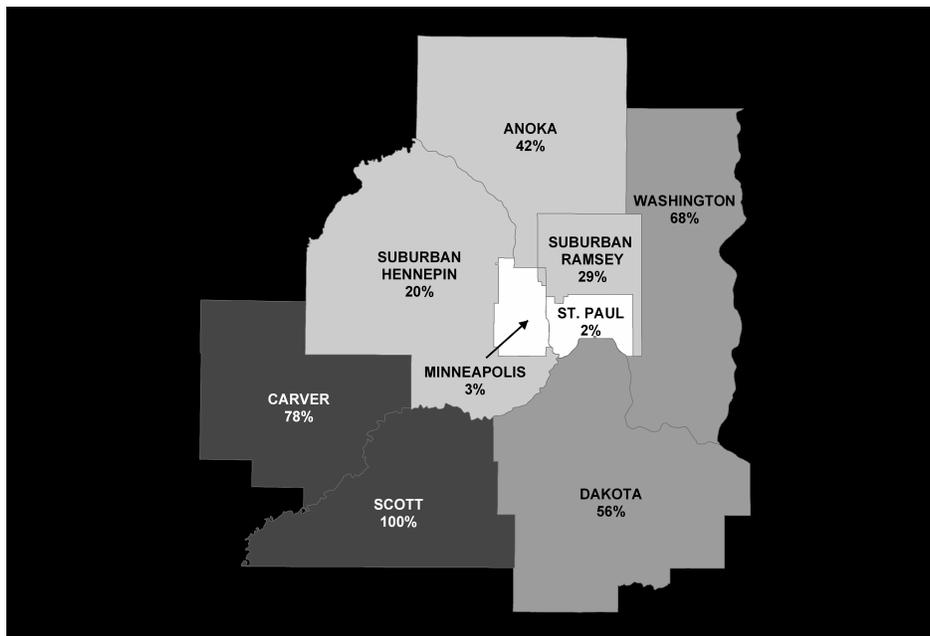


PROJECT PURPOSE

PROBLEM

Economic opportunities for low-income families and minorities are increasingly limited in Minneapolis, St. Paul, and the inner-ring suburbs. Since 1980 job growth has been moving to the metropolitan fringe, inaccessible to many lower income and minority families. According to the Minnesota Department of Employment and Economic Development, the job growth between 1990 and 2002 in Minneapolis and St. Paul was 3% and 2%, respectively, compared with a 34% average across the suburbs. At the same time, and unlike many Midwestern cities, the population of Minneapolis and St. Paul increased by 4.6%.¹ The vast majority of lower income households as well as African Americans, Asians, Hispanics, and American Indians are also concentrated in Minneapolis and St. Paul.² Generating greater economic opportunity requires a place-based response to the triple whammy of rising housing costs, suburban job growth, and funding cuts to public transportation. The Brookings Institution's Living Cities Project concludes: "The future of the cities' middle class, whose size stagnated in the 1990s, may hinge on the progress of these groups in the coming decade."³

Figure 1: Map of 7-Employment Growth in Seven County Metropolitan Region, 1990-2002



The development patterns in metropolitan areas across the nation are separating working families and low-income individuals from economic opportunities.⁴ In the Twin Cities area, Blacks and American Indians have unemployment rates four times as high as Whites, while unemployment for other racial/ethnic groups is also substantially higher than for Whites.⁵ Moreover, the full

¹ The Brookings Institution, *Living Cities: Minneapolis-St. Paul in Focus: A Profile from Census 2000*, p.11.

² Metropolitan Council, *Key Facts*, U.S. Census 2000 data.

³ The Brookings Institution, *Living Cities: A Profile from Census 2000*, p.4.

⁴ David Almasi, *National Policy Analysis #402*, The National Center for Public Policy Research, 2002.

⁵ Wilder Research Center, *Metro Trend Watch*, 2003.

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employment of workers on Temporary Assistance for Needy Families (TANF) would require various city-to-suburb commutes—but current transit routes are not viable for the majority of destinations.⁶ Also, each suburban municipality faces its own variety of challenges. A recent taskforce of 20 mayors from the metropolitan area concluded: “In order for the Twin Cities metropolitan region to grow economically, businesses need access to workers, and workers need housing they can afford.”⁷ *See Appendix A: Maps of Employment and Housing.*

While a wide range of public, private and nonprofit entities at the local, regional and state level are charged with one dimension of the problem, they do not have the tools to understand the multiple dimensions together. In the Hawthorne Neighborhood in Minneapolis, residents have watched manufacturing plants close and are being encroached by high-end condominiums. As a first step, developing a community vision to preserve and create jobs will require local leaders to gain a greater understanding of the contemporary metropolitan economy. In Roseville, a first-ring suburb of St. Paul, the population is increasingly, on one hand, older, and on the other hand, more diverse. In order to provide a mix of housing and employment options for these residents-- as called for in the city’s comprehensive plan--policymakers need to know more about the current employment and commute patterns. At the state level, the Minnesota Housing Finance Agency funds affordable housing projects based, among other criteria, on access to employment, expressways and bus routes. Organizations that want to access these funds must have access to a tool to better understand the region.

An assessment tool that provides a complete picture of the region -its economy and labor market, commuting patterns and transportation, affordable housing, and development opportunities - would serve low-income families by serving economic and community developers, planners, and the businesses that drive regional job growth. Linking jobs, transportation and affordable housing is a prerequisite for opening the pathway to the American Dream.

SOLUTION

Building on Minnesota’s strong GIS and labor market information infrastructure, Minnesota 3-D is a dynamic GIS based Internet application that brings together labor market, housing and development information and analysis for the Twin Cities metro area into one easy-to-use tool for economic and community developers, planners and businesses. The system will assist with the development of jobs near housing and vice versa, as well as linking residents to jobs. *See Appendix B: Minnesota 3-D Applications.*

By combining new statewide data on employment and demographics through an agreement with the U.S. Bureau of Labor Statistics, the Social Security Administration, and the Census Bureau with the existing region-wide parcel-level housing data, Minnesota 3-D will be a “first-of-its-kind” system. Additional data layers (e.g., tax and assessment information from the Minnesota Department of Revenue, small business loans through the Minneapolis Consortium of Community Developers, and transportation routes and bus routes from the Metropolitan Council) will also be included. Links to employment databases, such as the Minnesota Job Bank, will make the system relevant for individuals looking for jobs and organizations who assist the unemployed and underemployed.

⁶ Metropolitan Council, *Job Access and Reverse Commute Transportation Plan*, 2000.

⁷ Metropolitan Council, *Affordable Housing: Making it a reality—Report of the Second Mayors’ Regional Housing Task Force*, 2002.

Figure 2: The Dimensions of Minnesota 3-D

<i>DATA</i>	<i>JURISDICTIONS</i>	<i>PROGRAMS</i>
Housing	Neighborhoods & Communities	Capacity-Building
Employment	Cities & Suburbs	Market Analysis
Development	Counties & State	Policies & Projects

On the user side, Minnesota 3-D will appear as a suite of Internet-based GIS applications that will produce a range of outputs. First, the system will provide information on the location-based need for job creation and workforce housing production. Second, through a market analysis and planning support module, Minnesota 3-D will provide relevant data on development opportunities. The project has an off-line task of building capacity at the community level through training and technical support. The local lessons from the Minneapolis Neighborhood Information System and the St. Paul Community GIS Consortium will be fully utilized.

Over the course of the grant period, Minnesota 3-D will establish a spatial mismatch baseline, provide quarterly trend analysis and annual summaries of economic opportunity areas. Job import/export analysis will be performed for municipal jurisdictions and sub-geographic areas. A tool box of best-practices for linking jobs and housing at the community level will be compiled and disseminated. Systemic barriers to the next generation of community economic development will also be addressed through policy change. Taken together, strategic economic and community development solutions that bring together job opportunities and affordable housing for low-income families and communities of color will be enabled by Minnesota 3-D. *See Appendix C: Minnesota 3-D in Action.*

The use of parcel data by a range of community and local users facilitates the verification and correction of errors and omissions. Ramsey County will create a model application and methodology to allow municipalities, with assistance from community partners, to create, update and correct property addresses in Ramsey County. The Metro GIS Addressing Work Group will assist to develop this project as a model for other counties in the region.

OUTCOMES

Minnesota 3-D will result in a range of outcomes related to job creation and workforce housing opportunities across the region. The purpose is to connect employers and employees more efficiently, thereby maximizing existing public infrastructure and investments. A few key indicators during the grant period include: a) doubling the number of community GIS users; b) finding the twelve most important development opportunities available to close the gap between housing and jobs; c) stimulating new development projects in each of six key partners’ target communities. Demonstrating the power of GIS analysis to practitioners and policymakers will radically transform the way decisions around employment, housing and development are made. A member of the 35W Coalition has stated: “I have been waiting for this for 15 years.”

Indeed, the ultimate, long-term community outcome is to generate economic opportunities for middle and low-income families through the next generation of community economic development. Through project partners utilizing Minnesota 3-D, measurable progress will be

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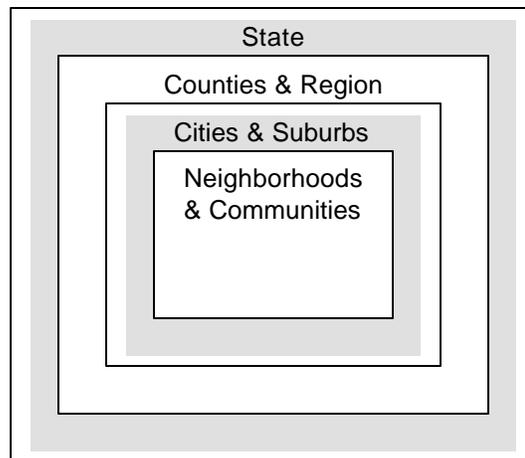
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made by: a) increasing the rate of construction of workforce housing units near job growth centers by 20% over three years; b) creating 20% more new jobs for residents (with average wages of \$12 per hour) near existing labor centers in the central cities and inner-ring suburbs over three years.

INNOVATION

Minnesota 3-D is innovative in three ways: open access philosophy, data integration, and effective partnerships. First, one innovative approach embedded in this project is the open access nature of the online GIS application. This is a reflection of the fact that the system will be created in a transparent environment designed to accommodate the needs of partners and users. A principle of empowered usability is maintained across jurisdictions and geographic scales. The result is a multi-layered information environment with a public entry point--an advancement on both “bottom-up” and “top-down” systems in which the information environment mirrors the complexity of the region. In this process, traditional hierarchies of knowledge are replaced by constructive feedback loops and open communication.

Figure 3: A Multi-Layered, Multi-User Information Environment



Second, the combination of the existing parcel-level housing data standardized across the region through MetroGIS with the federal and state data available in Minnesota on employment, employers and employees means that Minnesota 3-D will be a “first-of-its-kind” information system. Through pilot data sharing agreements with the State of Minnesota, the Bureau of Labor Statistics (BLS), the Social Security Administration (SSA), and the U.S. Census Bureau’s LED program, employment data will be linked to individual data including residence, sex, race, place of birth, and date of birth. These enhanced data will be provided at the block level on an annual basis. This pilot, equivalent to an annual census, will guide future efforts in other states. *See Appendix D: Federal-State-Local Data Integration.*

Third, the mismatch between decent jobs and affordable housing is a significant problem for America’s large cities and the experience of this partnership over the course of the grant period will offer insights into practical and effective remedies. The multiple layers of integrated data, analytical capacity, and strategic cooperation has not been combined in a way that allows comprehensive solutions to be developed and refined.⁸ Minnesota 3-D will take the application

⁸ National League of Cities, *Land Use and Development Challenges in America’s Cities*, 2003.

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of GIS to a new level and demonstrate the benefits of increased synthesis and broader multi-sector, cross-jurisdictional collaboration. It will support better housing and economic development policies and decision making by both private and public organizations.

COMMUNITY INVOLVEMENT

Minnesota 3-D is the culmination of over a decade of collective problem-solving, GIS innovation, and capacity building. It is the broadest effort yet attempted, and at the same time is more rooted than ever in the needs and aspirations of neighborhood and community-based organizations in the Twin Cities. The new focus on employment expands the number of community stakeholders. *See Appendix E: Partner Profiles.*

Collaborative Network

The network of multi-sector partners that has formed to design and utilize Minnesota 3-D is significant in its own right, particularly the close working relationship between community-based organizations in the two central cities of Minneapolis and St. Paul. The data access being provided by county, regional and state level partners is also historic. Finally, the Center for Urban and Regional Affairs (CURA) at the University of Minnesota has a unique commitment to bringing entities together to share best-practices and build capacity. CURA is an access point for information, the coordinator of the various sectors, and technical assistance provider. All of the partners have a vital role in the project and will be guiding its implementation through the steering committee. *See Appendix F: Steering Committee and Collaborative Network.*

Neighborhood & Community Organizations

- Dedicate staff and volunteer time to increase GIS capacity within the organization through training, workshops and practical application (*See Appendix G: Community Capacity Building Program*)
- Incorporate Minnesota 3-D data and analysis into project development, program planning and evaluation strategies
- Provide feedback on data integrity and generate data, where applicable, to be made available to other users

Cities & Suburbs

- Initiate and support strategic development projects that will align housing availability and job opportunities
- Incorporate Minnesota 3-D data and analysis into decision-making and policy-making process around housing and economic development
- Leverage GIS expertise and capacity, where it exists, to assist other municipalities with professional development
- Promote Minnesota 3-D among existing community, private and public partners through the local development process

Counties, Regional and State Entities

- Provide standardized and complete data to the greatest extent possible and coordinate the compilation of new data layers
- Set higher expectations for the level of economic opportunity required by housing and employment projects in order to be funded

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- Promote Minnesota 3-D among existing community, private and public partners in the regional and state development process

Center for Urban and Regional Affairs, University of Minnesota

- Serve as overall project manager, including reporting, accounting and quality control
- Utilize faculty and student research capacity to identify best-practices and analyze public policy options
- Leverage university resources to provide support and training to neighborhood and community organizations
- Coordinate Minnesota 3-D dissemination to public, private, university, and community audiences

EVALUATION

The Minnesota 3-D project will be evaluated by an independent evaluation team from Wilder Research Center led by Dr. Richard Chase. Wilder Research Center has a strong working relationship with the project steering committee partners, has been involved in shaping this proposal, and will work closely with the steering committee in the final design and implementation of the evaluation. As required by TOP grantees, Wilder Research Center will be responsible for preparing a separate final evaluation report. *See Appendix H: Evaluation Plan.*

The evaluation will employ a multi-method approach to draw qualitative and quantitative evidence to assess the project's achievements. Data sources will include user surveys, interviews with project participants, and reviews of public data and records. The evaluation has a before-during-after design with two types of comparisons: a) Conditions in targeted communities (housing and jobs) prior to and after the project based on detailed baseline data and results ascribed to Minnesota 3-D by public and private decision-makers (e.g., CDC and state agency directors); b) Results in communities using Minnesota 3-D compared with results during the same time frame in communities not using the applications.

In addition to measuring outcomes, project development, testing, and implementation will be documented to assess and improve the project as it unfolds and to ensure that others may adapt or replicate it in all or part. This documentation will include time and activity records, profiles of participants in each phase, and meeting summaries.

The three (3) outcomes:

1. More efficient location of affordable housing and employment development projects at community, municipal, county and regional levels.
2. More efficient and cost effective public and private investments in housing and economic development projects at community, municipal, county, and regional levels.
3. Increased economic opportunities for middle and low-income families through the next generation of community economic development.

The ultimate question will be: Did Minnesota 3-D meet its target goals of a) increasing the rate of construction of workforce housing units near job growth centers by 20% over three years; b) creating 20% more new jobs for residents (with average wages of \$12 per hour) near existing

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labor centers in the central cities and inner-ring suburbs over three years. We realize that plans for these changes may be surrogates for expected changes as a result of the application development.

PROJECT FEASIBILITY

The Twin Cities region is a nationally recognized leader in public Geographic Information Systems (GIS). For instance, the Minneapolis Neighborhood Information System (MNIS) was included as a case study in *GIS Mapping for Change* (2002) from the Local Initiatives Support Corporation and PolicyLink. The Twin Cities was also featured in multiple chapters of *Community Participation and Geographic Information Systems* (2002) edited by William J. Craig, Trevor M. Harris and Daniel Weiner. While Minnesota 3-D builds on this foundation, it is the next generation of GIS-based community economic development.

Technical Approach

The technical demands are well within the capacity of the partners. The Minnesota Department of Employment and Economic Development (DEED) has seven years of experience compiling, maintaining, and using wage records to analyze such labor force issues as employment turnover by industry, earnings by industry and region for the non-profit and private sectors, and wage distribution. DEED has also geocoded business establishments located in the metropolitan region and has used these data for GIS analysis of employment distribution and change over time. The new data management and maintenance responsibilities will be fulfilled by DEED with assistance from University of Minnesota graduate assistants. The partners providing data will be included in feedback loops and policy decisions. ***See Appendix D: Federal-State-Local Data Integration.***

The centerpiece of this approach is the creation of an online mapping application. With emerging Internet-based mapping technologies, this is the most cost-effective way to maximize access, analytical capacity, and user-to-user information sharing. Two other approaches were considered: an intranet/data download solution and a physical walk-in center. Compared with an intranet solution or a physical resource center, an online application is available for more users and demands less staff time, respectively. Minnesota 3-D is a scalable, standards-based system that can accommodate expanded data layers and geographic coverage. ***See Appendix I: Minnesota 3-D Technical Design.***

Applicant Qualifications

The University of Minnesota has a well developed grants management system for outside funding. CURA, the lead agency for the proposed project, has extensive experience managing and reporting on federal grants. CURA has been a major subcontract to the City of Minneapolis for a previous TOP grant awarded in 2001; a Department of Education Urban Community Services Grant, and two grants from the Community Outreach Partnership Center grants from the US Department of Housing and Urban Development. CURA has a continuing involvement to increase the capacity of community development organizations through the application of new technologies, most significantly GIS related. This experience includes the development and training to support the Minneapolis Neighborhood Information System, support of the St. Paul Community GIS Consortium, and several applied projects with community organizations involving the use of public data and GIS analysis. ***See Appendix J: Applicant Qualifications.***

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Project Implementation

Year 1: Develop database and web application; Build community GIS capacity

Year 2: Increase web-based tools and data layers; Target development projects

Year 3: Leverage resources for development projects; Final results

For information about the project implementation timeline for different components of the project, see appendices.

Privacy and Security

The employment data that will be used for this project are subject to state and Federal data confidentiality rules and laws. Minnesota's Labor Market Information (LMI) Office has extensive experience working within these rules and laws to provide as much data as possible without violating them: The Office is able to make available more labor market data than any other state in the country without violating data confidentiality. The other data is all public.

Sustainability

Minnesota 3-D will become an indispensable GIS tool for public, private and nonprofit development enterprises. At the end of the grant period, Minnesota 3-D will migrate to a state or regional governmental body from its initial university base. The matching funds that have been allocated to the project are expected to continue, if not increase, after the grant period. In addition, philanthropic institutions such as the Fannie Mae Foundation and the Minneapolis Foundation have a demonstrated willingness to support innovative GIS applications.

Dissemination

The Center for Urban and Regional Affairs (CURA), University of Minnesota is responsible for dissemination at the local, state, national and international levels. Most importantly, Minnesota 3-D will be further promoted online through CURA's website, which is a nationally significant resource for policymakers and development practitioners. The research reports and maps are accessed at a rate of 60,000 times per month. Furthermore, Minnesota 3-D will be integrated into CURA's ongoing local outreach activities: an annual community GIS expo, monthly housing forums, special seminars, and community training workshops. Graduate students will also be involved in the project through assistantships and course-based work. These future policy and research professionals will gain an appreciation of how collaborative GIS systems can serve communities. CURA will devote an issue of its quarterly publication, *CURA Reporter*, to Minnesota 3-D. It is distributed to 5,500 public officials, researchers, and public practitioners in Minnesota and the United States. An additional 1,000 copies will be used for dissemination at state and national conferences, such as URISA (Urban and Regional Information Systems Association), Neighborhoods USA, ESRI Education and Users conferences, and the National Congress for Community Economic Development. Opportunities for dissemination through academic, professional and community development publications will also be utilized.