

Minnesota 3-D

Technology Opportunities Program (TOP) grant evaluation report summary

Introduction

Overview of Minnesota 3-D

The Center for Urban and Regional Affairs (CURA) at the University of Minnesota was awarded a federal Technology Opportunities Program (TOP) grant in October 2004 to address the growing distance between workers' residences and jobs brought on by development patterns.¹ With TOP resources, the Minnesota 3-D project brought together key actors from geographic information systems, economic and community development, and neighborhood planning to envision how spatial mismatches could be alleviated through better use of information. It was CURA's belief and its partners' that a robust analytical tool – one capable of highlighting interdependencies between jurisdiction and program areas – was needed to overcome certain barriers to economic growth. CURA's primary partner, the Labor Market Information Office of the Minnesota Department of Employment and Economic Development's (LMI/DEED), took on the technical responsibilities of developing and maintaining the analytical tool.

The Minnesota 3-D website (M3D), which can be found at <http://map.deed.state.mn.us/M3D/>, is the result of CURA and LMI/DEED's effort to provide the Twin Cities area with an accessible and unique analytical tool. Built on geographic information system (GIS) technology, M3D spatially integrates geographic layers at large and small scales with a warehouse of data. Users interact with the site through a combination of menus and a mapping interface, and they can draw information from M3D in the form of maps or data tables.

In an effort to make M3D a valuable and unique tool, the Minnesota 3-D project focused on incorporating relevant information and data not readily available elsewhere. A central component of M3D is information on economic travel patterns called laborsheds and commutesheds. Laborsheds indicate where workers in particular area live, and commutesheds indicate where residents of an area go to work. Data on these travel patterns are obtained from the U.S. Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) program. Additional data have been obtained through local partnerships with the following organizations and others: Federal Reserve Bank, HousingLink, Metropolitan Council, Minnesota Child Care Resource and Referral Network, Minnesota Department of Employment and Economic Development, Minnesota Department of Human Services, and Minnesota Department of Revenue.

Evaluation purposes

This evaluation report is the second produced as part of the evaluation of the Minnesota 3-D project. The first or baseline report, released in May of 2006, identified communities exhibiting the greatest spatial mismatches and reported findings from interviews of local economic and community development professionals who were considered likely users of the M3D website.² The second report was originally intended to replicate the first in order to measure community outcomes of the project. However, because the website was launched a year ago and most of the information examined in the baseline study was drawn from the 2000 decennial census, replication of the baseline report has been deferred in favor of a descriptive analysis of how M3D was developed and has been applied since being launched.

¹ See <http://ntiaotiant2.ntia.doc.gov/top/details.cfm?oeam=276004024> for the M3D entry in the TOP grantee database.

² A summary of the report can be found at <http://www.wilder.org/report.html?id=1915>.

Key evaluation questions

- To what extent has the Minnesota 3-D project succeeded at meeting its technical and partnership objectives during development?
- To what extent is the M3D website accessible, integrated, and a useful tool for planning and decision making, especially with regard to addressing spatial mismatches?

Evaluation methods

Three general approaches were used to answer the above questions. Readily available information, including webpage statistics and hands-on observation of the M3D website, was examined and brought to bear on the evaluation questions as appropriate. A sample of M3D users was interviewed by phone using a structured survey instrument. Respondents were asked about the purposes for which they used M3D and about their experience with the website. In-person interviews were conducted with three M3D users who had used the website extensively. The users are profiled in case studies to illustrate some of the specific uses, strengths, and limitations of the M3D application.

The survey sample is comparable to the geographic distribution of M3D visitors located in Minnesota (see Table 5). However, the true representativeness of the survey cannot be estimated since the sample was not randomly drawn from a frame that approximates all M3D users. The sample is considered purposive since it consists of all individuals identified by CURA as likely M3D users (e.g., workshop attendees) and an additional subset of likely users who were identified by respondents (i.e., snowball sampling). Out of 89 individuals in the sample, 57 responded to the phone survey for a response rate of 64 percent.

Conclusion

Evaluation findings

To what extent has the Minnesota 3-D project succeeded at meeting its technical and partnership objectives during development?

The Minnesota 3-D project accomplished the major tasks it set out to do with support from the federal Technology Opportunities Program (TOP). The M3D website launched in October of 2006 and is now on its way to 6,000 visits in the first year. The project progressed with considerable input and in-kind contributions from planning and economic development practitioners. Crucial partnerships were established with the Labor Market Information Office of the Minnesota Department of Employment and Economic Development's (LMI/DEED) and other organizations to develop the application and populate the database. Data partners include the Federal Reserve Bank, HousingLink, Metropolitan Council, Minnesota Child Care Resource and Referral Network, Minnesota Department of Human Services, and Minnesota Department of Revenue. Considering that over 1,000 hours were voluntarily contributed to the Minnesota 3-D project and that the project was able to respond to changing issues with new and relevant partnerships, namely with county governments to incorporate mortgage foreclosure data, the project seems to have maintained CURA's tradition of applying collaborative strategies to community issues.

To what extent is the M3D website accessible, integrated, and a useful tool for planning and decision making, especially with regard to addressing spatial mismatches?

Free access to the M3D mapping application and its online availability make it a valuable resource, according to phone survey respondents and case study interviewees. However, it has proven less accessible in terms of the user interface, which has limited instructions, few prompts and is not immediately clear on how to proceed, making it time consuming and difficult to master for novice computer users.

The Minnesota 3-D project's focus on the Twin Cities metropolitan area and its emphasis on simplicity over fully customized maps and reports qualify the website as a complement to GIS software and other analysis tools, rather than a full substitute. Respondents and interviewees generally feel that M3D excels by integrating relevant data not available elsewhere and by providing a means for readily comparing different areas at different scales.

Users have not applied M3D in a uniform way or for one particular purpose. Users have examined commutesheds and laborsheds to alleviate spatial mismatches, the foremost purpose described in the

TOP grant proposal. However, for the most part, users have addressed spatial mismatches in more general terms. Some have sought a deeper understanding of their own community; while others have engaged in regional thinking by examining and comparing the realities faced by nearby or similar communities in the Twin Cities. Some users have sought guidance in decision making; while others have used M3D for scholarship. In sum, M3D is advancing the understanding of spatial mismatches and helping communities make informed decisions that potentially could narrow the gap between community needs and community assets in the near future.

**Wilder
Research**

www.wilderresearch.org

1295 Bandana Boulevard North, Suite 210
Saint Paul, Minnesota 55108
651-647-4600; FAX 651-647-4623



For more information

This summary presents highlights of the *Minnesota 3-D, Technology Opportunities Program (TOP) grant evaluation* report. For more information about this report, contact Kris Nelson at <mailto:kns@umn.edu>.

Authors: Christopher Moore, Richard Chase, Rasheeda Curry
SEPTEMBER 2007