoring of affirmative action plans.
- Evaluation of the equal employment opportunity program.
- Complaint tracking.

Evaluation

A cost, benefit and risk analysis has not been completed. Ongoing operational costs are not defined. Benefits and risks of the system enhancement to the department are not identified. Agency-wide information system costs have not been identified. A thorough analysis of the proposed technology and alternatives has been conducted.

Stakeholders have been involved in business and project planning. The department plans to work cooperatively with the statewide systems project and other state agencies to ensure compliance with federal and state requirements. Current and planned applications can be used on other hardware platforms, which is consistent with the state's open systems goals.

Records management, data administration and information asset security need to be addressed on an agency-wide level.

An agency-wide strategic information plan is needed to help management determine how information systems can support business needs. Top management is not involved in information systems plan-

ning. Agency-wide budgeting does not identify funds available for information system development, which results in limited funds and a patchwork approach to system management. Only one full-time position is devoted to system support, which may put the department's systems at risk; strategic planning is needed to determine if additional staff members are needed.

The department's programs are information intensive and its information systems are critical to its success. An analysis of the information system management process is needed to recommend possible changes in structure or methods. Analysis costs will require additional funding.

Recommendations

This project is recommend if money is available and requirements are met.

The Information Policy Office requests that these requirements be written into the appropriation:

- A total of $225,000 should be appropriated.
- $100,000 of the appropriation should be used to hire a consultant to help analyze the department's information management function and recommend a structure and process.

Before purchasing hardware and software, the department should:

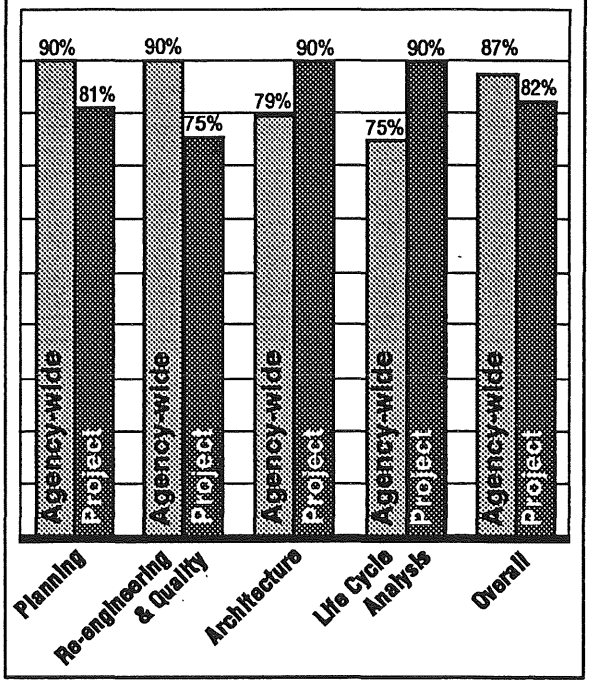
- Develop an agency-wide strategic information plan to help management determine how information systems can support business needs, and submit the plan to the Information Policy Office by July 1, 1994.
- Based on the strategic information plan, begin planning for future system management needs, including data administration, software project management, support staffing and information asset security.
- Develop a project information system life cycle analysis to identify costs, benefits and risks and submit the analysis to the Information Policy Office by July 1, 1994.
- Develop a comprehensive records retention schedule for paper and electronic records, and submit it to the Information Policy Office by July 1, 1994.

Department of Human Services: *Child Support Enforcement System*

Reallocation

Requested Amount	Requested FTE Positions	Recommended
$6,401,000	9	$6,401,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Enhance existing child support enforcement system to comply with federal requirements.

Background

This project is mandated by the federal Family Support Act. The project will receive 90 percent reimbursement when certified. Net biennial cost to the state will be $640,000.

The automated child support enforcement system processes collections and monitors all child support cases handled by the state and counties. The program supported by the system locates absent parents, takes legal action to determine paternity, determines the ability of absent parents to meet support obligations, and obtains and enforces court orders.

Evaluation

Extensive project planning has been completed, including a cost, benefit and risk analysis.

The program manual will be on-line for easy access to workers who have questions on policies and procedures. An automated interface with MAXIS and the medical management information system is planned.

The project will involve partnerships with other states and the Minnesota Departments of Jobs and Training, Public Safety, Revenue and Health to share absent parent information.

More involvement of stakeholders in project planning and system development is needed in order to fully meet their needs.

The department administers large, complex programs. To ensure consistent data and system management, the department needs to integrate into mainstream activities its efforts in the areas of life cycle analysis, open systems migration, data and records management, and system development methodology.

An information asset security plan is needed.

Recommendations

This reallocation request is recommended if a requirement is met.

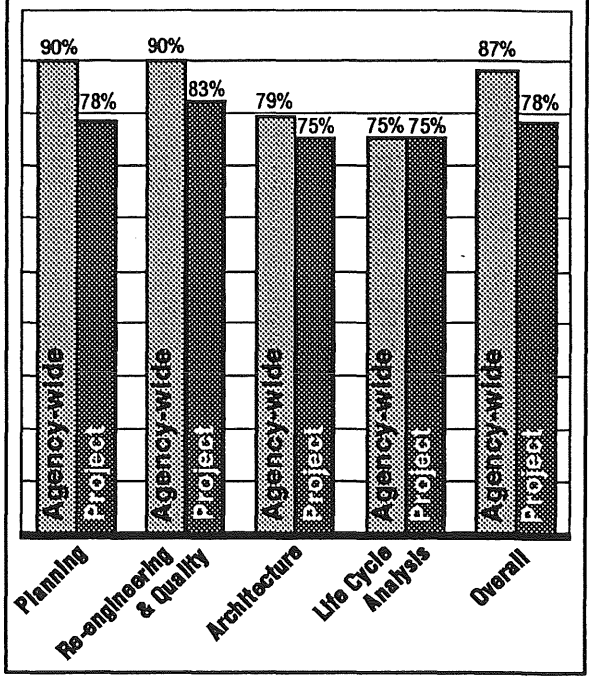
- Stakeholders should be identified and become more involved in project and system development.

Department of Human Services: *Electronic Benefit Transfer*

General Fund

Requested Amount	Requested FTE Positions	Recommended
$7,500,000	14.5	$7,500,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Automate the delivery of public assistance benefits in Hennepin County.

Background

Federal reimbursement will reduce the biennial cost to $4.5 million. The project is not federally mandated.

This project would expand a system now operating in Ramsey County to cover public assistance cash and food stamp benefit delivery in Hennepin County. The project is designed to reduce mail losses and fraud; Hennepin County, which has 30 percent of the state's public assistance caseload, experiences 60 percent of its mail losses. Another identified problem is pedestrian and automobile traffic in and near banks and county offices. The Ramsey County automated system was implemented after all county banks large enough to handle the cash benefit account refused to participate in the program.

A plastic card would replace paper checks and food stamp coupons. Recipients would use the card to withdraw cash benefits at automatic teller machines. The same card would be used instead of food stamps at participating businesses. Service delivery would be improved. Some program costs borne by the county would be shifted to the state.

Evaluation

A cost, benefit and risk analysis has not been completed. The costs of implementing the project are defined; however, cost savings and the resulting benefits are unclear. The department believes that further analysis will document additional cost savings to the state, Hennepin County, retailers and financial institutions. The risks of not implementing the project are not identified.

Preliminary analysis has found several anticipated benefits, including reductions in postage, mail losses and duplicate check costs. Participation in the program will be easier for retailers. Pedestrian and automobile traffic will be reduced. Recipients will be able to withdraw cash as needed and will not have to receive their monthly benefits in a lump sum. Recipients who do not have bank accounts will not have to pay a fee to have their checks cashed. The system may have the potential to deliver other benefits.

Based on the preliminary analysis provided by the department, the new delivery system will cost more to operate than the current system. While the project would significantly reduce costs caused by fraud,

theft and mail losses, these gains are more than offset by the increased costs of implementing and operating the new system. Overall, it is expected that the state would experience a net cost increase of $1.9 million the first year and $934,000 for each succeeding year.

A complete picture of the impact of the system on county costs is not available. The preliminary analysis indicates that Hennepin County would realize savings of $555,000 to $659,000 per year if the system is implemented. The largest share of those amounts is $400,000 saved per year by not opening a new county funded issuance location. Documentation to support these estimates is not available.

The department has not planned for implementing the system statewide or in the rest of the seven-county metropolitan area. A formal, in-depth assessment of the existing Ramsey County system is being conducted.

The department administers large, complex programs. To ensure consistent data and system management, the department needs to integrate into mainstream activities its efforts in the areas of life cycle analysis, open systems migration, data and records management, and system development methodology.

An information asset security plan is needed.

Recommendations

This project is recommended if money is available and if requirements are met.

Additional planning is critical to success. The Information Policy Office requests that these requirements be written into the appropriation; before technology is purchased, the department should:

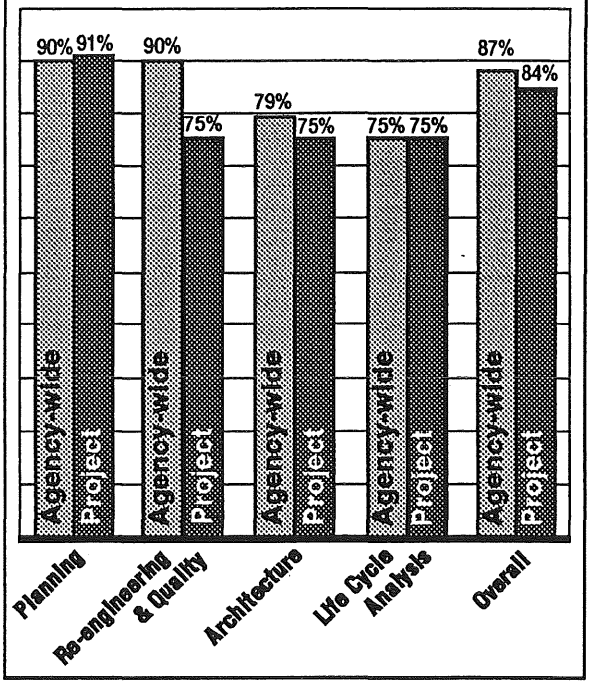
- Complete a life cycle analysis to identify costs, benefits and risks of the system and the impact it will have on other department programs. The analysis should include potential implementation in the seven-county metropolitan area and statewide, and explore the potential for sharing costs with other units of government and the private sector.
- Involve key stakeholders, such as retailers and banks, in the analysis and planning.
- Analyze the system's potential for delivery of other government services and benefits. The department should contact other state agencies to determine if partnerships are possible.
- Conform to statewide electronic data interchange standards when appropriate.
- Incorporate the findings of the formal, in-depth assessment of the Ramsey County system into project planning.
- Develop a comprehensive project work plan that includes a schedule, effectiveness measures, and a detailed management structure and process.
- Submit all plans and findings to the Information Policy Office by July 1, 1994.

Department of Human Services: *MAXIS Operations*

General Fund

Requested Amount	Requested FTE Positions	Recommended
$31,918,000	0	$16,732,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Fund statewide benefit eligibility and issuance system operating expenses.

Background

This request would cover the base operations budget for FY 1994-95 and an operations deficit incurred during the 1992-93 biennium. The recommended amount is for the FY 1994-95 base operations budget. A recommendation on funding the 1992-93 deficit is outside the Information Policy Office's authority.

MAXIS is a federally certified, statewide, automated benefit eligibility and issuance system. It is used to administer a number of major programs, including Aid to Families with Dependent Children, Food Stamps, General Assistance, Work Readiness, Minnesota Supplemental Aid, Medical Assistance, General Assistance Medical Care, and Emergency Assistance. MAXIS forces statewide consistency in program administration, ensures client due process rights, and detects program abuse. The system links almost 4,000 devices located in every county. Each month over 500,000 citizens rely on MAXIS for subsistence and medical needs.

MAXIS interfaces with the state's child support enforcement system and medical management information system, and with Social Security and the Internal Revenue Service. An automated state issuance center prints, inserts and mails benefit checks, food stamps, client notices, vendor payments and other documents.

Development and implementation were completed in December 1991. Federal funds contributed about 70 percent toward development of the system and will average about 50 percent for operations. The federal operations contribution for FY 1994-95 is expected to be $27.6 million. This money will not reduce the state funding request.

Evaluation

Long-term and short-term costs and benefits are identified. Some risks need study.

MAXIS is a successful operational system that is constantly changing. Upgrades reflecting new policies occur regularly. Additional functions, such as entry for Minnesota Care and the Minnesota Family

Investment Plan, are now being implemented. These additions make an already large system larger, more complex and more expensive to operate.

As initially implemented, the system demonstrated two basic problems: processing delays and higher-than-expected operating costs. The processing delays have been significantly reduced, although they still exist during periods of heavy use. Operational costs have stabilized, but exceed original predictions because additional functions were added to the design.

At this stage of the system's operational life, several questions should be answered:

- Can operating expenses be reduced?
- Can distributed processing benefit the system and, if so, what would it cost and when could it be implemented?
- How will MAXIS serve other programs and data communities in the future?
- Can system performance be improved and if so, at what cost?

The department administers large, complex programs. To ensure consistent data and system management, the department needs to integrate into mainstream activities its efforts in the areas of life cycle analysis, open systems migration, data and records management, and system development methodology.

An information asset security plan is needed.

Recommendations

The MAXIS operating budget should be funded if money is available and if requirements are met.

The Information Policy Office requests that these requirements be written into the appropriation:

An independent information systems audit of MAXIS should be started as soon as possible. The audit should be paid for by the Departments of Finance and Human Services, and directed by a steering committee with representatives from the counties, Finance, Human Services and the Information Policy Office. The audit should consult stakeholders and review technology, operations, costs and system support. In addition, the audit should specifically address:

- If operating expenses can be reduced.
- If distributed processing can benefit the system and, if so, what it would cost and when it could be implemented.
- How MAXIS will serve other programs and data communities in the future.
- If system performance can be improved and at what cost.

Audit findings should be reported to the legislature during the 1994 session.

Department of Human Services: *Medical Management Information System*

Purpose

Fund increase in operating costs of a replacement medical management information system.

Background

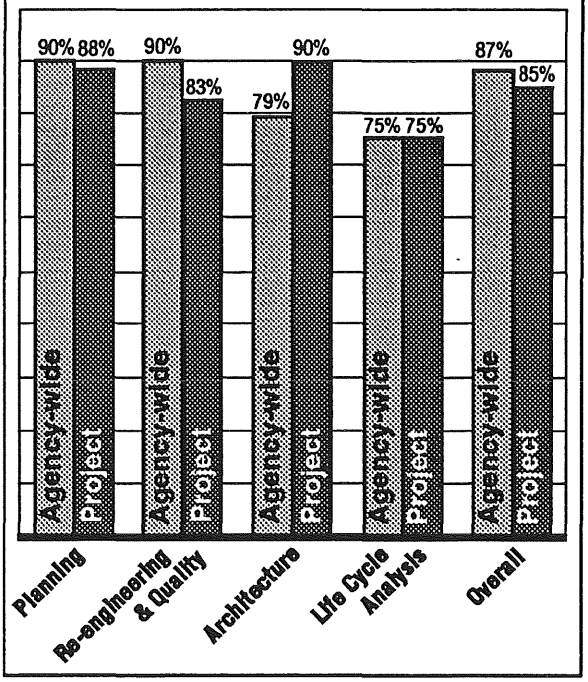
Development of the new system was approved by the legislature in 1989. More than $17 million have been invested over the past three years; without additional funding the investment will be lost. The new system, scheduled to become operational in January 1994, will be more expensive to operate: $20.2 million for the biennium compared to a biennial cost of $15.2 million for the old system. Federal reimbursement will reduce the state's net biennial cost increase to $1.2 million.

The medical management information system supports three publicly funded health care programs: Medical Assistance, General Assistance Medical Care and Minnesota Care. The program affects 450,000 citizens each year and annually pays claims totaling $2 billion.

Reallocation

Requested Amount	Requested FTE Positions	Recommended
$4,800,000	0	$4,800,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Evaluation

Costs are identified for the biennium. Operational costs are not defined for the life span of the system. Benefits are identified. Risks need further definition.

The current system was installed in 1974. The new system is based on a federally certified system from Florida. The system will use telecommunications to improve the timeliness and quality of eligibility verification and claims payment services. Claims processing will be automated. An expected benefit is an increase in the willingness of medical providers to participate in publicly funded health care programs. This should expand the availability of health care services to citizens.

The improved features of the system will support the Minnesota Care effort to control costs and improve citizen access to health care.

The department administers large, complex programs. To ensure consistent data and system management, the department needs to integrate into mainstream activities its efforts in the areas of life cycle analysis, open systems migration, data and records management, and system development methodology.

An information asset security plan is needed.

Recommendations

This reallocation request is recommended if requirements are met.

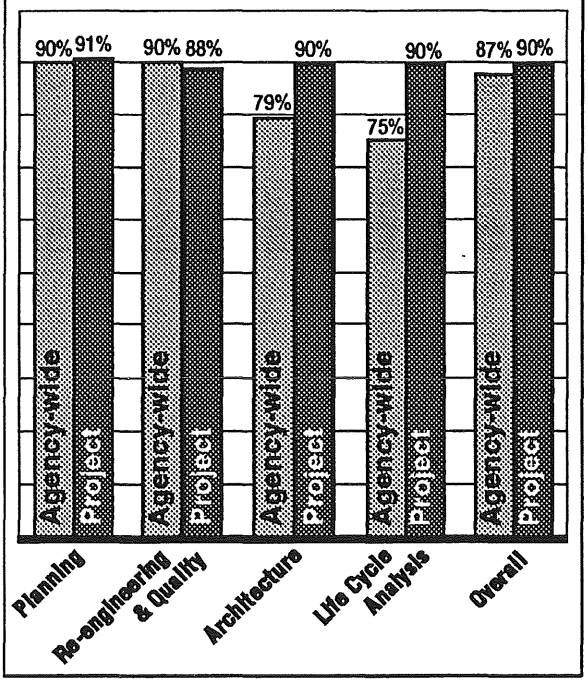
- Develop an active partnership with other Minnesota Care agencies to effectively accommodate the data sharing needs of the data community.
- Study the feasibility of using the new system for all state government medical claims processing. Study costs should be paid for by existing operating funds. A report and recommendations should be submitted to the Information Policy Office by Jan. 15, 1994.

Department of Human Services
Social Services Information System

General Fund

Requested Amount	Requested FTE Positions	Recommended
$1,773,000	3	$1,773,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Re-engineer and replace the current administrative system with an automated system used by counties.

Background

The Community Social Services Act of 1979 established county-administered, state-supervised delivery of social services to the mentally ill and retarded, the chemically dependent, vulnerable adults, elders at risk, adolescent parents, state wards and dependent, neglected and abused children. The Department of Human Services (DHS) is required to supervise and monitor the delivery of these services statewide.

The existing system will not meet proposed federal regulations requiring client-specific quarterly reports on children's services.

The project is expected to:

- Enable timely and accurate reporting by establishing an information system at the county level that identifies clients and the social services they use.
- Improve the quality of client services by providing reliable information to allow analysis of costs, benefits and service delivery.
- Streamline collection, management and processing of data at the county level, and simplify reporting to DHS.
- Implement statewide data standards for social services reporting so that county reports to DHS are standardized.
- Allow effective evaluation of service delivery on a statewide basis, provide mandated state and federal reporting, and support policy decisions by establishing a statewide database to provide standardized, client-specific information. Each county information system will extract, summarize and transfer data to the statewide database.

Evaluation

Costs, benefits and risks are well defined for the system's predicted life span.

The project is linked to two of DHS priorities: children and outcome evaluation. The system will share data with other agency programs, such as Child Support Enforcement and Medical Assistance. This

effort will fundamentally support the Children's Cabinet by establishing a statewide database on Minnesota's children who receive social services.

The existing system is used by 75 counties. The remaining counties use a different electronic system or do the work manually. The current system does not adequately meet the information and reporting needs of the state or the counties, and will not meet proposed federal regulations requiring client-specific quarterly reports on children's services. The new system will support county administrative operations, meet all federal and state reporting needs, and enable program performance evaluations.

A consortium of counties will pay for the design and development of a family and children's services worker interface system that will be fully integrated with the new county information system. The interface will enhance productivity and integrate data collection into day-to-day activities.

A substantial majority of counties have been actively involved in supporting the initial planning efforts, contributing both staff time and funding. Both county and state program management stakeholders have been involved with planning and design. Client and service data elements will be standardized. A system for reporting client activity will be developed to provide a complete picture of social service activities by county and statewide.

The department administers large, complex programs. To ensure consistent data and system management, the department needs to integrate into mainstream activities its efforts in the areas of life cycle analysis, open systems migration, data and records management, and system development methodology.

An information asset security plan is needed.

Recommendations

This project is recommended if money is available and if requirements are met.

The Information Policy Office requests that these requirements be written into the appropriation; the department should:

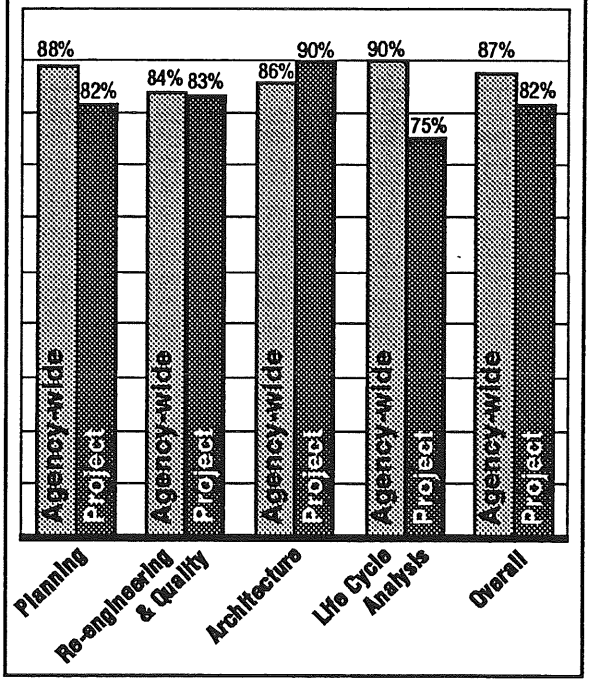
- Develop an active partnership with the Children's Cabinet to effectively accommodate the data sharing needs of that data community.
- Work with all counties to develop effective interfaces with their information systems and reach agreement on data standards.
- Use the state's endorsed standard for database access.
- Use a state-endorsed national standard programming language to develop the new system.

Department of Labor and Industry: *Workers' Compensation Imaging System*

Special Revenue Fund

Requested Amount	Requested FTE Positions	Recommended
$10,000,000	0	$5,000,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	NO

Purpose

Re-engineer work processes and implement electronic imaging to store and distribute workers' compensation information.

Background

This project is designed to improve the handling of workers' compensation claims and the delivery of benefits. The current workers' compensation system is paper-based and is expected to become more of a management problem in the future. With the current system:

- Over 1.1 million paper files must be managed.
- 2.4 million pages are filed each year.
- 10,000 pages arrive at the department each day.
- Over 260 new files are created each day.
- 25,000 files are in circulation at any given moment.
- There is no backup to the paper files.
- 30 percent of all dispute resolution files are unavailable when needed.

Evaluation

Initial hardware and software implementation and consulting costs are identified. Ongoing operational costs are not defined. Extensive benefits are identified. More analysis of risks is needed. Agency-wide costs have been identified for computerized and manual information systems.

Stakeholders, including the insurance industry, endorse the project and have been involved in planning. Extensive, thorough research on re-engineering and workers' compensation imaging systems has been conducted. The importance of training, security, data practices, disaster recovery and technical support have been incorporated into planning. The potential for partnerships with stakeholders should be explored.

Some planning areas need further work if project success is to be ensured:

- Re-engineering of work processes is a critical part of this project. There is agency-wide understanding of re-engineering principles, including the importance of training and of managing change in the workplace as processes are modified. Project-specific re-engineering is discussed at

length, but more detail is needed to identify how and when the redesign of work processes will be achieved. It is critical that a re-engineering assessment drive the implementation of technology.

- Change management should be addressed further. Managing change is often a slow and difficult process during an organization's transition to new, unfamiliar and evolving methods of doing business. Training and communication are critical to successfully managing the changes.
- Forms need to be reviewed, redesigned and standardized as part of the re-engineering process.
- A project work plan is needed.
- The agency-wide data and application architectures need to be developed.

This is an ambitious project. The original plan called for a two-year implementation schedule, with re-engineering accomplished while technology was being installed. This schedule may place such a heavy burden on the department that re-engineering, forms redesign, training and change management will not receive adequate attention. To ensure that all aspects of the project receive adequate attention, a longer schedule is needed. The project should be implemented over three years with the help of outside consultants. The first phase should be devoted to developing a re-engineering plan and re-engineering work processes where possible before the technology is applied. The technology should be implemented as dictated by the re-engineering plan.

An agency-wide business plan, strategic information plan, information asset security plan and open systems migration plan have been completed.

Recommendations

This project is recommended if money is available from the special revenue fund and if requirements are met.

The Information Policy Office requests that these requirements be written into the appropriation:

- $5 million should be appropriated at this time.

Before technology is purchased, the department should:

- Increase the implementation schedule to three years.
- Develop a detailed work plan that includes a schedule, effectiveness measures, and a detailed management structure and process.
- Complete a life cycle analysis to identify all costs and risks.

During the first year of the project, the department should:

- Hire a consultant to assist with development of a re-engineering plan, with attention given to a training and change management plan. The plans should be submitted to the Information Policy Office by July 1, 1994.
- Develop the data and application architectures.
- Incorporate forms review, redesign and standardization into the re-engineering process.

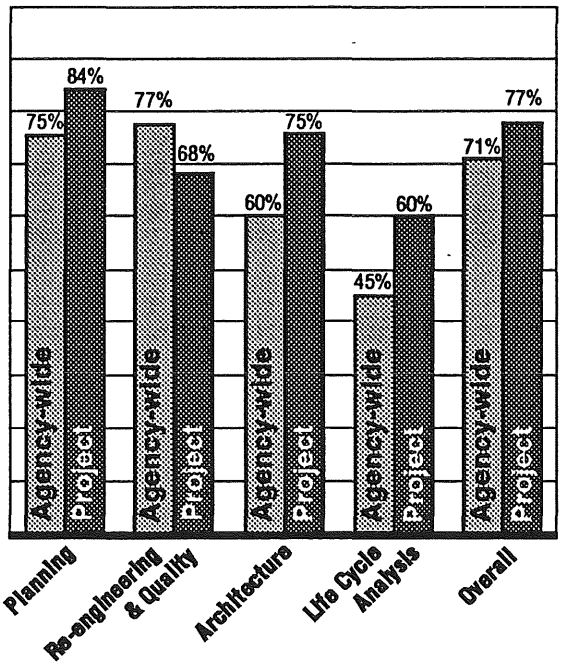
After evaluating the results of the re-engineering assessment and meeting all other requirements, the department should return to the legislature for any remaining necessary funding in the 1996-97 biennium.

Municipal Board: *Local Area Network and Database*

General Fund

Requested Amount	Requested FTE Positions	Recommended
$40,000	0	$40,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	NO

Purpose

Install a local area network and database to support office automation.

Background

This project will implement a local area network and shared database. The project is designed to enhance the Municipal Board's ability to serve municipalities and citizens. The board reviews city and township consolidations and mergers, and reviews 200 annual requests for municipal adjustments. Staff members coordinate approximately 30 hearings a year, provide board members with information and support necessary to make decisions, and consult with local governments, citizens and developers regarding boundary adjustments.

Evaluation

A cost, benefit and risk analysis has not been completed. A potential vendor has identified the costs of hardware, software and programming, but benefits and risks are not included. Training and maintenance costs have not been considered.

Currently, four stand-alone personal computers are used for word processing. Required summary reports of boundary adjustments are prepared manually. This process is slow, labor intensive and does not help the staff perform analysis or identify trends. A shared database with report generation capability and networked office automation software will improve productivity.

The staff has demonstrated an ability to plan for and manage the project, but have not involved external stakeholders.

Data administration and information asset security needs to be addressed.

The network technology will be new to the organization and will require support. It will be necessary to train a staff member to administer the network and database. The network administrator should thoroughly document procedures and train a backup administrator as time permits over the first months of system operation. The lead staff member should consider participation in the Small Agency Technology Resource Group.

Recommendations

This project is recommended if money is available and requirements are met.

The Information Policy Office requests that these requirements be written into the appropriation; the board should:

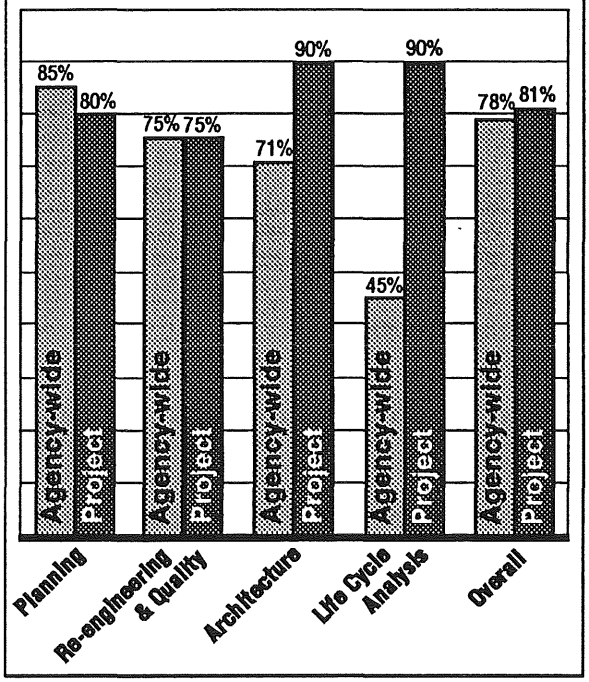
- Train a staff member to be the network and database administrator. A backup should also be trained.
- Complete a life cycle analysis to identify costs, benefits and risks and submit it to the Information Policy Office by June 1, 1993.
- Address data administration and information asset security.

Department of Natural Resources: *Computer Training Program, Local Area Networks and Office Automation*

General Fund

Requested Amount	Requested FTE Positions	Recommended
$159,000	1	$159,500
$819,500	5	$819,500

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Establish a computer training program and facility, and install local area networks and office automation in regional offices.

Background

This request contains two proposals:

- Establish a computer training program and facility. This proposal would train employees to use agency information resources and help in the implementation of information system projects.
- Implement local area networks (LANs) in regional offices and connect them to each other and the St. Paul offices.

  Department of Natural Resources (DNR) regional offices currently use minicomputers. These computers are linked to DNR's central information systems in St. Paul and provide some office automation services, such as word processing. The department anticipates that the manufacturer will stop supporting the minicomputers during the biennium.

Evaluation

A cost, benefit and risk analysis of the computer training program and facility has been completed. Implementation costs for the LAN are identified. Ongoing LAN operational costs, benefits and risks need more definition.

The training program and facility proposal addresses a known business problem, includes a needs analysis and an analysis of alternatives.

The LAN project would be a reasonable step toward creating an agency-wide information infrastructure that would support the organization's mission. A LAN pilot project was conducted in the Brainerd regional office and demonstrated that personal computer-based LAN technology can support the department's regional offices. Regional office functions would be automated. Divisions would be able to jointly manage and share data.

The department should continue to explore the potential of using the Statewide Telecommunications Access and Routing System, and continue to contact other agencies to seek data community partnerships. A detailed LAN project work plan is needed.

DNR's agency-wide planning process is a good example for state government. The business planning and budgeting effort produces an understandable and useful document. The department has begun work on a strategic information plan to demonstrate how information technology can support business needs, facilitate data sharing between divisions or provide for integrated information resource management.

Agency-wide records management, data administration, data practices and open systems migration need to be addressed.

Recommendations

The computer training program and facility and the LAN project are recommended if money is available and if requirements are met.

The Information Policy Office requests that these requirements be written into the appropriation; the department should:

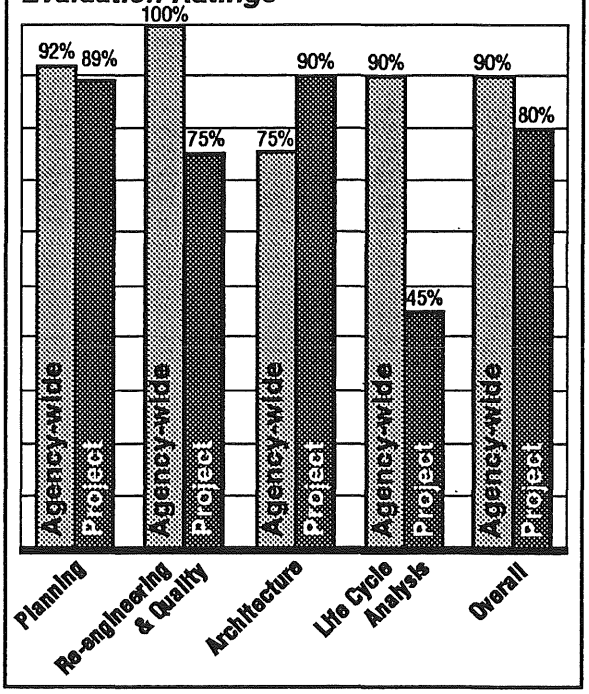
- Complete a detailed LAN project life cycle analysis to identify all costs, benefits and risks, and submit it to the Information Policy Office by Oct. 1, 1993.
- Develop a LAN project work plan that includes a schedule, success measures, a minicomputer-to-LAN migration plan, personal computer applications, and a detailed project management structure and process.
- Determine the feasibility of using the Statewide Telecommunications Accessing and Routing System.
- Complete an agency-wide strategic information plan that demonstrates how information technology can support business needs, facilitate data sharing between divisions and provide for integrated information resource management. The plan should be submitted to the Information Policy Office by Oct. 1, 1993.
- Continue to identify and participate in data communities.
- Incorporate into the strategic information plan all records management, data administration, data practices and open systems migration issues.

Pollution Control Agency: *Environmental Compliance Management Systems*

Environmental Fund
General Fund

Requested Amount	Requested FTE Positions	Recommended
$4,000,000	5	?*

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

*** Planning to date indicates that this project should be funded. However, a cost analysis hasn't been completed and a recommendation on a specific amount cannot be made at this time.**

Purpose

Re-engineer work processes and provide automated tools to generate regulatory documents, analyze compliance data, track regulatory requirements and more efficiently allocate staff.

Background

This project is a multi-phased, four-year effort to re-engineer and automate many of the Pollution Control Agency's (MPCA) work processes. Funding would be split between the environmental fund ($2,908,000) and the general fund ($1,092,000).

The project includes work process re-engineering, local area networks, relational databases, office automation, geographic information systems and time management software. Total project costs are estimated to be $7.5 million.

The project is designed to help MPCA:

- Reduce permit, license and certificate backlogs.
- Reduce costs to regulated businesses.
- Improve information analysis.
- Improve permit issuance productivity.
- More consistently enforce environmental protection regulations.
- Better coordinate the programs and agencies that jointly address environmental problems.

Evaluation

A cost, benefit and risk analysis is being conducted. To date, the cost analysis has not been completed and project costs cannot be accurately predicted. The requested amount is based on a preliminary estimate of project costs.

Although the cost analysis has not been completed, the high quality of planning to date indicates that this project will succeed and will improve the quality of agency operations.

Extensive agency-wide and project planning have been conducted. The project is linked to clearly identified needs that, if met, will improve the quality of agency programs. Stakeholders have been

involved to ensure that their needs are met and service delivery is improved.

Planning is based on user data needs and not driven by technology. Data standards will be adopted. MPCA recognizes its membership in key data communities and is active in several data groups, particularly related to geographic information. In a later phase of this project, geographic information systems will be developed in collaboration with that data community. Electronic data interchange will also be addressed in a later phase.

An agency-wide quality program has been implemented and has achieved measurable success. The program has stimulated some work process re-engineering.

MPCA needs to revisit its procedures for assessing the historic value of data and adhere fully to the statewide information asset security policy.

The project will introduce fundamental changes in the workplace. Managing change is often a slow and difficult process during an organization's transition to new, unfamiliar and evolving methods of doing business. Training and communication are critical. MPCA needs to develop a change management plan as soon as possible.

Recommendations

This project is recommended if money is available and if requirements are met.

The Information Policy Office requests that these requirements be written into the appropriation; the agency should:

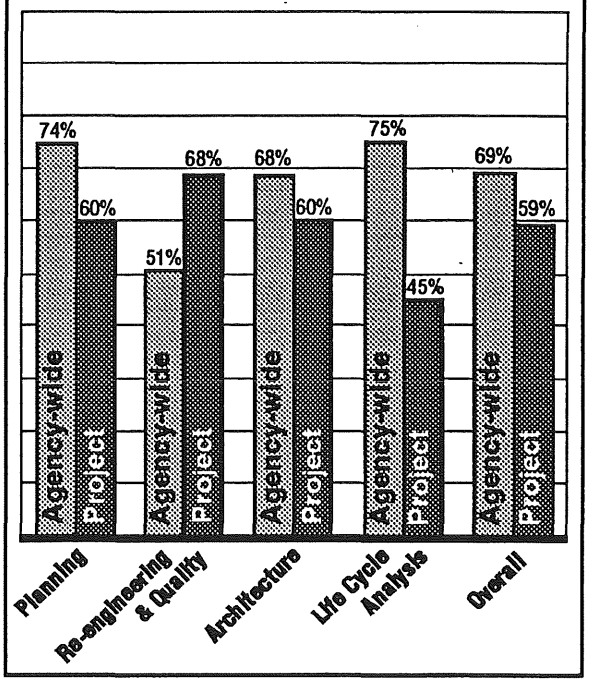
- Complete a life cycle analysis to identify costs, benefits and risks, with special attention given to a full understanding of costs over the life of the system. The analysis should be submitted to the Information Policy Office by Mar. 15, 1993.
- Complete a detailed work plan for the biennium that includes a schedule, effectiveness measures, and a detailed management structure and process. The work plan should also include a tentative schedule and milestones for the remaining years of the project.
- Develop a change management plan that includes a training plan.
- Formalize procedures for assessing the historic value of data.
- Identify and participate in data communities.
- Adhere to the state's information asset security policy.

Department of Public Service: *Document Imaging System*

General Fund

Requested Amount	Requested FTE Positions	Recommended
$160,000	0	$84,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Augment paper-based document handling system with electronic imaging.

Background

This project will ultimately be paid for by assessments on regulated utilities. There will be no net cost to the state.

This project would implement an electronic imaging system. Both the Public Utilities Commission (PUC) and the Department of Public Service (DPS) have requested imaging systems. The duplicate requests are a formality; the agencies have consulted and seek a single, shared system. In preparation for the system a cable has been installed to link the agencies. DPS is requesting that it own and manage the system; PUC would be given appropriate access. DPS has a working relationship with PUC, a major stakeholder. DPS analysts review the filings and represent citizen interests in matters before the commission. DPS is the official custodian of the commission's inactive files.

PUC filings have increased from 654 in 1982 to 1,466 in 1992. Filings range in size from less than five pages to tens of thousands of pages. The largest filing in recent years was 80,000 pages. Under pending PUC guidelines, 15 copies will be made of each filing and distributed internally. Up to 10 additional copies will be distributed by DPS.

Evaluation

A cost, benefit and risk analysis has not been completed. Initial technology costs, benefits and risks are identified, but ongoing operational costs and training expenses are not defined.

An optical system would allow scanning of filings and related documents into an electronic format, where they could be searched by key words or phrases. Filings could be automatically distributed to appropriate personnel. The number of paper copies would be reduced by at least half. The system could be used by outside parties who have a need to see the information. The stored images would be available to citizens at DPS or, if they have access to compatible technology, remotely by using telecommunications equipment. DPS would use the system for other department documents.

The PUC, DPS, Attorney General and Administrative Hearings Office all have a stake in the filing information at some point in the process and, therefore, constitute a data community. Other agencies may participate in the data community when involved with specific filings.

Imaging systems are new to the workplace and experience with the technology is limited. Imaging's value as a productivity enhancement tool is in question. Technology is often applied before work processes are re-engineered. Before the technology is implemented, imaging's value as an analytical tool should be studied and a work process re-engineering assessment should always be conducted.

The imaging system will improve analysis by making electronic searches possible. However, staff members will be required to switch from reading sheets of paper to reading electronic images on a computer screen, which may be a dramatic and potentially difficult change in their work process. This may be possible only for shorter documents. Larger high resolution computer monitors may be required, which will increase costs.

The department needs retention schedules to manage the preservation and disposition of electronic information, and data practices policies and procedures for electronic information. Agency-wide re-engineering and quality improvement strategies and an information asset security plan are needed.

Recommendations

This project is recommended if money is available and if requirements are met. The recommended amount reflects the costs of a shared imaging system.

The Information Policy Office requests that these requirements be written into the appropriation:

- Funding for the imaging system hardware and software should be split evenly between PUC and DPS. PUC and DPS should form a partnership to jointly purchase and operate the imaging system. Each agency should purchase a scanner.
- A steering committee should be formed to guide the project and be held accountable for its performance. Data community members should be represented on the steering committee. The steering committee should survey all agencies who historically have used the information that will be scanned into the system and establish a working data community.
- DPS should develop formal document retention schedules and data practices policies and procedures for electronic information; agency-wide re-engineering and quality improvement strategies; and an information asset security plan, and submit them to the Information Policy Office by July 1, 1994.

The steering committee should:

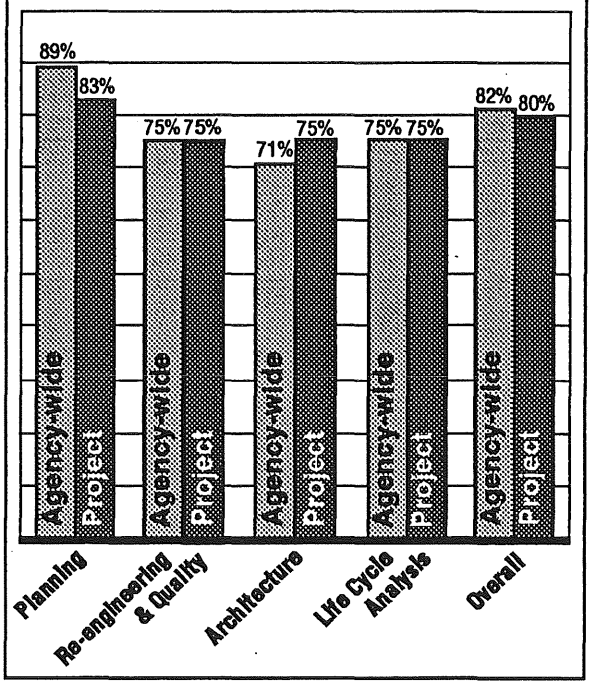
- Consult with the Information Policy Office on appropriate technical standards.
- Name an experienced project manager, who should report to the steering committee.
- Seek input from all stakeholders, including utilities and citizens; seek advice from users of imaging technology, including the Department of Labor and Industry; study the impact of the imaging system on users to understand its strengths and weaknesses as an analytical tool; and conduct a work process re-engineering assessment.
- Formulate policies and procedures for system access, and establish data practices and records management policies and procedures for data community computerized information.
- Write a project work plan that addresses the above issues and submit it to the Information Policy Office for review before equipment is purchased.
- Complete a life cycle analysis to identify all imaging system costs, benefits and risks and submit the analysis to the Information Policy Office before equipment is purchased.

Public Utilities Commission: *Local Area Network and Document Imaging System*

General Fund

Requested Amount	Requested FTE Positions	Recommended
$394,000	1	$318,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Upgrade local area network and augment paper-based document handling system with electronic imaging.

Background

This project will ultimately be paid for by assessments on regulated utilities. There will be no net cost to the state.

This project would upgrade an existing local area network and implement an electronic imaging system. Both the Public Utilities Commission (PUC) and the Department of Public Service (DPS) have requested imaging systems. The duplicate requests are a formality; the agencies have consulted and seek a single shared system. In preparation for the system a cable has been installed to link the agencies. The commission has a working relationship with DPS, a major stakeholder. DPS analysts review the filings and represent citizen interests in matters before the PUC. DPS is the official custodian of the commission's inactive files.

Filings before the PUC have increased from 654 in 1982 to 1,466 in 1992. Filings range in size from less than five pages to tens of thousands of pages. The largest filing in recent years was 80,000 pages. Under pending PUC guidelines, 15 copies will be made of each filing and distributed internally. Up to 10 additional copies are made and distributed by DPS.

Evaluation

A cost, benefit and risk analysis has not been completed. Initial technology costs, benefits and risks are identified, but ongoing operational costs and training expenses are not defined.

An optical system would allow scanning of filings and related documents into an electronic format, where they could be searched by key words or phrases. Filings could be automatically distributed to appropriate personnel. The number of paper copies would be reduced by at least half. The system could be used by outside parties who have a need to see the information. The stored images would be available to citizens at DPS or, if they have access to compatible technology, remotely by using telecommunications equipment.

The PUC, DPS, Attorney General and Administrative Hearings Office all have a stake in the filing information at some point in the process and, therefore, constitute a data community. Other agencies may participate in the data community when involved with specific filings.

Imaging systems are new to the workplace and experience with the technology is limited. Imaging's value as a productivity enhancement tool is in question. Technology is often applied before work processes are re-engineered. Before the technology is implemented, imaging's value as an analytical tool should be studied and a work process re-engineering assessment should always be conducted.

The imaging system will improve analysis by making electronic searches possible. However, staff members will be required to switch from reading sheets of paper to reading electronic images on a computer screen, which may be a dramatic and potentially difficult change in their work process. This may be possible only for shorter documents. Larger high resolution computer monitors may be required, which will increase costs.

PUC has determined that additional personnel are needed to handle the increased paper flow. The imaging system is expected to reduce but not eliminate the need for new personnel. Agency-wide project management procedures and guidelines have not been formalized. A data administrator is needed.

Recommendations

This project is recommended if money is available and if requirements are met. The recommended amount reflects the costs of a shared imaging system.

The Information Policy Office requests that these requirements be written into the appropriation:

- Funding for the imaging system hardware and software should be split evenly between PUC and DPS. PUC and DPS should form a partnership to jointly purchase and operate the imaging system. Each agency should purchase a scanner.
- A steering committee should be formed to guide the project and be held accountable for its performance. Data community members should be represented on the steering committee. The steering committee should survey all agencies who historically have used the information that will be scanned into the system and establish a working data community.
- PUC should complete a life cycle analysis of the local area network to identify costs, benefits and risks and submit it to the Information Policy Office by May 1, 1993.

The steering committee should:

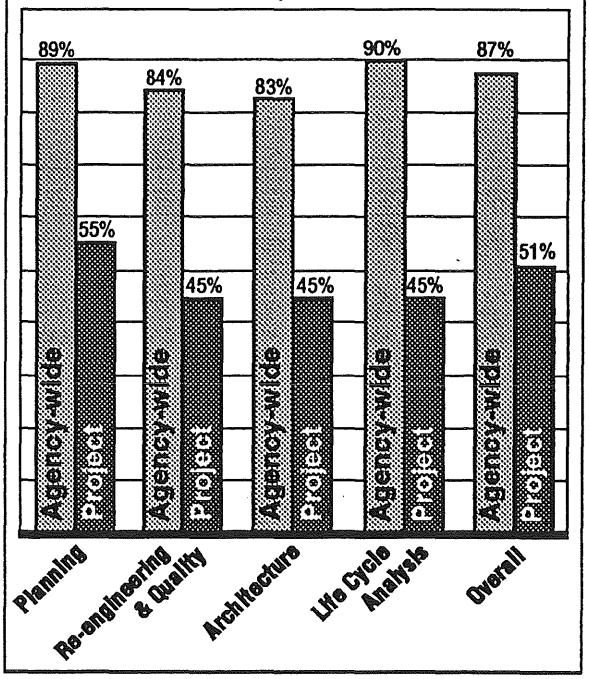
- Consult with the Information Policy Office on appropriate technical standards.
- Name an experienced project manager, who should report to the steering committee.
- Seek input from all stakeholders, including utilities and citizens; seek advice from users of imaging technology, including the Department of Labor and Industry; study the impact of the imaging system on users to understand its strengths and weaknesses as an analytical tool; and conduct a work process re-engineering assessment.
- Formulate policies and procedures for system access, and establish data practices and records management policies and procedures for data community computerized information.
- Write a project work plan that addresses the above issues and submit it to the Information Policy Office for review before equipment is purchased.
- Complete a life cycle analysis to identify all imaging system costs, benefits and risks and submit the analysis to the Information Policy Office before equipment is purchased.

Department of Revenue: *Customer Service Centers*

General Fund

Requested Amount	Requested FTE Positions	Recommended
$3,000,000	0	0

Evaluation Ratings



Technology community implications requiring multi-agency cooperation?	YES

Purpose

Conduct pilot projects to study alternative means of delivering tax information and services to citizens.

Background

A majority of Department of Revenue services are available only from St. Paul and only during business hours. This places the burden of access on the taxpayer. The pilot projects would explore ways of using information technology to deliver department services and information to citizens:

- Office-within-offices: expand services in existing department or other agency offices.
- Distributed offices: establish new, smaller offices located around the state.
- Information kiosks: develop and install electronic workstations in public places.
- Mobile units: offices-on-wheels serving communities on a regular schedule.

Evaluation

Project planning has not progressed beyond the conceptual stage. A cost, benefit and risk analysis has not been completed. Some costs are identified, but need further definition.

This proposal addresses the Minnesota Milestones goal of creating government that is more responsive, more efficient and closer to citizens. The proposal raises concerns about a single agency striving to meet a statewide goal that may better be reached through multi-agency cooperation. And because agencies in general have limited experience with cooperatively planning and managing projects, there are issues to be addressed before extensive investments are made in projects and programs:

- Agencies need to determine what citizens need and want, and when information technology can be used to meet those needs. Information technology should be used only when appropriate.
- When appropriate uses of technology are identified, the method of citizen access to information and service delivery should be consistent throughout state government, regardless of agency or program. A statewide citizen access strategy is needed, and statewide technology and data standards need to be adopted.

- Agencies need to learn when to work together, and how to manage and participate in projects that involve multiple units of government. There is potential for redundant, conflicting technology investments if agencies do not cooperatively plan and implement information systems.
- Low risk pilot projects are needed that will give agencies experience in identifying and meeting citizen needs. Agencies must learn when information technology is appropriate, how to apply it effectively, and how to participate in and manage multi-agency projects.

Recommendations

The Department of Revenue proposal is not recommended at this time. However, the concept has strategic merit and should be considered in a different form.

If money is available, the Information Policy Office suggests an alternative approach to:

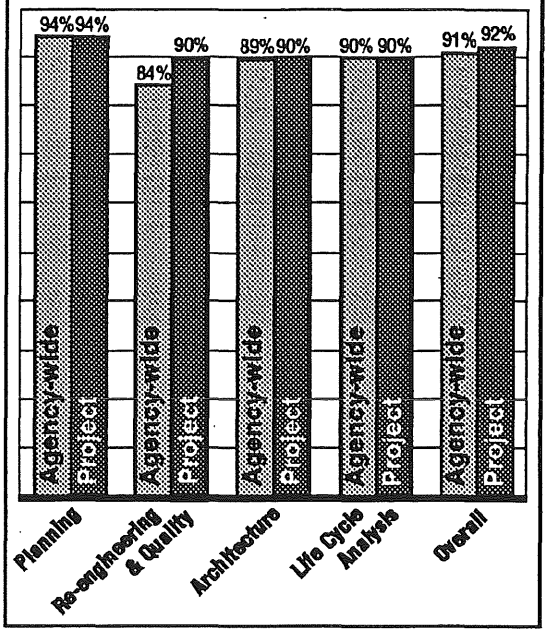
- **Determine if and how information technology can be used to meet citizen needs.** It is recommended that $150,000 be appropriated to Minnesota Planning to assess public opinion on using information technology to make government more responsive, more efficient and closer to citizens. Findings should be reported to the Information Policy Office by Jan. 1, 1994.
- **Develop a statewide citizen access strategy and adopt statewide standards.** If needs are identified by the Minnesota Planning assessment, it is recommended that $100,000 be appropriated to the Information Policy Office to develop a statewide citizen access strategy and adopt statewide technology and data standards to facilitate the use of information technology to improve citizen access to government services and government-held information. If needs are not identified, the money will be returned to the general fund. Planning should be completed July 1, 1994.
- **Learn how to successfully fund and manage projects that involve multiple units of government.** It is recommended that $100,000 be appropriated to the Department of Administration, Management Analysis Division, to study the issue of funding and managing projects that involve multiple units of government and to recommend policies and procedures. The Management Analysis Division should report its findings to the Information Policy Office by Jan. 1, 1994.
- **Gain experience with low risk pilot projects targeted at identified citizen needs.** If needs are identified by the Minnesota Planning assessment, it is recommended that $2,650,000 be appropriated to the Information Policy Office to fund multi-agency pilot projects that address specific citizen needs. The projects will align with the citizen access strategy developed by the Information Policy Office and use the management policies and procedures developed by the Management Analysis Division. If needs are not identified, the money will be returned to the general fund.

State Arts Board:
Local Area Network

General Fund

Requested Amount	Requested FTE Positions	Recommended
$200,000	0	$200,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Implement a local area network and hire a consultant to evaluate current work processes.

Background

The board awards grants totaling $4.3 million to the arts community and is a statewide resource for citizens desiring arts-related information. The board currently has 16 stand-alone personal computers with word processing, database and accounting software. Several anticipated benefits will be realized by re-engineering work processes and implementing a local area network.

Private donors are expected to contribute $100,000 in FY 1996 to fund telecommunications links between the board system and regional arts councils.

The network would provide several anticipated benefits:

- Time needed to respond to information requests will be reduced.
- Grants will be released in less than 45 days due to the reduction in paperwork and processes.
- Grant recipients will be enabled to meet reporting requirements.
- Change of addresses on mailing lists will be updated within 48 hours instead of two weeks.
- Grant review will be streamlined by allowing staff to share word processing documents.

A consultant will be hired to evaluate the computer and manual information systems and recommend areas for improvement, such as:

- Hardware and software standards.
- Streamlining internal communications and support.
- Data security.
- Redefining work processes.
- Stakeholder information systems.

Evaluation

Costs, benefits and risks over the predicted life span of the system are well defined.

Stakeholders have been included in agency-wide planning. A business plan, strategic information plan, and data practices and security policy and procedures manuals have been developed. Agency-wide information system costs are identified.

Recommendations

This project is recommended if money is available and if requirements are met.

The Information Policy Office requests that these requirements be written into the appropriation; the board should:

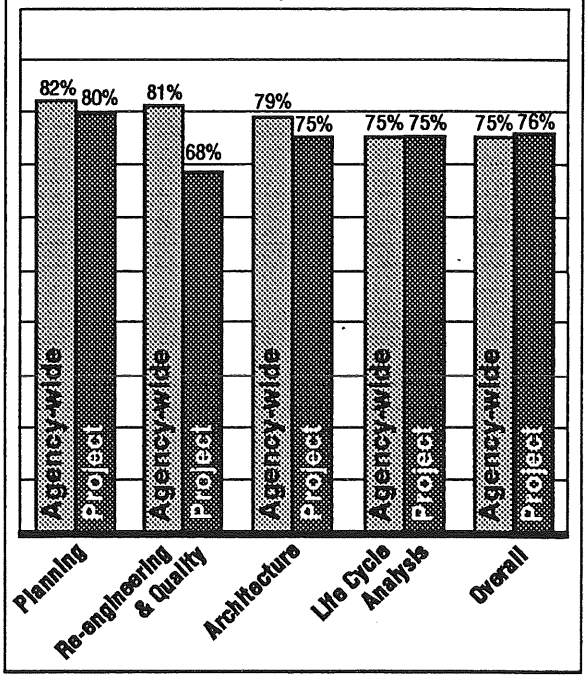
- Measure the performance of the network against anticipated benefits to determine its value.
- Survey stakeholders to determine if their needs are met by the network.

Department of Trade and Economic Development: *Community Profile Database*

General Fund

Requested Amount	Requested FTE Positions	Recommended
$364,000	1	$364,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Automate existing system and create a database of community economic development information.

Background

The Department of Trade and Economic Development has collected an extensive amount of information on Minnesota's communities. The community profiles are a resource for businesses searching for suitable sites to locate or expand, and to communities who are seeking development. The information is currently maintained on a stand-alone personal computer, printed on profile sheets and filed manually. Staff members rely on memory and manual searches of the hundreds of community profiles.

This request would automate the system and create a database of community profiles that could be electronically searched to provide relevant information to businesses making expansion and location decisions. Telecommunications links would allow regional economic development organizations to access and update the data.

Evaluation

A cost, benefit and risk analysis has not been completed. Implementation costs are known, but ongoing operational costs need definition. Benefits and risks are not fully identified.

This request is directly related to an identified business problem. With better, easier to access information the department will improve service to its principal stakeholders: businesses and communities.

There is planned involvement of stakeholders in project management, including participation by Advantage Minnesota, a non-profit organization created to market Minnesota to businesses. Regional development commissions, Minnesota Initiative Funds and community development corporations will be involved in database design. Project management will include top management and users.

The department has not explored partnerships with other state agencies who may serve the same customers, have a need for the project's data, or maintain data useful to this project. There is a need to measure how well the database promotes community economic development. A re-engineering assessment of work processes has not been conducted.

The department completed an extensive strategic business planning process in 1988. Stakeholders have been involved. Products and services are known. A quality improvement program enhances service delivery by using client feedback surveys to assess effectiveness. Goals and objectives have been set, and strategies to achieve them have been chosen. The department has identified three specific strategies: help Minnesota businesses grow, regionalize services, and provide clients with responsive services.

Recommendations

This project is recommended if money is available and if requirements are met.

The Information Policy Office requests that these requirements be written into the appropriation; the department should:

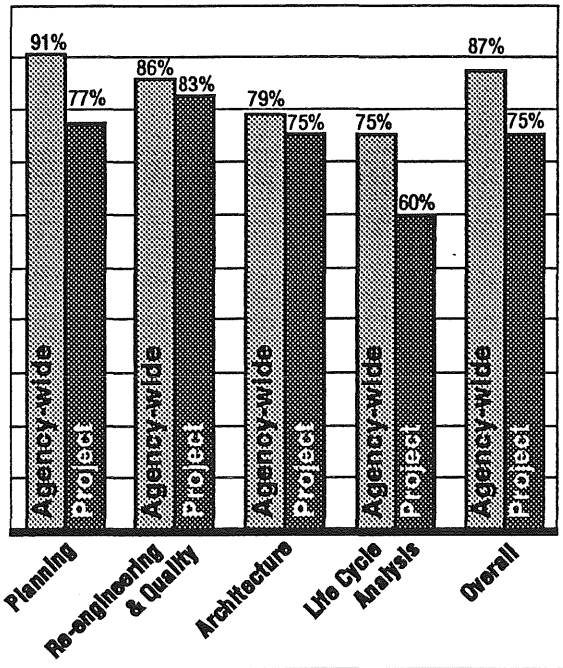
- Complete a life cycle analysis to identify the project's costs, benefits and risks over its life span.
- Determine if partnerships are possible with other state agencies who may serve the same customers, have a need for the project's data, or maintain data useful to this project.
- Develop measurements to document the project's effectiveness.

Department of Transportation: *Administrative Information*

Reallocation

Requested Amount	Requested FTE Positions	Recommended
$1,500,000	0	$1,500,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Strategically plan and implement new information system infrastructure to improve administrative functions and prepare for the statewide systems project.

Background

This request is for a reallocation of previously appropriated trunk highway funds.

Changes in state and federal requirements are forcing major changes in Department of Transportation (MnDOT) administrative systems. Fund accounting must include new allowable uses for federal funds and new partners who will use the money. In addition, the statewide systems project will require new administration approaches. The department wants to be ready with new systems when the new statewide accounting system goes on-line in July 1994.

This is an agency strategic initiative that would enable MnDOT to:

- Create management structures that aid strategic and business planning, and promote the accuracy, accessibility and integration of data required for managing resources, projects and processes.
- Plan and implement new administrative systems in coordination with the statewide systems project.
- Monitor transportation markets.
- Measure the outcomes of MnDOT programs and policies,
- Evaluate the success of the department in implementing strategic and business plans.

Evaluation

MnDOT's approach to information management is a good example for other state agencies. Planning is based on a statewide, citizen-based view of the department's role. An agency-wide strategic management process incorporates public input as well as internal analysis. The business has been defined, and products and services identified.

A cost, benefit and risk analysis cannot be completed because information needs and the resources necessary to meet them are not yet fully understood. The resources necessary to implement new

systems required by the statewide systems project cannot be identified at this time.

The department's Information Leadership Council, which provides department-wide information management leadership, views this request as important to enhancing the strategic value of information so that it can be used in support of the department's business goals. The request has been given priority over operational system needs.

MnDOT is emphasizing planning, architecture, standards, and data identification and definition. This project would support three general functions that generate and use administrative information:

- Resource management, which plans for, acquires, maintains, controls and retires MnDOT resources.
- Project and process management, which measures inputs and output quantity, quality and delivery.
- Strategic business management, which measures customer demands for transportation products and services, develops plans to meet demands, and evaluates if and how the planned outcomes were achieved.

The department has created a Council for Administrative Information, which oversees administrative information management activities. Council responsibilities are identified and leadership, membership and stakeholder involvement are defined.

An administrative systems project is being created. Project leader responsibility and accountability have been defined. Selection of a project leader is underway. Stakeholder involvement is planned.

Recommendations

This reallocation request is recommended if requirements are met; the department should:

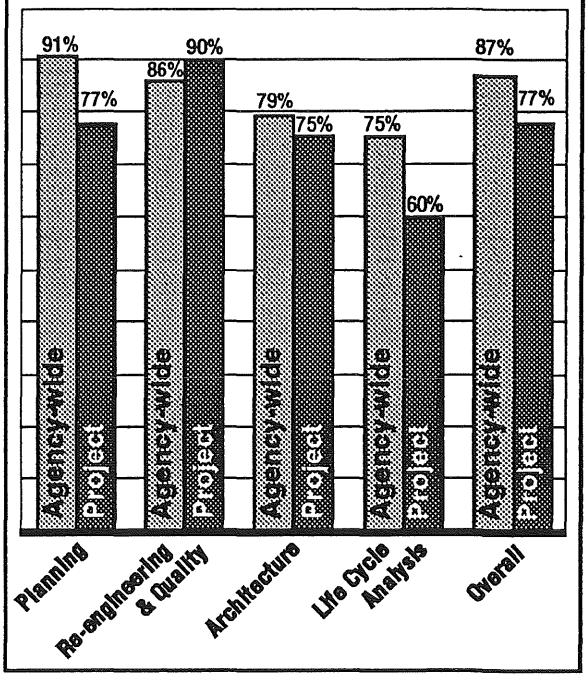
- Involve both internal and external stakeholders, and ensure that internal stakeholder needs receive the same level of attention that is given to external stakeholder needs.
- As individual projects are defined, do a life cycle analysis on each to identify costs, benefits and risks.
- Ensure that department solutions integrate well with, and do not duplicate, the functions of the statewide systems project.

Department of Transportation: *Geographic Information*

Reallocation

Requested Amount	Requested FTE Positions	Recommended
$1,500,000	0	$1,500,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	YES

Purpose

Continue strategic development of geographic information infrastructure, including a base map and data standards.

Background

This request is for a reallocation of previously appropriated trunk highway funds.

Geographic information is used to support all Department of Transportation (MnDOT) programs, products and services. The department is developing a database and base map for geographic information systems.

This initiative is designed to provide the data infrastructure required for re-engineering work processes and increase data sharing among MnDOT units. The project would coordinate department geographic information efforts by:

- Linking the database information to the base map.
- Developing and implementing geographic information data standards.
- Developing and implementing maintenance processes.

Evaluation

MnDOT's approach to information management is a good example for other state agencies. Planning is based on a statewide, citizen-based view of the department's role. An agency-wide strategic management process has begun incorporating public input as well as internal analysis. The business has been defined, and products and services identified.

A cost, benefit and risk analysis cannot be completed because information needs and the resources necessary to meet them are not yet fully understood. The resources necessary to implement new geographic information projects cannot be identified at this time.

A MnDOT geographic information council has been formed to ensure that the department's data is accurate, integrated and accessible. The council has been identified as responsible for keeping this project's work processes and technology current and effective. The council is supported by project-specific task forces, including a location data server task force and a statewide base map task force.

Base map stakeholders have been surveyed about their needs.

Current geographic information efforts are handicapped by a lack of standards, which results in redundant and incompatible data. A department location data standards group has been established.

The base map and data standards are statewide issues, important not only to MnDOT's internal operations, but to other state agencies and local governments. MnDOT and other agency roles and responsibilities as data custodians, suppliers, owners and users should be carefully considered. The department actively participates on the Governor's Council on Geographic Information and is involved with national base map development.

Recommendations

This reallocation request is recommended if requirements are met; the department should

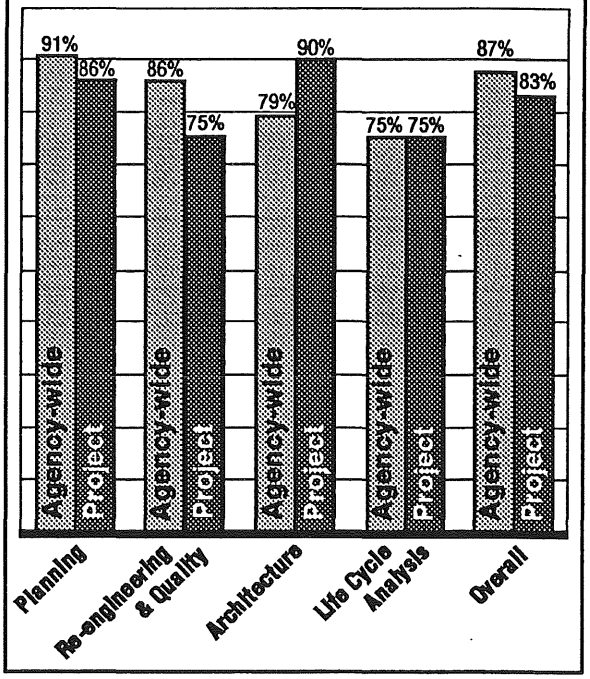
- Complete project-specific life cycle analyses to identify costs, benefits and risks over the system's life span and submit them to the Information Policy Office when completed.
- Continue to be involved with the Governor's Council of Geographic Information, and state agency and local government stakeholders in development of the base map and data standards.

Department of Transportation: *Information Planning, Architecture and Standards*

Reallocation

Requested Amount	Requested FTE Positions	Recommended
$660,000	0	$660,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	NO

Purpose

Fund the coordination of department-wide information planning, architecture and standards.

Background

This request is for a reallocation of previously appropriated trunk highway funds.

The Office of Information Planning (OIP) guides agency-wide development of the information architecture, standards and guidelines, and supports the department's strategic information planning and resource allocation processes. OIP will implement an agency-wide strategic information plan, manage data as a shared resource, develop a technology environment, standardize a system development methodology, and enable the implementation of other information standards, policies and guidelines. These activities will lay the foundation for all department information plans.

Without OIP, the department believes it will be inhibited from reaching its goal of creating an information infrastructure that provides accurate, integrated and accessible data.

Evaluation

MnDOT's approach to information management is a good example for other state agencies. Planning is based on a statewide, citizen-based view of the department's role. An agency-wide strategic management process has begun, incorporating public input as well as internal analysis. The business has been defined, and products and services identified.

An assessment of costs, benefits and risks for the biennium has been completed. Ongoing costs cannot be determined at this time.

Success would be measured by achieving an ambitious list of outcomes, including:

- Strategic information planning that links department information plans and technology investments with business planning.
- Elimination of duplicate data and redundant data collection.
- Shorter system development times.

- Fewer resources spent on system maintenance.
- Continued viability of current technology during a long-term transition to a targeted information architecture.

OIP's standards implementation work is critical to providing the information infrastructure needed to support work process re-engineering.

MnDOT recognizes the need to involve the agency records manager in information resource management activities and maintains records retention schedules for computerized information. Procedures are in place to comply with the Minnesota Government Data Practices Act. The agency has security policies and guidelines for its mainframe data and is developing local area network and personal computer security policies. Since 1988, MnDOT has had an active quality improvement program that guides all information system requests.

Although a data administrator has not been named, the data administration function is seen as a top priority. The agency is committed to creating an open systems environment.

Recommendation

This reallocation request is recommended if requirements are met.

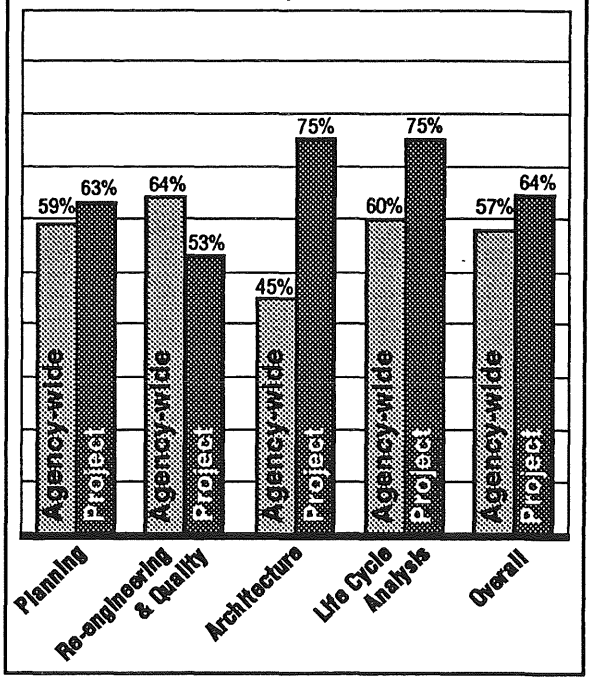
- Define the role of agency data administrator.
- Continue with current project management training plans.
- Routinely evaluate progress against identified outcomes.

Veterans Home Board:
Home and Central Office Information System

General Fund

Requested Amount	Requested FTE Positions	Recommended
$1,482,980	0	$200,000

Evaluation Ratings



Data community implications requiring multi-agency cooperation?	NO

Purpose

Purchase personal computers, networks and software to support administration of four veterans' homes and the central office.

Background

The board operates four long-term nursing care facilities for armed forces veterans. The central office is located in St. Paul. The project would install local area networks in each home and link them to the central office with a wide area network.

Evaluation

A cost analysis has defined in detail all costs, including ongoing operational costs over the life span of the system. Benefits and risks are not identified.

An agency-wide business plan has been developed with the help of a consultant. The business plan is limited to a description of current functions and does not identify business problems.

An implementation plan has been developed with the involvement of home staff. The plan's focus is limited to technology, with work flow and network design addressed in detail. User data needs are not identified.

Overall, planning addresses how information will be processed, but not what information is needed to support home and central office operations and decision making. Training and change management plans have not been developed. A re-engineering assessment of work processes has not been conducted.

Additional planning is necessary before technology is purchased. Business problems need to be identified. Strategic information planning needs to demonstrate how technology can address the business problems. User data needs should be identified. Stakeholders should be involved.

The feasibility of using the Statewide Telecommunications Access and Routing Network should be explored.

The board needs to address records management, information asset security, data practices, data administration, project management policies and procedures, stakeholder involvement and open systems migration.

Recommendations

This project is recommended if money is available and if requirements are met. Additional planning is critical to success.

The Information Policy Office requests that these requirements be written into the appropriation:

- $200,000 should be appropriated at this time.
- A staff member should be hired to lead the agency in strategic information planning and to conduct a pilot project of limited scope to address a specific business problem.
- Agency-wide strategic information planning should be completed to identify user data needs, detail how information technology can provide solutions to business problems, and identify a pilot project. The plan should be submitted to the Information Policy Office by July 1, 1994.
- A pilot project plan and an analysis of its costs, benefits and risks should be developed and submitted to the Information Policy Office before technology is purchased.
- A new life cycle analysis based on the results of the pilot project should be developed for the home and central office information system and submitted to the Information Policy Office. When the analysis is complete, the board should return to the legislature for funding to complete the project.
- The board should develop policies and procedures for records management, information asset security, data practices, data administration, project management, stakeholder involvement and open systems migration.

Appendices

Appendix A:
Agency Funding Request and Recommendation Summary

	Requested	Recommended
Dept. of Administration: *Electronic Data Interchange*	$842,000	$842,000
Dept. of Administration: *STARS*	$3,450,000	$3,450,000
Dept. of Corrections: *Minicomputer Upgrade*	$500,000	$1,100,000
Board of Electricity: *Licensing System Expansion*	$50,000	$50,000
Dept. of Finance: *Statewide Systems Project*	$20,267,000	$20,267,000
Higher Education Coordinating Board: *Video Network*	$1,669,499	$1,669,499
Dept. of Human Rights: *Information System Enhancement*	$125,000	$225,000
Dept. of Human Services: *Child Support Enforcement*	$6,401,000	$6,401,000
Dept. of Human Services: *Electronic Benefits Transfer*	$7,500,000	$7,500,000
Dept. of Human Services: *MAXIS Operations*	$31,918,000	$16,732,000
Dept. of Human Services: Medical Management System	$4,800,000	$4,800,000
Dept. of Human Services: *Social Services Information*	$1,773,000	$1,773,000
Dept. of Labor & Industry: *Document Imaging System*	$10,000,000	$5,000,000
Municipal Board: *Local Area Network & Database*	$40,000	$40,000
Dept. of Natural Resources: *Training Program, Regional Networks, Automation*	$979,000	$979,000
Pollution Control Agency: *Environmental Compliance Management System*	$4,000,000	*
Dept. of Public Service: *Document Imaging System*	$160,000	$84,000
Public Utilities Commission: *Local Area Network & Document Imaging System*	$394,000	$318,000
Dept. of Revenue: *Customer Service Centers*	$3,000,000	**
State Arts Board: *Local Area Network*	$200,000	$200,000
Dept. of Trade & Economic Development: *Community Profile Database*	$364,000	$364,000
Dept. of Transportation: *Administrative Information*	$1,500,000	$1,500,000
Dept. of Transportation: *Geographic Information*	$1,500,000	$1,500,000
Dept. of Transportation: *Planning, Architecture & Standards*	$660,000	$660,000
Veterans Home Board: *Home & Central Office Information System*	$1,482,980	$200,000
Totals	$103,575,479	$78,654,449

* Additional information required from agency before an amount can be recommended.

** Project recommended in different form with funding given to different agencies.

Appendix B:
Agency Personnel Requests

	Requested	Full-Time	Part-Time
Dept. of Administration: *Electronic Data Interchange*	5*	3	2 Temp
Dept. of Administration: *STARS*	4	4	
Dept. of Corrections: *Minicomputer Upgrade*	0		
Board of Electricity: *Licensing System Expansion*	0		
Dept. of Finance: *Statewide Systems Project*	7	7	
Higher Education Coordinating Board: *Video Network*	1.5	1.5	
Dept. of Human Rights: *Information System Enhancement*	0*		
Dept. of Human Services: *Child Support Enforcement*	9**	9**	
Dept. of Human Services: *Electronic Benefits Transfer*	14.5	14.5	
Dept. of Human Services: *MAXIS Operations*	0		
Dept. of Human Services: *Medical Management Information System*	0		
Dept. of Human Services: *Social Services Information*	3	3	
Dept. of Labor & Industry: *Document Imaging System*	0* (Will reclassify 3-6 existing positions.)		
Municipal Board: *Local Area Network & Database*	0		
Dept. of Natural Resources: *Training Program, Regional Networks, Automation*	6	6	
Pollution Control Agency: *Environmental Compliance Management System*	5	5	
Dept. of Public Service: *Document Imaging System*	0		
Public Utilities Commission: *Local Area Network & Document Imaging System*	1		
Dept. of Revenue: *Customer Service Centers*	0		
State Arts Board: *Local Area Network*	0***		
Dept. of Trade & Economic Development: *Community Profile Database*	1	1	
Dept. of Transportation: *Administrative Information*	0		
Dept. of Transportation: *Geographic Information*	0		
Dept. of Transportation: *Planning, Architecture & Standards*	0		
Veterans Home Board: *Home & Central Office Information System*	0****		

* IPO recommends hiring a consultant.
** Unclassifed positions.
*** Agency seeks a consultant.
**** IPO recommends one full-time position be created.

Appendix C:
Information System Budget Request Review Instructions

(Sent to agencies June 22, 1992.)

The Information Policy Office is required by legislation to review state agency information system investment plans. This includes new funding requests and reallocations of existing budget resources. The purpose of this activity is to foster effective planning and use of information technology to provide services to Minnesota's citizens.

Agencies must submit their 1994-95 information system budget requests to IPO, along with the supporting documentation requested in these instructions. Requiring the supporting documentation has three goals:

- To provide IPO with the information necessary to evaluate and rate individual requests and make funding recommendations to the Legislature.
- To ensure the quality of agency information system planning.
- To ensure progress toward agency-wide and statewide information architectures.

Each agency is asked to answer questions that provide general information about agency-wide planning efforts and specific information about each funding request. The questions reflect IPO's evaluation of requests: equal emphasis will be placed on individual project planning and on efforts that incorporate individual projects into an agency-wide strategic planning process.

To help agencies understand and answer the questions, an overview of the history and future of information system planning is included. Also included are definitions for some of the terms used in these instructions.

IPO staff members are available to assist agencies desiring additional information about the requirements.

Requirements and Deadlines

Agencies planning to submit a funding request should notify IPO as soon as possible. By **Oct. 1, 1992**, agencies must submit to IPO:

- Information system funding requests
- Answers to the questions beginning on page 8. These questions pertain to agency-wide issues and should be answered only once, regardless of the number of funding requests.
- Answers to the questions beginning on page 10. These questions must be answered for *each* funding request.
- Completed life cycle analysis for *each* funding request.

Because of the demands of the upcoming session and the Department of Finance's requirements, the deadline for submitting requests cannot be extended. Agencies are urged to submit requests before the deadline if possible.

Appendix C: Information System Budget Request Review Instructions

Agencies are encouraged to submit any other supporting documentation that will demonstrate planning activities, including:

- A business plan
- A strategic information plan
- An information asset security plan
- A plan detailing the move toward an open systems environment (sometimes called a migration plan)

Because these activities are essential management tools, they will be required for the 1996-97 biennial process. Agencies are encouraged to begin creating the plans as soon as possible. This optional documentation will help IPO better understand an agency's needs. It should be delivered to IPO in advance of the funding request, ideally by **Sept. 1, 1992.**

The Evolution of Information System Planning in Minnesota

Motivated by the need to make government more effective and efficient, information system planning by state agencies is evolving and becoming more sophisticated (Figure 1). In the past, agency planning centered on individual projects. Later, thinking progressed to incorporating the projects into agency-wide planning. Eventually, agencies will adopt a broad approach in their planning that extends beyond their organization's boundaries. Each step up the evolutionary ladder expands the scope. Each level requires a more strategic approach, involves an expanded stakeholder base, has greater impact on the way state government serves its citizens, and will likely take longer to accomplish.

Early planning efforts were narrow in scope, and limited to specific projects. Most agencies did very little real agency-wide planning, nor did they analyze the potential impact on stakeholders outside their organizational boundaries. For budgeting purposes, the individual projects were lumped together and presented as an agency-wide plan, but in reality the plan often went no further than simply detailing expenditures for automating existing processes. While this approach may have seemed logical at the time, it often rendered fragmented, redundant investments and operations within agencies and throughout state government.

Over time, the planning emphasis has changed in some agencies. Many of Minnesota's state agencies are beginning to see the benefits of adopting a big picture approach toward meeting their information system needs. They have enlarged the scope of the planning process by setting agency-wide goals and strategies. There is more cooperation among internal units and between agencies, and less emphasis on individual initiatives. Specific projects are now viewed from an agency-wide perspective; the projects are judged on how they will support the agency's mission. Agencies are also realizing that it is essential to re-engineer work processes before technology is applied.

The logical conclusion of the evolution in planning is a statewide perspective. **This does not mean central planning.** It does mean that each agency will view itself as part of a larger whole that adheres to standards when it does information system planning. Agencies will seek out natural partners and collaborate with them to create and operate the most efficient systems

Appendix C: Information System Budget Request Review Instructions

possible. This statewide planning emphasis offers the best return on information system investments, and greatly improves the ability of government to meet citizen needs.

Level of Planning Expected From Agencies

Agencies should have advanced to at least the agency-wide planning level. They should be able to explain information system investment plans from that perspective.

Terminology

Some words have many meanings and cause delays while planners agree on a common definition. To simplify the planning process, IPO has developed definitions for much of the confusing terminology. Although attempts were made to conform to common meanings where possible, some of the Minnesota definitions differ from those used in other states, industries and media. The definitions found in this document will be used for the planning of Minnesota state government information systems.

Business goals and objectives

Business goals are broadly defined as the central aims of a business. A goal describes the direction for the organization and the level of accomplishment necessary to fulfill its mission. It should be measurable, attainable with existing or expected resources, and understandable to stakeholders. Each goal will probably have one or more objectives that further define the work to be done.

An objective renders tangible results. Objectives are intermediate steps to be realized in reaching the goal. In total, they outline the work required to accomplish the goal.

Business plan

An agency-wide business plan usually includes a mission statement, vision, goals and objectives. These four components in summary describe:

The purpose of the agency and the business it is engaged in: its stakeholders, products, services, role in state government, and how it measures success.

A direction for the agency: how it may respond to changing stakeholder needs, what it intends to accomplish, and what level of business performance will constitute success.

Critical success factors

Things that must go right if the organization is to achieve its objectives and goals, and carry out its mission. Failure in any of these factors will have a measurable, detrimental impact on the agency's ability to perform and accomplish its business plan.

Data administrator

An individual responsible for managing an organization's data. The data administrator is responsible for creation and maintenance of the logical data model, which defines the data necessary to conduct business. The data administrator is *not* simply a data base administrator, whose responsibility is much more limited.

Appendix C: Information System Budget Request Review Instructions

The data administrator's responsibilities include obtaining agency-wide agreement on data definitions and relationships, operating the information resource dictionary system, agency-wide data management planning, developing agency-wide data base administration strategy, and coordination and joint planning with management information systems and business planning functions.

Information architecture

A plan for managing information assets in support of agency and state business. It consists of policies, standards and guidelines that give direction for the effective use of applications, data and technology.

Information asset security

A set of procedures that reduce the risk of damage to the accuracy and integrity of stored information and its associated hardware and software.

Life cycle analysis

Life cycle analysis assumes that any information system will have a life span during which it grows, matures, becomes inadequate and is replaced. The life cycle analysis describes how the system will evolve over time, which provides an in-depth look at the potential costs, benefits and risks over the life of the system.

Minnesota Government Data Practices Act

A statute regulating the collection, access to and use of government-held information. The act focuses on ensuring both individual and public rights by defining what data can be collected, who can see it, agency responsibilities, penalties for violating the law, and procedures for challenging the accuracy and completeness of information.

Mission statement

A statement that summarizes the identity and purpose of the organization. While likely derived from enabling legislation, the mission statement should also express the intent of the law and agency interpretation, not simply paraphrase the statutes.

Open systems standards

Open information systems allow the free flow of data among hardware platforms and software. ***Open systems are not proprietary and not limited to or defined by any particular brand of hardware or software.*** Open systems in Minnesota state government are defined by national and international standards selected by IPO.

Records management

Units of state and local governments are required by law to manage information to safeguard the public interest. Governments must identify government records, assess their value, and determine how long to keep them and how to properly dispose of them.

Appendix C: Information System Budget Request Review Instructions

Re-engineering

Re-engineering is a fundamental redesign and restructuring of how the work is done. Re-engineering is *not* software reprogramming or automating an existing work process.

Stakeholders

Stakeholders have an interest in the business of the agency. Stakeholders can be both individuals and other organizations. They can be clients, customers, citizens, groups–anyone who may affect or be affected by the agency's actions. Stakeholders include:

- Those receiving and benefiting from services provided by the agency
- Those providing services or funding to the agency
- Agency employees
- Sources of authority to which the agency is directly accountable; for example, the Legislature or federal government.

System development methodology

A specialized form of project management specific to the design, development and implementation of information systems.

Vision

Describes an ideal future: how the agency will function as an organization, how it will serve its stakeholders and what success will look like. A good vision statement will be:

- An attainable, preferred condition that will energize people to act
- Common ground to bridge differing needs and approaches
- Stable and remain viable over time

For more information...

IPO staff members are available to answer your questions. Please call:

Elizabeth Butkovich	296-6322
Jimmy Corcoran	296-5884
Stephen Gustafson	297-2262
Rick Hullsiek	297-3256
John Mikes	296-1415
Greg Peterson	296-6397

Appendix C: Information System Budget Request Review Instructions

General Questions About Agency-wide Planning

(To be answered once by each agency submitting one or more funding requests)

Statewide Planning Perspective

Minnesota's constitution defines the purpose of government as "...instituted for the security, benefit and protection of the people." In practice, government involves itself in three basic aspects of citizen life: economic, human and environmental.

Economic: providing fairness, opportunity and growth in commercial activity, and protecting citizen property.

Human: providing security and opportunities that enhance citizen capacity to participate in society.

Environmental: protecting habitat and managing the state's natural resources for citizens economic and leisure use.

1a. In which of these aspects is your agency involved? (It's possible to be involved in more than one.)

1b. How did you reach that conclusion?

Agency-Wide Planning Perspective

2. How do you do agency-wide planning? (Describe the process.)

3. What are your agency-wide business goals and objectives?

4. What are your agency-wide strategies for reaching your business goals and objectives?

5. What are your agency-wide critical success factors?

6. Who are your stakeholders?

7. What programs do you manage, and what products and services are provided by each?

8. How does your agency manage the retention, disposition and preservation of your computerized records?

9. How are the principles of re-engineering applied to your work processes?

10. How is the data administration function handled by your agency (apart from the operation and maintenance of information technology)? Has an individual been designated as the data administrator?

11. What have you done to address information asset security? Has an individual been desig-

Appendix C: Information System Budget Request Review Instructions

nated by the commissioner or agency head to develop and implement an agency-wide security plan?

12. What policies and procedures have you developed to meet the requirements of the Minnesota Government Data Practices Act?

13. How does your agency appraise computerized information for it's administrative, legal, fiscal and historical value?

Agency-Wide Information Resource Planning Perspective

14. What is the annual agency information system budget as defined by the life cycle methodology?

15. How have you planned to move toward an open systems environment?

16. Has your agency instituted or plan to institute a quality improvement program? If so, describe it.

17. How do you ensure that your information system projects succeed (describe management techniques, system development methodology, etc.)?

Questions specific to each funding request

1. What is the amount of the funding request?

2. What is the total project cost as identified in the life cycle analysis?

3. What is the source of funding?

   Base reallocation $_____ New funding $_____

   If new funding, what is the source (general fund, special revenue fund, etc.)? _____

4. Will new positions be created? If so, how many? ____

5. Is this system new, or an extension or modification to an existing system?

6. What is the purpose of this funding request?

7. What agency programs, products or services are supported by this funding request and how?

8. How will this funding request help accomplish your agency-wide critical success factors?

9. Which of your stakeholders will be affected by this funding request?

10. How will your stakeholders be involved in project management?

Appendix C: Information System Budget Request Review Instructions

11. What partnerships do you plan with other stakeholders, including joint ventures with other state agencies? Identify your partners and their involvement.

12. How will this funding request enhance data sharing among your stakeholders?

13. How will you measure the effectiveness and determine the success of this investment?

14. How does this funding request support your work process re-engineering efforts?

15. Once the project is in place, how do you intend to keep both the work processes and the technology current and effective?

16. How does this funding request rank against other agency information system funding requests and against all other agency funding requests?

17. How will your agency and stakeholders be affected if funding is denied?

Appendix D:
Questions Grouped By Rating Category

Agency-Wide Planning

Minnesota's constitution defines the purpose of government as."...instituted for the security, benefit and protection of the people." In practice, government involves itself in three basic aspects of citizen life: economic, human and environmental.

Economic: providing fairness, opportunity and growth in commercial activity, and protecting citizen property.

Human: providing security and opportunities that enhance citizen capacity to participate in society.

Environmental: protecting habitat and managing the state's natural resources for citizens economic and leisure use.

1a. In which of these aspects is your agency involved? (It's possible to be involved in more than one.)

1b. How did you reach that conclusion?

2. How do you do agency-wide planning? (Describe the process.)

3. What are your agency-wide business goals and objectives?

4. What are your agency-wide strategies for reaching your business goals and objectives?

5. What are your agency-wide critical success factors?

6. Who are your stakeholders?

7. What programs do you manage, and what products and services are provided by each?

8. How does your agency manage the retention, disposition and preservation of your computerized records?

13. How does your agency appraise computerized information for it's administrative, legal, fiscal and historical value?

17. How do you ensure that your information system projects succeed (describe management techniques, system development methodology, etc.)?

Project Planning

6. What is the purpose of this funding request?

7. What agency programs, products or services are supported by this funding request and how?

8. How will this funding request help accomplish your agency-wide critical success factors?

9. Which of your stakeholders will be affected by this funding request?

Appendix D: Questions Grouped By Rating Category

10. How will your stakeholders be involved in project management?

11. What partnerships do you plan with other stakeholders, including joint ventures with other state agencies? Identify your partners and their involvement.

13. How will you measure the effectiveness and determine the success of this investment?

16. How does this funding request rank against other agency information system funding requests and against all other agency funding requests?

17. How will your agency and stakeholders be affected if funding is denied?

Agency-Wide Re-engineering and Quality

9. How are the principles of re-engineering applied to your work processes?

16. Has your agency instituted or plan to institute a quality improvement program? If so, describe it.

Project Re-engineering and Quality

14. How does this funding request support your work process re-engineering efforts?

15. Once the project is in place, how do you intend to keep both the work processes and the technology current and effective?

Agency-Wide Architecture

10. How is the data administration function handled by your agency (apart from the operation and maintenance of information technology)? Has an individual been designated as the data administrator?

11. What have you done to address information asset security? Has an individual been designated by the commissioner or agency head to develop and implement an agency-wide security plan?

12. What policies and procedures have you developed to meet the requirements of the Minnesota Government Data Practices Act?

15. How have you planned to move toward an open systems environment?

Project Architecture

12. How will this funding request enhance data sharing among your stakeholders?

Agency-Wide Life Cycle Analysis

14. What is the annual agency information system budget as defined by the life cycle methodology?

Project Life Cycle Analysis

2. What is the total project cost as identified in the life cycle analysis?

Appendix E:
Questions Not Used For Ratings

1. What is the amount of the funding request?
3. What is the source of funding?

   Base reallocation $_____ New funding $_____

   If new funding, what is the source (general fund, special revenue fund, etc.)? _____
4. Will new positions be created? If so, how many? ____
5. Is this system new, or an extension or modification to an existing system?