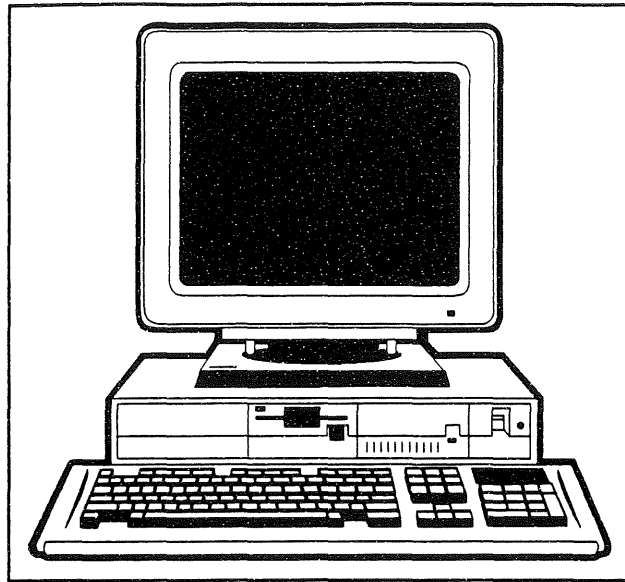# The Regional Access System

A Life Cycle Cost Benefit and Risk Analysis

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Introduction

The purpose of the Regional Access System is to increase the number of businesses locating, expanding or retained in Minnesota by automating and integrating into one database, economic development information on Minnesota communities as well as other types of pertinent information business needs. State, regional, and local economic development agencies will be linked through a computer network that allows staff of all agencies to access this important information in assisting their business clients.

Background

Businesses seeking to expand or relocate want to know which communities have certain characteristics (labor supply, available buildings, distance to transportation facilities, etc.) that meet their business requirements. The Department of Trade and Economic Development collects an extensive amount of information on Minnesota communities. However, this information is currently maintained in a fragmented fashion on separate, stand-alone PCs, manually in files or in individual printed profiles on communities. Staff members rely on memory and manual searches of hundreds of community profiles to find the community and location information businesses want. Staff struggle to try to keep the information current on each Minnesota community.

The proposed system will automate, integrate, and expand the economic information available on each community and create a database of community profiles that can be electronically searched to provide relevant information to businesses making expansion and location decisions.

Cost Analysis

This section describes the system design, scope of the project, and expected life. It is followed by a five year life cycle cost summary and documentation detailing the resource requirements, cost assumptions and component costs for each projected year.

System Design

The Regional Access System in its initial phase is being developed for operation on DTED's DEC 486 33 mhz server. This server runs on the SCO Unix Operating System. The server has the capacity to add up to 4 additional cpu units internally to enhance performance as well

as the ability to add several gigabytes of memory. Currently DTED runs several applications on this machine (Word Perfect Office, Lotus 1,2,3, limited word processing and several databases). The database language currently used is Informix.

The Regional Access System is being developed as an Informix 4GL database application. It will reside as a database option in Word Perfect Office menu. Users will have access to DTED's Word Perfect Office menu which will include Electronic Mail and the Department's Electronic Phone Directory as well as the Regional Access System database application. Staff from each of the department's divisions as well as Advantage Minnesota can access this computer and the databases on it. Local and regional economic development organizations will access the system initially through direct dialing using a modem and eventually through the Internet computer network. DTED is connected to the Internet through a Cisco AG 9000 Router and T-1 Line connection to the Minnesota Department of Administration. In addition, four 9600 baud modems and incoming phone lines are installed on the SCO Unix network server that allow for direct dialing.

Since the Regional Access System is an additional application being run on this system cost estimates represent expenditures we anticipate to incur as a result of this project. Some of the costs identified could possibly have occurred whether or not DTED developed the Regional Access System. This is because some of the applications and other databases on the system would have required additional capital investment.

It is anticipated that the Regional Access System as well as other DTED databases will eventually be made available through Internet. For both security as well as performance reasons this will likely necessitate the addition of a second server during the third year of the project.

System Scope

The system will be accessible internally within the department by DTED's staff by the beginning of the 2nd year. Of this total, however, only 40 staff in the Business and Community Development Division are anticipated to be frequent users. Externally, 25 sites are anticipated to be added to the system by the end Year 2 and 100 sites by the end of Year 3 of the project.

System Life

The useful life of the system will be determined by how users perceive its value and how technology changes. Our current system design anticipates the information system will exist for 5 years. However, yearly evaluations will occur that take into account usage levels and the benefits of the system as perceived by end users.

Life Cycle Cost Summary

Figure 1 provides a summary of life cycle costs broken out by capital and operating costs. Resource requirements and a summary of cost assumptions and cost components for each catagory (hardware, software etc.) of expenditure by year follows the table.

Figure 1. Summary of Regional Access System Costs

	Capital Costs						Operating Costs						Total Costs (1,000'S OF $)					
	FY 94	FY 95	FY 96	FY 97	FY 98	Total	FY 94	FY 95	FY 96	FY 97	FY 98	Total	FY 94	FY 95	FY 96	FY 97	FY 98	Total FY 94-98
HARDWARE	$24.9	12.4	35.8	10.0	10.0	93.1	1.4	4.4	10.6	18.1	18.1	52.6	26.4	16.8	46.3	28.1	28.1	145.7
SOFTWARE	24.8	13.0	19.5	6.0	6.0	69.3	2.0	7.0	7.0	7.0	7.0	30.0	26.8	20.0	26.5	13.0	13.0	99.3
FACILITIES	0	.1	5.1	0	0	5.2	0	1.5	3.0	3.0	3.0	10.6	0	1.6	8.1	3.0	3.0	15.8
SERVICES	35.0	35.0	10.0	0	0	80.0	0	0	0	0	0	0	35.0	35.0	10.0	0	0	80.0
SUPPLIES	0	0	0	0	0	0	.8	1.3	2.3	2.3	2.3	9.0	.8	1.3	2.3	2.3	2.3	9.0
STAFF	0	0	0	0	0	0	15.0	62.5	85.0	85.0	85.0	332.5	15.0	62.5	85.0	85.0	85.0	332.5
USERS	0	0	0	0	0	0	8.0	10.9	2.9	2.9	2.9	27.5	8.0	10.9	2.9	2.9	2.9	27.5
TOTAL	84.8	60.5	70.4	16.0	16.0	247.7	27.2	87.6	110.8	118.3	118.3	462.2	112.0	148.1	181.2	134.3	134.3	$709.9

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Hardware:

Year 1 (F 94):

Costs for Year 1 include the addition of a second 486 33 mhz cpu, 5GB of hard drive capacity, a tape backup system and four 9600 baud modems. The total cost of these items were $18,765. Hardware installation costs were $2,800. Hardware maintenance costs attributable to the RAS for Year 1 were estimated at approximately $1,000 per year. Three computer phone lines were added at an estimated cost of $795 ($120 apiece for installation and $12.10 a month or $145 a year for operating costs). A SCSI controller, UPS system and 32 bit ethernet card were also added to the system at a cost of $3,000.

Year 2 (FY 95):

Costs for Year 2 include the addition of 4 GB of hard drive space ($6,500). A second 10 GB tape drive unit ($4,500). Installation costs for this equipment is estimated to be $1,000. Maintenance costs on the primary server that are attributable to the Regional Access System are estimated to be $1,500 per year. Another Year 2 cost will be the installation and operation of a 1-800 phone number connected to the modems at a cost of $2,278. (This assumes 10 sites averaging 30 minutes of access time per week for 15,600 minutes at 14.6 cents per minute for $2,278.) Other Year 2 costs includes the addition of one 14,400 baud modem ($300) and phone line ($120 to install). The annual operating costs for this phone as well as the previously installed three lines will total $580 (4 x $145).

Year 3 (FY 96):

Costs for Year 3 associated with the 1-800 # are estimated to be $7,971. This assumes 50 sites, 35 of which would access the system using the 1-800 for 30 minutes per week at a cost 14.6 cents per minute. Due to the increased workload during Years 3 and 4 purchase of a Regional Access System Server at a cost of $30,000 is anticipated. Installation costs for the hardware and software are anticipated to be $2,800. Also a router modem will be added at a cost of $3,000. Hardware maintenance cost attributable to the RAS are anticipated to be $2,000 for the year. The annual operating costs for the four phone lines will be $580.

Year 4 (FY 97):

Year 4 costs for the 1-800 are estimated to be $15,032. This assumes 100 sites, 66 of which will access the system 30 minutes per week at a cost of $14.6 cents per minute. Additional telecommunications equipment and other miscellaneous hardware will cost and additional $10,000 including installation costs. Hardware maintenance costs are anticipated to be $2,500 per year. The annual operating costs for the four phone into lines will be $580.

Year 5 (FY 98):

Year 5 costs for the 1-800 number are estimated to remain at $15,032. An additional $10,000 for miscellaneous computer hardware upgrades (including installation costs) is budgeted for. Hardware maintenance costs remain at $2,500 per year. The annual operating costs for the four phone into lines will be $580.

Software:

Year 1 (FY 94):

Year 1 costs include upgrading our Unix operating system software ($6,436) and Informix database software package to a 16 user license $15,634. Annual software maintenance costs attributed to this project are estimated at $2,000. We also purchased Erwin ERX case tool for $2,700. (This tool has generated the physical database design, the Entity Relationship diagrams and some of the SQL code for the program.)

Year 2 (FY 95):

Year 2 costs include the purchase of a client/server software that enables the user to access the RAS from a windows environment. The cost of the software will be $10,000 and training $3,000. The addition of this software will allow end users to access Regional Access System from either a window or text environment. Annual software maintenance costs attributed to this project are estimated at $7,000 ($2,000 for Informix and $5,000 for our client/server software). Approximately 25 sites will need to install software on their PC at a cost of approximately $500 per site. These costs will be paid by the site and have not been factored into the costs.

Year 3 (FY 96):

During Year 3 we will also have to install Unix Operating System ($4,000) on the dedicated Regional Access System server. At the same time we will need to install and upgrade the Informix database software on the dedicated Regional Access System server to a 32 user license (these are concurrent users) at a cost of $15,500. Installation costs of the software are covered in the hardware installation figures for the Regional Access System Server purchased during year 3. Annual software maintenance costs attributed to this project are estimated at $7,000. An additional 50 remote sites will be added to the system during year 3. Each site will have to install software on their PC at a cost of approximately $500 per site. These costs will be paid by the site and have not been factored into the cost totals.

Year 4 (FY 97):

Costs for software enhancement during Year 4 are estimated at $5,000. Installation costs estimated at $1,000. Annual software maintenance costs associated with the project are estimated at $7,000. An additional 50 remote sites will be added to the system during year 3. Each site will have to install software on their PC at a cost of approximately $500 per site. These costs will be paid by the site and have not been factored into the cost totals.

Year 5 (FY 98):

Costs for software enhancement during Year 4 are estimated at $5,000. Installation costs estimated at $1,000. Annual software maintenance costs associated with the project are estimated at $7,000.

Facilities:

Year 1 (FY 94):

Year 1 costs are $0. No additional space was required for hardware or staff associated with the Regional Access System.

Year 2 (FY 95):

Year 2 facility costs assume one person will be brought on to manage the Regional Access System beginning in July of 1994. Space rental costs are $11.50 per sq. foot x 100 sq. ft. for $1,150 per year. Installation and operation of a phone over the one year period are estimated at $480 ($120 for installation and $30 per month since some long distance phoning is anticipated).

Year 3 (FY 96):

Year 3 costs assume a programming position to support the Regional Access System will be added in addition to the Regional Access System Coordinator hired in Year 2. Rent for these two positions are estimated at $2,300 and phone costs $840. (This includes $120 installation cost for the programmer phone and $720 in operating costs for this phone and the Regional Access System Coordinator's phone.) It is also anticipated that some remodeling (shelving and cabinets) of our computer server room will be necessary. It is anticipated these changes can be made for $5,000.

Years 4 and 5 (FY 97 and FY 98):

Rent and phone costs for Years 4 and 5 are anticipated to be $3,020 each year.

Services:

Year 1 (FY 94):

Year 1 costs include contract programming for the first two modules (Community Profiles and Property Tracking System) $35,000. This is considered Phase I of the Project.

Year 2 (FY 95):

Year 2 contract programming includes the cost ($30,000) for developing a windows front end that will allow users to access the Informix database either in character mode or as a windows application. In addition, consulting services costing $5,000 will be needed to help hookup 25 remote sites.

Year 3 (FY 96):

Year 3 costs will be $10,000. A technical services contract to analyze the delivery system suggest any needed changes. Phase 2 programming will be handled by a programmer hired to support the Regional Access System. (See personnel.)

Years 4 and 5 (FY 97 and 98):

Year 4 and 5 costs will be $0. Previous contract programming handled by in-house programmer will support the Regional Access System. (See personnel.)

Supplies:

Year 1 (FY 94):

Supplies for Year 1 include $300 for data purchases that are incorporated into the new Community Profiles as well as $500 for forms and mailings used in the collection of data for the Community Profile and Property Tracking System modules.

Year 2 (FY 95):

Supply costs for Year 2 include the same costs as Year 1 as well as another $500 for diskettes and cartridges used in tape backup of the system.

Year 3-5 (FY 96, FY 97 and FY 98):

Each years costs include the same as Year 2 plus an additional $1,000 for data purchases related to Phase 2 module additions.

Staff:

Staff costs are based on estimates of the time required by technical, managerial, and administrative personnel required for systems development, operations and maintenance. It does not include the time of DTED business specialists who assisted in the conversion to the new system through definition of user requirements and specification of data that will go into the system. The time required for professional staff to assist in the conversion process to the new system is listed under Year 1 and Year 2 User costs. This is because the IPO time spent by users in converting to the new system as "User" costs.

Below are the annual salary and benefit cost assumptions for staff positions involved in development and maintenance of the Regional Access System. Staff costs were calculated by multiplying the percentage of time spent on the project times the annual salary and benefits.

Position	Salary and Benefits
Management Analyst Sup. III	$50,000
Business and Community Development Director	50,000
Senior Systems Analyst	50,000
Economic Development Representative (RAS Coordinator)	40,000
Economic Development Representative	40,000
Economic Development Specialist	40,000
Programmer	40,000
Clerk Typist II	25,000

Year 1 (FY 94):

Staff time for Year 1 include Dan Quillin (Project Management) 20%, Mark Lofthus (Project Management) 5%, Rosario Adiarte (Senior Systems Analyst) 5%.

Year 2 (FY 95):

Year 2 staff costs include Dan Quillin (Project Management) 20%, Mark Lofthus (Project Management) 5%, Rosario Adiarte (Senior Systems Analyst) 10%, RAS Coordinator 100%, Clerical support 20% of one person's time.

Year 3 (FY 96): During the third year staff requirements include Dan Quillin (Project Management) 10%, Mark Lofthus (Project Management) 5%, Rosario Adiarte (Senior Systems Analyst) 5%, RAS Coordinator 100%, one Programmer 75%, Office Clerical support 20% of one persons time.

Year 4 and 5 (FY 97 and FY 98):

Staff time for these years include Dan Quillin (Project Management) 10%, Mark Lofthus (Project Management) 5%, Rosario Adiarte (Senior Systems Analyst) 5%, RAS Coordinator 100%, Office Clerical support 20% of one persons time, one Programmer's 75%.

Users:

The time required by users to convert to the new system (participating in defining user data requirements, collecting needed data, and training end users on the new system) are considered "User costs" and are calculated as staff time to convert to the new system.

Year 1 (FY 94):

Year 1 cost include time spent by Mark Gustafson (Economic Development Specialist) and Bill Coleman (Business Specialist) in defining user requirements and collecting data for the new system. It is estimated that both spent 10% of their time on this activity. Dollar costs are calculated against annual staff salary and benefits listed. (See Staff category.)

Year 2 (FY 95):

Year 1 cost include time spent by Mark Gustafson (Economic Development Specialist) and Bill Coleman (Business Specialist) in defining user requirements and collecting data for the new system. It is estimated that both spent 10% of their time on this activity. Dollar costs are calculated against annual staff salary and benefits listed. (See Staff category.) Also train 36 people for 1/2 day at a cost of $20 per hour per person ($2,880).

Years 3-5 (FY 96, FY 97 and FY 98):

Annual training on new modules. Train 36 people for 1/2 day at a cost of $20 per hour ($2,880).

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Analysis of Benefits

The benefit analysis consists of a system classification summary, an input output summary, linkage summary, and statement of evidence.

System Classification

The Regional Access System is 50% an optional new system, 25% an optional replacement system and 25% a necessary new system.

Input/Output Summary

Inputs

The following inputs will be changed with the Regional Access System:

1. Over 3,000 available commercial buildings will be entered into the Property Tracking module of the RAS. In the past the number has been about 300.

2. Commercial building data will be updated quarterly. In the past the updating of the data has not been systematic, comprehensive or periodic causing the data to be of poor quality.

3. As a part of the specifications process all fields have been identified, forms for the data collection designed, distributed and collected.

4. Local communities and economic development agencies will be able to access, review for accuracy, and update Commercial Property data and information contained in the Community Profile module.

5. One database contains both the Commercial Property data and the Community Profile data.

6. A revised Community Profile has been developed that includes more data on the community.

Outputs

1. A standard query screen that allows the end user to specify criteria such as community size, distance from Twin Cities, building size and labor costs and get a list of communities and available properties that meet that criteria. This will dramatically increase the quality and efficiency of providing this information to business clients.

2. The number of sites and locations offered businesses will increase as well as the quality and timeliness of information provided.

3. Local communities and economic development will be able to access the database and make the same queries as DTED staff. In addition they will be able to communicate with DTED staff and the commissioner via E-mail in Word Perfect Office.

4. Local communities should receive more business expansion leads.

5. Staff productivity and quality of service should increase substantially through access to the RAS automated database. This replaces a manual search of 250 communities and 3,000 buildings each time a business client request information on possible Minnesota locations. Currently this is done manually by having one staff person access separate stand-alone databases or paper records. The Regional Access System will be accessed by 250 DTED staff and eventually by over 100 local communities and economic development agencies.

Linkage Summary

The ability to link business clients with sites that meet their criteria for expansion or location is central to the mission of DTED. Historically, staff have had a difficult time responding to business clients that want information on possible expansion sites statewide. This has been due to several reasons. One of the reasons has been that the information on buildings and communities has been kept either on stand-alone databases or manually. Not only was the data of poor quality but the way it was stored did not have the proper query capability and only one person could access it at a time. The result has been a slow, inaccurate response to business clients. In addition, because the information on communities and available commercial properties was not integrated into a database accessible by all, searches relied on one person or manual searches of printed material. At one point less than 300 properties were being tracked and these were outdated and exclude.

The new system provides an integrated database of community and commercial property data. It is accessible by all staff as well as by communities and local economic development agencies. It provides a standard query screen (and more elaborate query capability) that will allow staff to provide any business client with community data, building data or both in a matter of minutes. This will not only increase the quality of information provided to business but it will significantly staff efficiency and productivity. Local communities not only will be able to access information, but to update it and use it for responding to business inquires. In addition they will be able to be part of DTED's electronic state economic development network. This will include E-Mail communications and eventual access to all DTED databases.

The number of business leads for communities will increase for two reasons. First, due to the fact that DTED will have more information on more communities effectively stored and retrieved will mean more options for each business and more communities statewide that may meet a given businesses criteria. Second, because staff productivity will increase due to the

automated database that all staff will be able to access the number of business client requests that can be handled will increase significantly resulting in more business leads as well.

This is a total system approach that includes improved data collection procedures. We have already revised our data collection procedures for building to include a new form and procedures that allow local economic development agencies to send us building data on diskette. This data is loaded on to a PC database which in turn is loaded into the Regional Access System database and onto the network. Current data on over 3,000 building has been collected and will be loaded into the system by the end of Year 1 of the project.

Focus groups were held with communities and the Community Profile data collection form was revised and data has been gathered on 250 communities which is not being entered into the Regional Access System database.

Statement of Evidence

As indicated in the previous section, DTED's capacity to maintain up to date information on buildings has been sadly lacking. As an example, during our focus group meeting with local and regional economic development organizations in the Southwest region of the state a particular building was discussed. DTED officials had been listing it as a highly desirable vacant commercial property. Local officials pointed out not only was our information dated (over 2 years old) on the building, but it was in such poor condition they would not show the building to a prospective business and were upset that DTED had such poor quality of information on their region. They also expressed frustration with the fact that they had no way to determine what information we had on communities in greater Minnesota.

A second frustration that DTED staff and managers had was that there are approximately 2,000 buildings in the Metro area that we had no data on at all. The number of buildings that become available in the Metro area is so large that it has in the past defied staff resources to keep up with them. The unfortunate result is that there are a significant number of businesses that are interested in locating in only the Metro area and we have had no automated data source to assist these business clients.

A third frustration staff and managers experienced is the tedium of manually trying to meet a business clients criteria in terms of communities they wish to consider and building requirements. From both DTED and the clients perspective a wide variety of choices statewide is desirable.

Collectively these problems result in an unacceptably low quality of service to both the business and communities DTED serves. The Regional Access System addresses each of these frustrations. Internal staff resources have been put in place to collect this information periodically. Local economic development organization can submit their available commercial building data on paper or on diskette. Each quarter DTED receives on diskette approximately 2,000 buildings covering the metro area. In the later part of June 1994 both

the data received on paper and the via diskette will be loaded into the RAS network computer. At the same time, new Community Profile data will be entered as well. Beginning in FY 95, communities will be able to call in to review the building and community data. We will then evolve into letting communities update the system. Staff will begin to using the standard query screen replace the tedium of manual searches in FY 95. It is estimated that performing a standard query and producing a report for a business client will take less than an hour with the Regional Access System and a higher quality search will be done for the business client. This compares to several hours that can be spent on a manual search and reporting prepared for the business client.

In 1993, DTED conducted a survey to determine if other state economic development agencies had developed electronic information systems to link and network together local economic development efforts with the state offices. We found that at least seven states (including such states as Texas, Oklahoma, Colorado) had initiated either a computer network or bulletin board system and the number growing. It should be noted that the information shared can vary from state-to-state. For instance many states make federal economic data available on bulletin boards. When DTED discussed this system with its internal staff and local economic development organizations, integrating the property tracking data and community profile information and keeping it current was the top priority. Later phases are likely to include access other types of economic data and tax information as well as business and license information. What is clear from our survey is that other states are moving ahead in this area and that to remain competitive Minnesota needs to improve the quality of service provided to both business clients seed king location information and communities who are anxious to attract new businesses to their community.

Finally, it should be noted that when the Regional Access System was presented to local economic development officials at the September 1993 Star Cities convention communities were very supportive. There general response was to ask why the state had not implemented this system earlier.

Analysis of Risks

This risk analysis classifies the primary of risk that development of this system entails, and then describes in detail the major and minor risk in order of their importance, and the preventive measures being taken to reduce that risk.

Primary Risk

The primary concern is failure of the proposed new system to meet the operational expectations of internal and external clients. The project involves new software programming, new technologies, new organizational structures, new processes, and training requirements.

Specific Major and Minor Risks in Proceeding with System

1)   Failure to provide remote site technical support. The installation of software at remote sites, training users and providing on going support once they begin using the system will place significant time burdens on technical staff. Failure to provide this support will mean the system will not be understood, valued or used. DTED has a very limited number of technical staff. The effort to service internal customers takes a great deal of time and effort. To try to support 100 additional remote sites with out additional support invites failure.

   Preventive Measures:

   A Regional Access System coordinator position is proposed to both market the program as well collect the data needed to update the system. In addition, a technical programming position is proposed that supports all DTED external programs and customers. (In addition to the Regional Access System this position will support external hookups to SBDC's and other outside agencies.)

2)   Due to lack of funding the vendor may not be able to make changes and adjustments after the initial programming is completed.

   Preventive Measures:

   During Year 3 we will make an effort to add a programming position that will support the Regional Access System. This position will modify Phase One programs as necessary, add Phase Two modules, and build window front ends to the Informix database. We will seek legislative funding to do so. If unsuccessful we will look at shifting internal resources to contract out changes or additions to the Regional Access System.

3)   Local economic development agencies may not see enough value in the system. The system may not generate the additional business expansion opportunities that local communities hope for. As a result while it may be useful to internal DTED staff local economic development agencies may not use it or they may not provide the building data or Community Profile information needed to maintain it.

Preventive Measures:

Focus groups of local economic development agencies were used to make sure the Phase I module represented high priority, key data that was important to both internal DTED staff and local economic development officials. Focus groups were also used to make sure we were collecting the right information on communities. Presentations with a feedback loop were made to the Annual Star Cities conference before proceeding. Measurement tools have been incorporated into the software programming to determine usage levels.

4)   This is the first database application that DTED will be making available to external customers. In addition, it will be the first database the department plans to make available through Internet. Therefore, the Project Manager and Information Service technical staff do not have a base of experience to draw upon in developing applications that have remote site customers or are accessed through Internet. Because of this lack of experience there is some risk of making a technical mistake, or not developing the application in the optimal manner.

Preventive Measures:

Part of our initial contract with our vendor who is developing the application includes technical support to make it work from two remote sites. In addition, we are participating in interdepartmental committees that are working on access to Internet. We have held focus groups with remote users and will continue to have contact with them as the project evolves. The manager and staff will continue to work with staff from other state agencies that have applications accessed from remote sites. We also will maintain frequent contact with staff of the STARS project to make certain we utilize this resource to greatest extent possible. In addition, after our first year of operation we are proposing a $10,000 contract with an outside consultant (such as the Gartner Group) to make certain that we are developing the application with the latest technology in mind.

5)   The Project has not received the legislative resources requested for the first two years of the project. (The legislature has funded it at less than 1/3 the requested amount.) As a result the timing, scope, and services offered may have to be reduced or delayed. (For instance, lack of funding may jeopardize the free 1-800 number to access the database, the development of a user friendly Windows front end for the database, as well as additional phases of the project that involve adding additional information

modules.) Proceeding with a new project that is inadequately funded increases the likelihood of failure and pulls staff from other important internal projects.

Preventive Measures:

The Department has proceeded carefully. We have been able to utilize unused funds in the Department to make hardware and software purchases that have supplemented our legislative appropriation and allowed us to proceed with the contract programming for Phase I of the Regional Access System. The contract programming has allowed us to proceed with the development of Regional Access System while maintaining and developing other required Department Information systems. It is our intention to seek FY 96 and 97 funding to fully develop the project in Years 3-5. If we are unsuccessful we will eliminate some of the services proposed and continue to look at shifting internal funding.

6)   Failure to back up database properly may result in significant loss of data and programs.

Preventive Measures:

Daily backups of the database and source code are now in effect. A larger tape back up unit is being purchased.

7)   Lack of a Windows front end. Due to a lack of funding this client server application may be developed in a Unix Informix database only. As a result the user interface will not be as friendly as windows and may not meet objectives originally promised to users. Users may critizise the system as not being state of the art and harder than necessary to use. This may reduce use of the system and require greater investment in training and technical support.

Preventive Measure:

This feature falls into the category of "nice to have but not essential." It will be developed as resources permit.

8)   Need regular project reviews with upper management. Insufficient meetings may result in a lack of awareness regarding project problems and budgetary needs.

Preventive Measures:

Have begun quarter status reports. Will hold project review meetings every six months.

9)   Failure to back up database properly may result in significant loss of data and programs.

Preventive Measures:

Daily backups of the database and source code are now in effect. A larger tape back up unit is being purchased for this purpose as well.

10) The tight time line in completing the initial contract programming phase involves risk. Internal staff are spread thin and may have a difficult time performing the tasks they must do (loading data, doing data entry and setting up the database properly on DTED's computer). These tasks must be completed by DTED staff so that testing and debugging of the application can occur on schedule. The result of not keeping internal tasks on time is that proper testing and debugging will suffer.

Preventive Measures:

Modified completion dates with vendor. This allows vendors staff to complete other projects while DTED staff completed this phase of the work. Vendors staff resume on site work when DTED has completed this phase of the work.

Risks In not Proceeding with the System

1) If DTED does not proceed with the Regional Access System the Department will continue to suffer from the inefficiencies of the current system. This includes limited and outdated information on available commercial properties and communities stored on separate stand-alone PC's inaccessible to staff. It would mean exhaustive and inefficient manual searches to find a set of communities and available commercial buildings that meet our business client's expectations.

Preventive Measures:

Proceed with and complete Phase I of the Regional Access System.

2) If DTED does not proceed the services offered to our business clients and communities we be significantly lower than if we proceed. Being able to assist a business client in finding communities with the infrastructure and buildings that meet their needs is central to DTED's mission. Communities likewise rely on the state to help them develop economically and feel DTED should be aware of all the development assets that the community has. There is also a concern over current information statewide. Metro site information is usually more current and readily available and may create an unequity in site location information. Without development of the Regional Access System, we will not be able to keep track of the information we need to in order to properly service businesses seeking to expand or relocate or assist communities in attracting economic development.

3)   If DTED does not proceed with the Regional Access System the state will lose it competitive position relative to other states in its ability to assist businesses making expansion or relocation decisions. Other states such as Colorado, Oklahoma, Texas, Kansas are offering communities and businesses access to state economic development information via phone modem access. If DTED does not proceed we will fall technically behind what other states are doing in this regard.

Preventive Measures:

Proceed with and complete Phase I of the Regional Access System.

4)   Local communities and economic development agencies will be disappointed if the Regional Access System is not developed. Access to DTED's economic information systems and E-mail, and is something that local communities feel is long overdue.

Preventive Measures:

Proceed with and complete Phase I of the Regional Access System.

ATTACHMENT A

PARTNERSHIPS WITH OTHERS

Background

The IPO in reviewing the Regional Access System project asked DTED to:

Determine if partnerships are possible with other state agencies who may serve the same customers, have a need for the projects data, or maintain data useful to this project.

In response to that question the following partnership have been and are being pursued with local economic development agencies and other state agencies.

Regional Focus Groups

Focus groups were held in the winter and spring of 1993 in three rural regions. Through the focus groups, most of the "customers" of the Regional Access System were identified, and established which among them are likely to want to participate in its further development an implementation. Those linkages will be maintained as implementation unfolds.

The focus groups introduced the Regional Access System to a primary group of customers, and involved them in making several determinations including: the nature of the specific operational objectives, types of data or resources which would be included in the data base and means for gaining access to the system.

These focus groups included a variety of agencies, some state, some quasi-state, some private. It also included regional development commissions, representatives of the Minnesota Initiative Funds, small business development centers, local and county development professionals, university officials, regional trade promotion alliances, private citizens involved in local development. The major agencies are often intermediaries who work with businesses, and thereof would be likely to want access to the system.

Focus Group on the "Community Profile"

A focus group was held during the summer of 1993 for the specific review of the "Community Profile." The Community Profile serves as one core of data scheduled to be entered into the Regional Access System in Phase I. This is the Profile that has been maintained on a stand-alone PC in DTED for purposes of printing a document on each of approximately 200 Minnesota communities and their economic characteristics. When integrated into the Regional Access System database, data in the Community Profile will be easily queried to find communities meeting the needs of businesses who are seeking locations. The focus group of local development professionals and service providers (including utility company economic developers) permitted DTED to assess the content of the current

Community Profile and arrive at a new format, which is part of the programming that will be completed in the first phase of the project in 1994.

Discussion with Star City Conference Participants

Participants at the Star Cities Conference, DTED's annual training session for local officials and others working in economic development received a briefing on September 23, 1993 on the Regional Access System. Participants were asked to suggest ways that the system could be implemented effectively to serve their needs.

Linkages with other Agencies

1. *Advantage Minnesota*

    Advantage Minnesota, a private corporation created by state law, is a key development partner which will need to access the database. Advantage will work with companies - Minnesota and elsewhere - seeking new locations and places to expand, and will therefore need the capability to use the community and available building data maintained by the system. The Regional Access System is only one of several technology-related links between DTED and Advantage Minnesota which will permit greater coordination in serving the customers of each.

2. *Minnesota Technology/Minnesota Project Outreach*

    Minnesota Outreach, created by state law and part of Minnesota Technology, Inc., maintains a database of technical experts and scientists which businesses can consult, as well as other resource information of interest to businesses. Because of the importance of the Regional Access System as a community database, all public sites currently on the Minnesota Project Outreach system are being considered as remote sites that will have access to the data in the Regional Access System. They include Minnesota Technology's regional offices, University of Minnesota Extension Offices, and the State's Small Business Development Centers.

    Conversations with Minnesota Project Outreach staff have also revealed that they maintain information on economic development programs and have had difficulty keeping it current. As DTED has collected new data on development programs within the past six months, Project Outreach and DTED may be able to develop a partnership in which the Regional Access System serves this purpose for both agencies, rather than have the two agencies maintain separate databases on essentially the same information.

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3. *Department of Economic Security*

    As part of the Regional Access System data on occupations and prevailing wage rates for the different regions of the state is maintained. Rather than try to collect this information DTED has a cooperative agreement with the Department of Economic Security (DES). DES annually collects this information by region. DTED pays DES $160 annually for a special run of this data which DTED receives on Diskette. DTED in turn loads this data into fields in the Regional Access System. It in turn is used as query field for some businesses making location decisions. This data is also generated as part of the Community Profile report.

4. *Other State Agencies*

    DTED also receives data on community and county retail sales from the Department of Revenue and population data by community and SMA from the Machine Readable Data Center at the University of Minnesota.

    Because the program is focused on economic development activities, we have sought partners with the agencies, regional groups, and local persons identified above, as the most immediately interested customers and stakeholders. We will remain open to sharing the information and benefits generated by the program.

ATTACHMENT B

DEVELOPING MEASUREMENTS TO DOCUMENT EFFECTIVENESS

Background

The IPO in reviewing the Regional Access System project asked DTED to:

Develop measurements to document the project's effectiveness.

In response to that question DTED has set goals and developed a set of measurements we intend to implement. They are:

Goals:

1. Measure the frequency with which staff use the database to find information on communities and available buildings.

    Measure

    A history table has been developed as part of the Phase I Regional Access System project. The history table will track the number of times that a query is made and the number of reports generated by user.

2. Provide an integrated database on communities that internal staff as well as regional and local economic development agencies find helpful and useful in economic development efforts. Each year the number reporting the system helpful and useful should increase.

    Measure

    Measure the number of internal staff and external agencies that describe their satisfaction with the system as good or excellent. (Based on survey of users.)

    Measure the number and percentage of users who identify that a specific problem or information need was resolved through accessing the Regional Access System. (Based on survey of users.)

3.   Improve the quality and timeliness of information provided to business clients.

Measure

Measure the number and percentage of internal staff that indicate they were able to provide more timely and higher quality information to their business clients as a result of the Regional Access System. (Based on survey of users of the system.)

4   Improve the productivity and efficiency of DTED staff through access to an automated database of community economic development information.

Measure

Measure the number of DTED staff that report they were more productive and efficient in answering business inquiries or in other aspects of their job as a result of their access to the Regional Access System. (Based on survey of users of the system.)