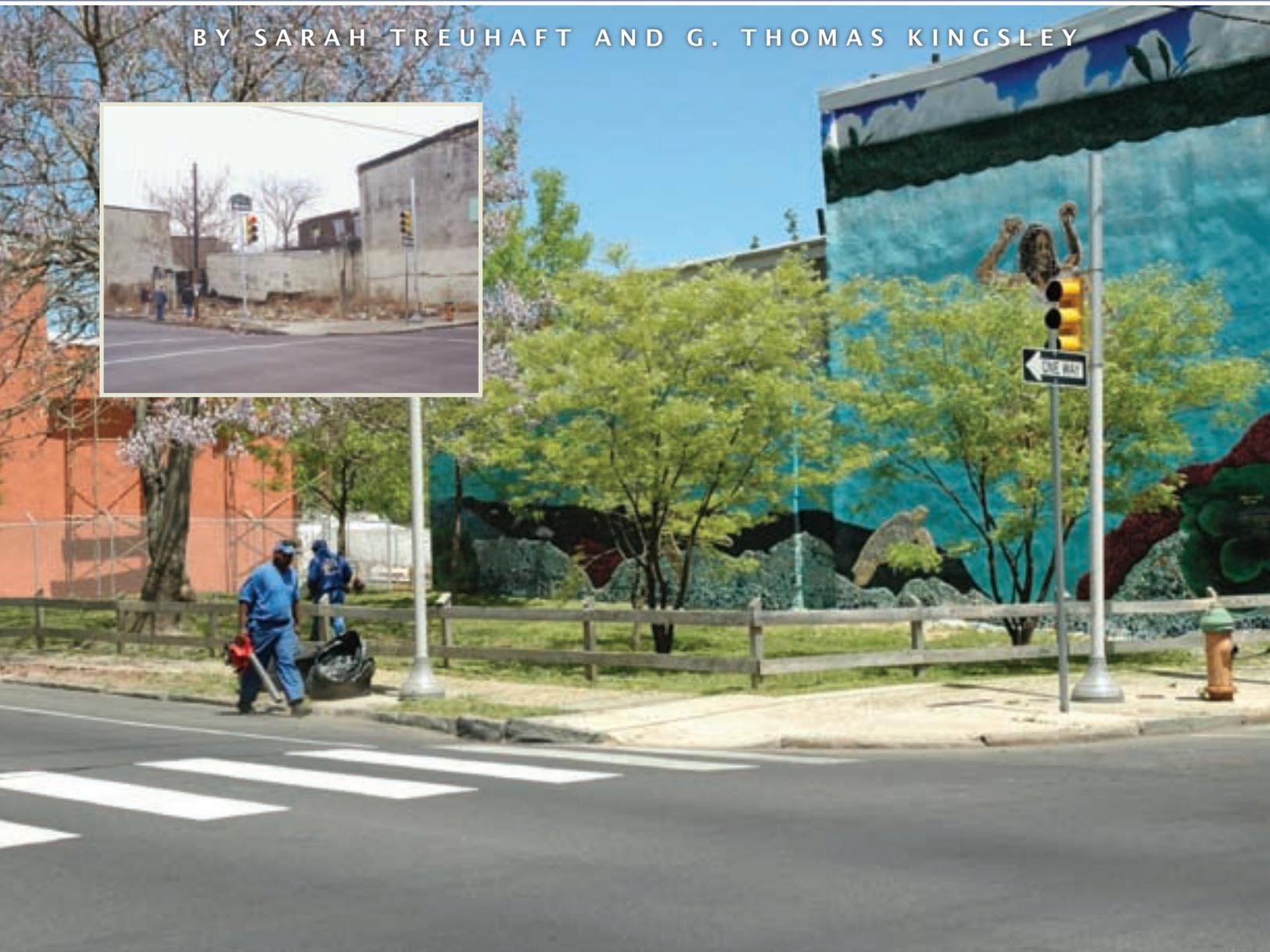# Transforming Community Development With Land Information Systems

BY SARAH TREUHAFT AND G. THOMAS KINGSLEY

Transforming Community Development With Land Information Systems

Policy Focus Report Series

The Lincoln Institute's policy focus report series addresses timely public policy issues relating to land use, land markets, and property taxation. Each report is designed to bridge the gap between theory and practice by combining research findings, case studies, and contributions from scholars in a variety of academic disciplines, and from professional practitioners, local officials, and citizens in diverse communities.

About this Report

This report is part of a multiyear research and action project by PolicyLink, the Urban Institute, and the Lincoln Institute of Land Policy to advance the field of parcel data systems and their application to community revitalization and equitable development. (See inside back cover for more information about the participating organizations.) It builds on research summarized in a recent Lincoln Institute working paper, *The Potential of Parcel-Based GIS in Community Development and Urban Land Management* (Chandler et al. 2006), which was presented to a group of community data systems experts in June 2006. At that meeting, attendees expressed the need for case studies to illustrate the value of integrated parcel data systems for the practice of community development. This report represents a first step toward cataloguing the most promising applications of these land information systems.

About the Authors

Sarah Treuhaft is a senior associate at PolicyLink in Oakland, California. She conducts research and writes on a variety of equitable development topics such as the use of data and mapping for community building and regional equity strategies. She also works with partner organizations to advance policies that benefit low-income communities, and facilitates trainings for community-based advocacy coalitions.

G. Thomas Kingsley is a senior researcher and research manager in housing, urban policy, and governance issues at the Urban Institute in Washington, DC, and is the author of numerous publications in those fields. He served as the director of the Institute's Center for Public Finance and Housing from 1986 through 1997. He currently directs the National Neighborhood Indicators Partnership, an initiative to further the development of advanced data systems for policy analysis and community building in U.S. cities.

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ON THE COVER

The Pennsylvania Horticultural Society used the ParcelBase application to help implement its Philadelphia Green program to rehabilitate vacant lots. More than 150 acres of vacant land have been transformed by these "clean and green" treatments, including this corner lot at 5th and Norris in North Philadelphia.

Executive Summary

A new era of data democracy has arrived, enabling tremendous improvements in land information systems and opening up a wealth of opportunities for the practice of community development and the management of community resources.

Geographic information systems (GIS) and Web services have dramatically expanded the ability to access, analyze, disseminate, and display vast quantities of data. These powerful technologies make it possible for cities, counties, and even regions to integrate their administrative databases and make parcel-level information available to the public via the Internet.

Community data intermediaries, together with the national networks that support them, also play a crucial role in the democratization of data—serving as bridge-builders for technology, government, and the community. With this extensive information infrastructure in place, community development practitioners now have greater access to the detailed property data that are so vital for analyzing and monitoring changes in neighborhood real estate markets.

This report describes how pioneering organizations and partnerships are turning robust, integrated parcel data systems into powerful tools for guiding community change. Drawing on extensive interviews with dozens of practitioners and community data experts, case studies of five cities and regions—Chicago, Cleveland, Minneapolis–St. Paul, Philadelphia, and Washington, DC—detail some of the nation's most promising applications of property-level information.

Bickerdike Redevelopment Corporation's use of parcel data supports its housing and organizing work on Chicago's northwest side, such as this rehabilitation of the historic Boulevard Apartments.
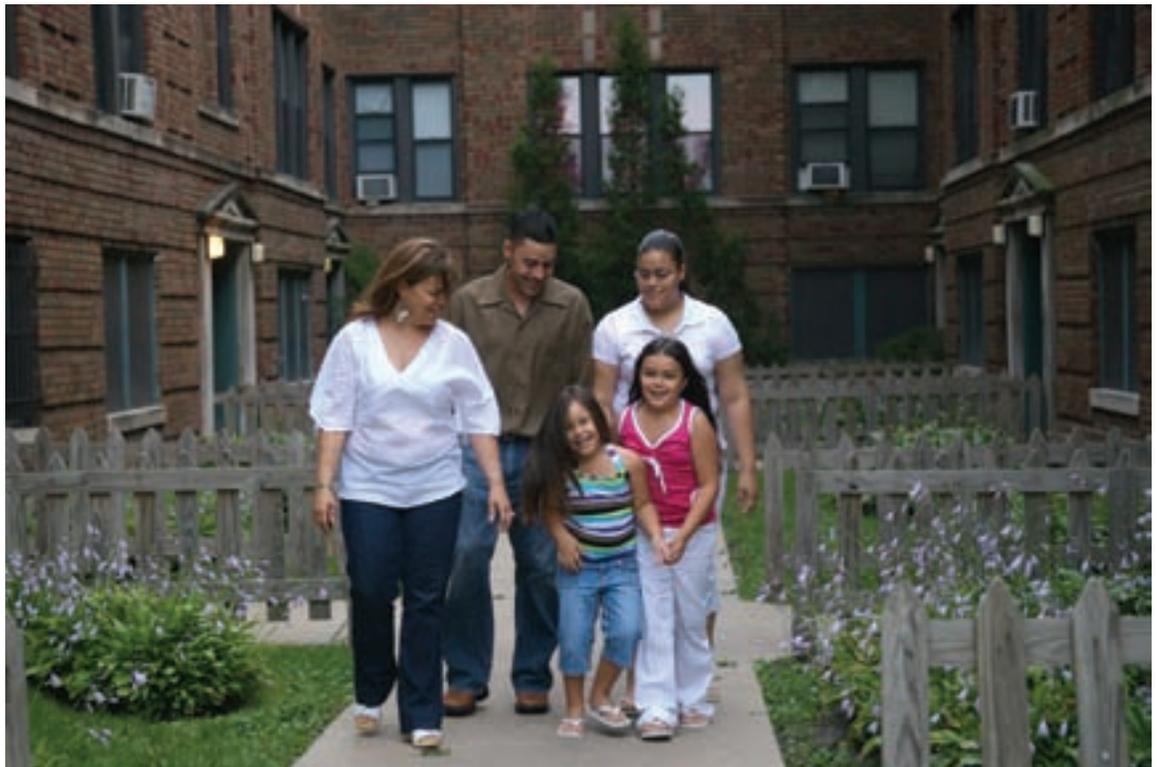
From the early successes showcased here, it is clear that innovative parcel data applications are truly transforming the practice of community development. The case studies were selected to demonstrate how land information systems can be used to address a wide range of community development challenges on both an urban and regional scale, such as the following:

- *Providing decision support for major initiatives*. In Cleveland, parcel data are being used to inform land acquisition decisions and model block efforts in six neighborhoods targeted for revitalization.

- *Informing foreclosure prevention strategies.* University-community partnerships in Cleveland and Minneapolis–St. Paul are developing systems to identify properties at risk of foreclosure and to design effective interventions.

- *Targeting outreach to low-income homeowners.* Community organizations in Chicago and Philadelphia have used parcel data to target services and resources to help low-income owners maintain and improve their homes.

- *Planning commercial district revitalization.* Using Web-based GIS tools, community groups in Chicago have surveyed local commercial districts to support economic development and transit-oriented development planning.

- *Supporting community organizing.* A resident task force in one of Cleveland's most distressed neighborhoods used data on loan transactions to identify and take legal action against property flippers.

- *Monitoring and preserving affordable housing.* An enhanced parcel data system is supporting collaborative efforts to preserve Section 8 units and manage the affordable housing stock in Washington, DC.

These and other advanced applications described in this report demonstrate the vast potential that integrated parcel data systems hold for the creation of equitable and sustainable communities. Fulfilling this promise, however, requires ongoing investments in systems, institutions, and processes. In particular, the support of government at all levels and of institutions and foundations is needed to bring emerging solutions to scale, disseminate best practices in the use of parcel data, and foster continued innovation in land information systems to support community change.

CHAPTER 1
From Parcel Data to Community Action

nformation on individual properties—including land value, ownership, zoning, tax liens, and vacancy status—is crucial for understanding neighborhood markets and how they are changing over time. While community development practitioners have always sought these data, until recently the cost of gathering the information from multiple local government agencies was prohibitive. Basic fact-finding on properties targeted for acquisition or improvement meant visiting city hall or other offices to examine individual records. This was a time-consuming process that precluded using property data more strategically for planning, decision making, and evaluation.

A new era of data democracy has now arrived. Technological innovations have vastly expanded the opportunities for using parcel data in community development. Geographic information system (GIS) technology has evolved from a tool that was cumbersome, expensive, and highly specialized to one that is increasingly accessible, user-friendly, and applicable within many fields. At the same time, the advent of Internet-based technologies such as Web GIS and Web services has made it possible to distribute vast quantities of data to widely dispersed users.

Recognizing the potential these advances held for the field of community development, PolicyLink and the Urban Institute, with support from the Lincoln Institute of Land Policy, began to inquire into the status of parcel data system development. A Web survey revealed that an unexpectedly large share of cities—72 of the nation's largest 100—operate systems that make parcel data from multiple agencies available to the public via the Internet (Chandler et al. 2006). These systems varied greatly in terms of their data quality and analytical capabilities (see table 1). Nevertheless, the movement toward integrated, GIS-driven, Web-based administrative parcel data systems was clear.

This finding immediately prompted several questions about what these advances mean for community development. Was the potential within integrated administrative parcel systems being realized? Were community development practitioners—the people and organizations directly involved in reclaiming vacant properties, preserving affordable housing, and other issues for which property data are relevant—accessing

TABLE 1
Common Variables Provided by Parcel Data Systems

Home Institution	Number of Cities (N=72)	Percent of Systems Providing Data on:			
		Current $ Value	Parcel Size	Land Use	Year Built
Technical Government Agency (IT/MIS/GIS)	35	69%	43%	37%	43%
Substantive Government Agency (e.g., Planning, Assessing)	34	50	50	47	38
University	2	50	50	100	50
Private Company	1	100	100	100	–

Source: Adapted from Chandler et al. (2006)

FIGURE 1
Map Milwaukee Exemplifies an Advanced Municipal Parcel Data System

Source: Map Milwaukee (http://www.city.milwaukee.gov/MapMilwaukee3480.htm)
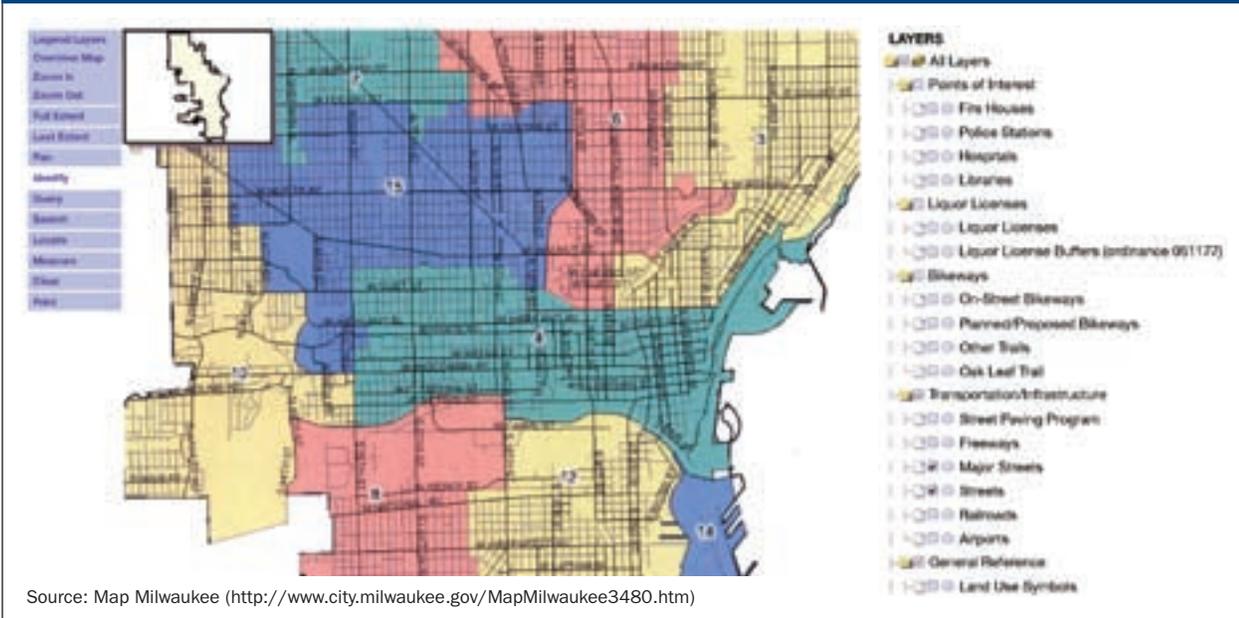
and using these land information systems? And if so, for what purposes?

This report provides answers to these questions. Drawn from a review of land information systems and interviews with dozens of community development practitioners and parcel data experts, the five case studies illustrate how pioneering practitioners in these cities and regions are transforming mundane administrative data systems into highly effective tools for community development.

THE EVOLUTION OF PARCEL DATA SYSTEMS

The origin of parcel data systems in the West can be traced to ancient Rome, where land surveyors inscribed bronze tablets with base maps demarcating property boundaries and ownership information. After disappearing during the Middle Ages, property mapping reemerged during the Enlightenment to become a widespread tool for land management and the taxation of real property. Over time, local governments began to maintain records for additional types of property conditions, such as building code violations and the locations of structural fires. For centuries, all of this information was

contained in paper records that were stored in separate municipal offices.

In recent years, technologies such as GIS have revolutionized public recordkeeping. Local governments are now creating integrated land information systems that recurrently gather data on parcels from multiple agencies and store the information in a single location (see figure 1). Personal computers, the Internet, Web-based GIS mapping, and Web services have democratized access to these parcel information systems, making data housed at government agencies available to community-based organizations and the public.

While the process differs across localities, the development of parcel data systems generally occurs in four stages.

1. Transfer of paper cadastral records (property data linked to a map indicating parcel boundaries) maintained by the tax assessor into a regularly updated, computerized database.
2. Integration of parcel data developed by the assessor, the recorder of deeds, the housing department, and other agencies into a single automated system.
3. Creation of an integrated parcel data

Portland, Oregon, is home to one of the nation's most sophisticated parcel data systems delivered through an enterprise, or institution-wide, model. The city chose to invest $7 million to develop an integrated information system after a business analysis documented the inefficiency of running multiple GIS systems in different city departments.

PortlandMaps.com is a user-friendly, Web-based system that provides agency employees and residents a single entry-way to the city's extensive databases—including more than 250 layers of parcel data and a variety of applications—while saving the city nearly $1 million per year (Chandler et al. 2006).
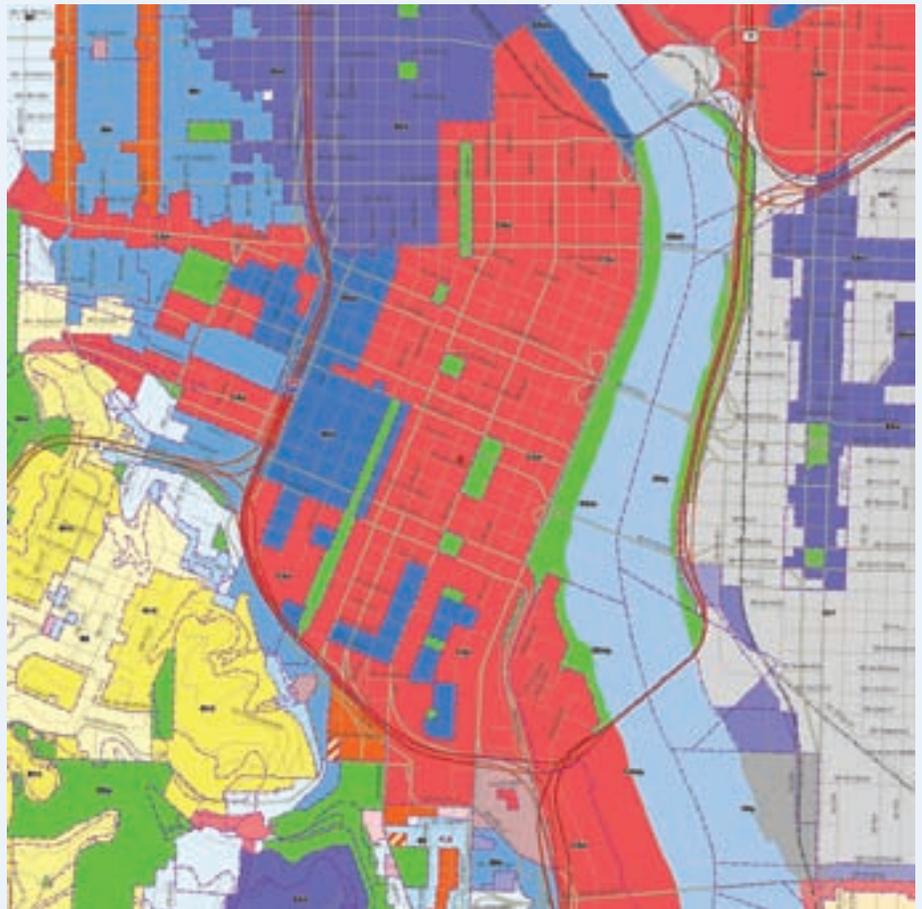
Source: PortlandMaps.com
© 2008 City of Portland, Oregon

system available to public sector employees on their desktops.
4. Development of a Web-based system accessible to government employees, community development practitioners, and the general public.

As parcel data systems develop, their power and utility grow. Combining databases previously stored in separate systems makes information access, maintenance, and distribution much more efficient. Sharing data across administrative agencies not only reduces the cost of acquiring and maintaining information, but also expands the selection of data available to users (see box 1). With these additional layers of information, users can perform different types of analyses that reveal new trends and opportunities. Moreover, cooperation on data system development can lead to improved interagency relationships, increasing the likelihood that participants will work together toward the same purpose (Nedovic-Budic et al. 2004).

The real value of integrated parcel data systems comes when community organizations and residents are able to access, review, and use the information. By virtue of their everyday presence, neighborhood-based users often possess the most up-to-date information about the ownership, value, and condition of properties. When brought into deliberative processes, they can use their local knowledge to verify data, confirm

findings, and develop more specific research questions. The bringing together of people and technology helps to build systems and institutions that are better equipped to create healthier, more equitable communities.

FACILITATING FACTORS FOR ADVANCED APPLICATIONS

Over the past 40 years as the federal government has decreased its involvement in neighborhood revitalization, community-based organizations (in particular, community development corporations or CDCs) and other nonprofit agencies have taken responsibility for the physical, social, and economic rehabilitation of distressed areas. In the process, these organizations have gained a sophisticated understanding of property markets and have become effective developers of affordable housing—and, increasingly, of mixed-income housing and mixed-use retail. Community development practitioners have also become adept at using data and mapping to support their activities (Craig and Sawicki 1996; Craig and Elwood 1998; Craig et al. 2002; Kingsley 1998).

While the democratization of parcel data systems is an enormous win for community development practitioners, data access alone does not automatically lead to

sophisticated applications. A mix of institutions and technological tools are needed to move parcel data into the field of community development (see figure 2).
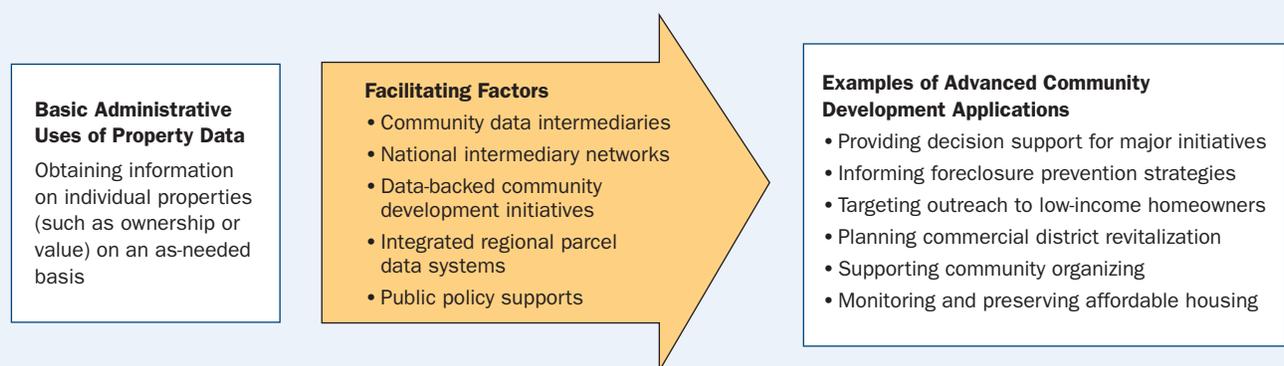
Community Data Intermediaries
Organizations that gather data relevant for neighborhood-level analysis and make the information available to community groups and local institutions play an essential role in bringing data and maps into the realm of community building (Barndt 1998; Treuhaft et al. 2006). Robust community development applications of parcel data are almost always guided by community data intermediaries, such as the Center on Urban Poverty and Community Development (Cleveland), the Cartographic Modeling Laboratory (Philadelphia), the Center for Urban and Regional Affairs (Minneapolis–St. Paul), the Chicago Metropolitan Agency for Planning, and *NeighborhoodInfo DC*.

In addition to building and maintaining comprehensive systems containing parcel- and neighborhood-level data, these intermediaries form institutional collaborations, partner with communities to develop data applications, pioneer new forms of applied research, and train local organizations and individuals on the use of data in community change. While many intermediaries

FIGURE 2
Advanced Community Development Applications Require Several Facilitating Factors

Basic Administrative Uses of Property Data

Obtaining information on individual properties (such as ownership or value) on an as-needed basis

Facilitating Factors
- Community data intermediaries
- National intermediary networks
- Data-backed community development initiatives
- Integrated regional parcel data systems
- Public policy supports

Examples of Advanced Community Development Applications
- Providing decision support for major initiatives
- Informing foreclosure prevention strategies
- Targeting outreach to low-income homeowners
- Planning commercial district revitalization
- Supporting community organizing
- Monitoring and preserving affordable housing

operate within universities, some are non-profit organizations or are hosted by government agencies.

National Intermediary Networks

Over two dozen community data intermediaries—such as the Cleveland, Minneapolis–St. Paul, and Washington, DC, institutions profiled in this report—participate in the Urban Institute's National Neighborhood Indicators Partnership (NNIP). This and other national learning networks help organizations adopt new information tools and use them effectively through information dissemination, convenings, and other activities. NNIP publishes guidebooks and research papers, holds semi-annual partner meetings, hosts a Web site and email listserve, conducts multisite demonstration projects, assembles national data sets, and provides technical assistance to startup intermediaries. The Community Indicators Consortium (CIC) is another learning network that fosters knowledge exchange among persons interested or engaged in the development and application of community indicators.

Data-backed Community Development Initiatives

Community development initiatives that promote the use of data and mapping in program development, monitoring, and evaluation (and provide the resources to support those purposes) help to catalyze innovative applications and effective collaborations. The Strategic Investment Initiative in Cleveland, the New Communities Program of the Local Initiatives Support Corporation (LISC) in Chicago, and the Neighborhood Revitalization Program in Minneapolis have effectively integrated the use of parcel data into community building. Creating the organizational capacity to use the data and technology is an important component of these successes.

Integrated Regional Parcel Data Systems

Land information systems that integrate property data maintained by separate administrative agencies and make the information available to users outside of government provide the basic infrastructure for advanced community development applications. Technological advances have enabled the rapid expansion of these systems at very low cost, and that trend is expected to continue (Chandler et al. 2006).

While most integrated systems are still at the city or county level, some—such as MetroGIS in Minneapolis–St. Paul—now include data layers for metropolitan regions. Regional data systems will become even more important in the coming years as the community development field extends into older suburbs and as groups increasingly incorporate a regional perspective into their work (Blackwell and Fox 2005).

Public Policy Supports

In addition to these institutional and technological factors, local political support and favorable public policies are essential elements in the development of advanced applications of parcel data. For example, mayoral initiatives to improve city data systems or prioritize efforts that require property data, such as reclamation of vacant property, help to drive innovation in the building and use of integrated systems.

On the public policy side, the federal Technology Opportunities Program (TOP), operated from 1994 to 2004, left a positive legacy that attests to the long-term benefits of investing in technological solutions to community challenges. State and local policies regarding access, sharing, and use of parcel data can also support advances in community development applications.

CHAPTER 2
Case Studies

The following case studies illustrate what is possible when community development practitioners are able to access parcel data, along with the tools and resources needed to analyze, manipulate, and display the information. Pioneering organizations and partnerships have developed advanced applications that use property data to conduct sophisticated analyses, support ongoing decision making and action, engage residents and local businesses, craft targeted outreach and program strategies, and guide and measure community investments. While by no means comprehensive, these case studies cover a wide range of community development arenas in distressed, transitional, and appreciating markets.

Table 2 identifies the many factors that contributed to the success of the advanced community development applications described in the case studies—applications whose power far exceeds the typical administrative uses for which the parcel data were originally captured and maintained.

TABLE 2
A Guide to the Case Studies

City/Region	Facilitating Factors	Applications of Parcel Data Systems
Chicago Region	*Community development initiative*: Full Circle Community Mapping and Planning Project; LISC's New Communities Program (NCP) *Parcel data system:* Parcel Pointer data system and mapping tools *Community data intermediary:* Chicago Metropolitan Agency for Planning (CMAP) *Institutional and policy supports*: John D. and Catherine T. MacArthur Foundation; Illinois Department of Commerce and Economic Opportunity; federal TOP grant	• Planning commercial district revitalization • Guiding transit-oriented development • Improving neighborhood food options • Extending housing preservation resources to low-income homeowners • Engaging community members in zoning re-map • Informing community land trust acquisitions • Identifying affordable rentals at risk of conversion
Cleveland	*Community development initiative*: Neighborhood Progress, Inc.'s Strategic Investment Initiative (SII) *Parcel data system*: Northeast Ohio Community and Neighborhood Data for Organizing (NEO CANDO) *Community data intermediaries*: Center on Urban Poverty and Community Development, Case Western Reserve University; Urban Development Law Clinic, Cleveland State University *Institutional and policy supports*: Local foundations; local politicians	• Providing decision support for land acquisition and model block efforts • Supporting block group, resident engagement, and community organizing activities • Targeting foreclosure prevention efforts • Informing citywide reclamation of abandoned properties
Minneapolis–St. Paul Region	*Parcel data systems*: Minneapolis Neighborhood Information System (MNIS); MetroGIS regional data collaborative; Minnesota 3-D *Community data intermediary*: Center for Urban and Regional Affairs (CURA), University of Minnesota *Institutional and policy supports*: Federal TOP grant	• Evaluating university impacts on neighborhood housing markets • Analyzing citywide foreclosure trends • Guiding transit-oriented development • Informing foreclosure prevention strategies • Mapping the regional jobs/housing imbalance • Assessing the impacts of new light rail service
Philadelphia	*Community development initiative*: Neighborhood Transformation Initiative (NTI) *Parcel data system:* Philadelphia Neighborhood Information System (NIS); BUILD vacant property management system *Community data intermediary:* Cartographic Modeling Laboratory (CML), University of Pennsylvania *Institutional and policy supports*: City of Philadelphia	• Targeting outreach to "tangled title" holders • Coordinating housing and commercial investments • Conducting urban policy research and analysis • Monitoring multiple community indicators • Tracking vacant properties from acquisition to disposition • Informing selection of parcels for green space and housing rehabilitation
Washington, DC	*Parcel data systems*: City of Washington, DC, real property database; *NeighborhoodInfo DC* data warehouse; HUD Section 8 database *Institutional and policy supports*: DC Department of Housing and Community Development; local CDCs and other nonprofits	• Producing quarterly reports on affordable housing • Monitoring expiring Section 8 units • Providing decision support for collaborative efforts to preserve Section 8 units

CHICAGO, ILLINOIS
Aligning Neighborhood Planning with Regional Development Goals

With its diversified economic base, thriving high-tech and finance industries, high rates of immigration, and growing ethnic diversity, the Chicago region stands out from its fellow Rust Belt metros. A massive influx of capital during the 1990s sent waves of change throughout the area, with development in the urban core creating a host of spillover effects in many neighborhoods. At the same time, the pattern of urban sprawl continues, with the outer-ring suburbs experiencing the fastest population gains (Taylor and Puente 2004).

The combined impacts of urban reinvestment and sprawl are complex. Housing affordability for both lower- and middle-income households is a major concern as communities across the region struggle to manage change. Many traditionally lower-income or working-class neighborhoods are now in transition while others remain in need of reinvestment. Ensuring that revitalization leads to improved quality of life and that current residents, businesses, and organizations have a say in planning the future of their neighborhoods are critical regional development goals.

The Full Circle Community Mapping and Planning Project

Chicago is home to a unique effort to apply parcel-level data and Web-based GIS tools to shape growth and development in the region. Initiated in 2003, the Full Circle Community Mapping and Planning Project provides community stakeholders—CDCs, health advocacy groups, local governments, and others—with the technological tools to collect and map previously unavailable local data, and to use the maps in participatory
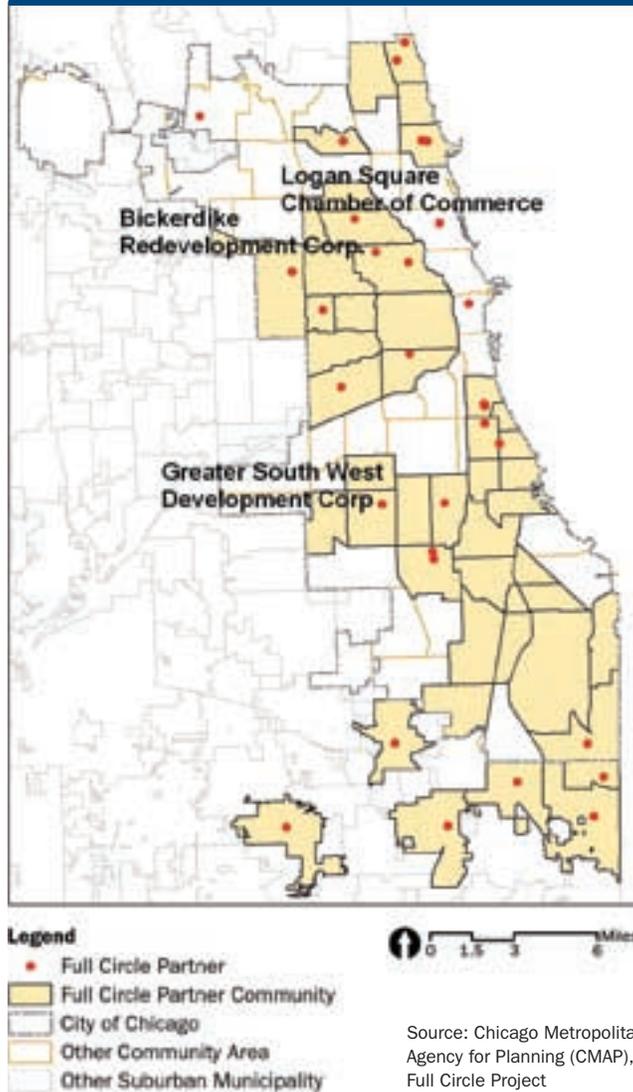
neighborhood planning efforts that align with regional development goals. The majority of Chicago's 77 communities are partners in the Full Circle Project (see figure 3).

The project and data system are managed by the Chicago Metropolitan Agency for Planning (CMAP), the regional planning agency for seven counties in northeastern Illinois. The project was launched with a $675,000 grant from the federal Technology Opportunities Program (TOP), with matching dollars from the John D. and Catherine T. MacArthur Foundation. MacArthur and the Local Initiatives Support Corporation (LISC) Chicago also support the use of the Full Circle system in the New Communities Program, a $17.5 million comprehensive planning effort underway in 14 communities. Grantees are encouraged to use the data and mapping system to catalogue community assets in developing and implementing strategic plans.

The Full Circle data system traces its roots to the Forum on Housing Solutions, convened by the Chicago Department of Housing in 2001. Recognizing that the lack of electronically accessible housing data was a major obstacle to decision making, the forum recommended the creation of a centralized, Web-based data repository to be hosted by a government entity with a regional reach. The Northeastern Illinois Planning Commission (NIPC), which would later merge with another regional planning agency to form CMAP, was chosen as the host. The clearinghouse initially included census information at the tract and block-group levels, then gradually added parcel-level data from the Cook County Assessor, the Cook County Recorder, the Chicago Department of Housing, the Illinois Housing Development Authority, and the U.S. Department of Housing and Urban Development (HUD).

As the data repository was being developed, stakeholders continued to call for more

FIGURE 3
Dozens of Organizations and Municipalities Participate in Chicago's Full Circle Project

Legend
- Full Circle Partner
- Full Circle Partner Community
- City of Chicago
- Other Community Area
- Other Suburban Municipality

Source: Chicago Metropolitan Agency for Planning (CMAP), Full Circle Project

detailed and more timely information on neighborhood assets and conditions. In response, NIPC applied for and received the TOP grant to develop the Full Circle system. Six organizations were initially selected to participate in the project in 2004, and six of the New Communities Program organizations joined in 2005–2006. Any interested organization can now attend the quarterly user meetings, receive training on data collection, obtain customized poster-sized

maps, and otherwise capitalize on the technology and know-how of the Full Circle staff.

The technology included in the Full Circle toolkit includes wireless "smart phones" that capture land use data in the field and deposit the information directly into a Web-based GIS system, known as Parcel Pointer, for later mapping and retrieval. The system allows users to track dozens of variables for any property and supports public, observational (user-generated), and survey data. As organizations adapt Parcel Pointer to their specific needs, they work with CMAP to develop new modules that other groups can then use. Surveys of historic structures, health clinics, social service providers, and employment opportunities are just a few of the modules that have been added.

Some of the most common applications of the Full Circle system involve data gathering and mapping to inform community economic development and commercial district revitalization in ways that engage residents, connect people to jobs, and build local planning capacity. Among the specific tools that help users understand the local business environment are Business List and

Business Survey. Business List is a business database populated with data from the electronic Yellow Pages and other sources. The system allows users to view the businesses located within a census tract or community, edit information that is incorrect, and add new data and/or new businesses. The Business Survey tool allows users to gather three types of information: conditions visible from curbside, interior characteristics, and opinions of managers or customers. Users create their own questionnaires by selecting from lists of possible data fields.

Planning Downtown Revitalization in Harvey

The business surveys were the central tools used in a year-long collaborative planning pilot project funded by the Illinois Department of Economic Development to help Harvey and two other inner-ring suburbs coordinate local efforts with regional planning objectives. In Harvey, an older working-class suburb of about 30,000 located south of Chicago, the plan focused on transit-oriented development (TOD) by integrating the train station and bus services into the urban fabric and attracting new businesses to fill vacant sites.

Local planners collaborated with the Center for Neighborhood Technology and the Human Action Community Organization to collect data needed to implement the city's Downtown Revitalization Plan. The groups used the Full Circle tools to inventory 162 parcels in Harvey's commercial district, collecting information on 25 parcel-level and 25 business-level attributes.

The surveys revealed that nearly a quarter of the commercial district parcels were vacant, and that a similar share had buildings in only fair to poor condition (Chicago Metropolitan Agency for Planning 2007). Harvey's planners used the results of this analysis to take several actions.

- *Identify and market potential infill sites.* The team produced site-specific development opportunity brochures that include maps and other detailed information to use when negotiating with developers.
- *Locate the owners of vacant parcels and buildings in poor condition.* The City of Harvey is talking with property owners about improving the appearance of their buildings.
- *Create a new transit-oriented overlay district.* Zoning changes and new design codes were needed to permit land assembly, attract desirable development, and promote a pedestrian-friendly downtown. The City Council has now approved the TOD overlay district proposed by the project partners.

The City of Harvey also plans to use the Full Circle tools to interview business owners about their concerns for and interests in downtown redevelopment, and to collect additional information on hours of operation, length of tenure, mode of transportation used by customers, and traffic and parking issues.
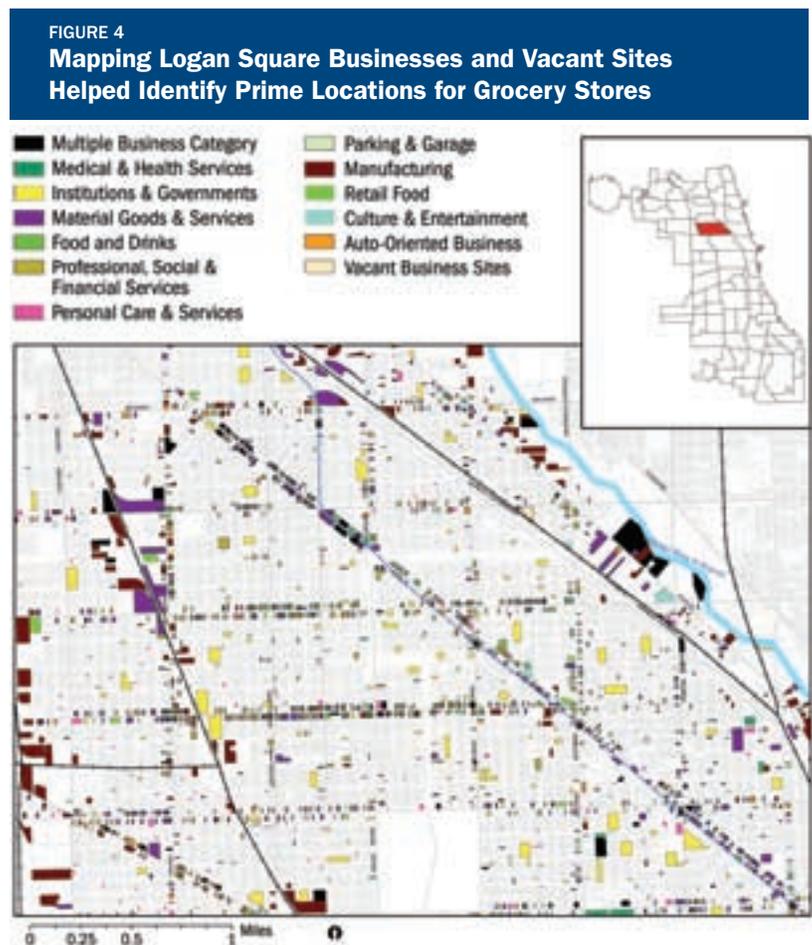
Improving Access to Quality Food in Logan Square

In another innovative application of the Full Circle system, the Logan Square Chamber of Commerce has worked for several years to encourage business development that meets the need for good-quality groceries and produce in this underserved Chicago neighborhood. In the spring and summer of 2006, chamber staff used the Business Survey tool to gather information on the types and locations of more than 1,100 businesses, including food retailers (see figure 4). They also catalogued vacant business sites. The chamber then used the maps—illustrating potential store locations as well as information on demographics and customer habits—to approach a small-format natural foods grocer that had recently entered the region.

The chamber also partnered with a citywide public health advocacy group, the Consortium to Lower Obesity in Chicago's Children, to survey the availability of fresh foods in the neighborhood. These new, more granular data are helping the organizations clarify the challenges and opportunities around providing Logan Square residents better access to healthy foods.

Preserving Historic Bungalows in Chicago Lawn

In the Chicago Lawn neighborhood, the Greater Southwest Development Corporation (GSDC) used the Full Circle tools to connect low-income homeowners with resources to preserve their homes. Between 1910 and

FIGURE 4
Mapping Logan Square Businesses and Vacant Sites Helped Identify Prime Locations for Grocery Stores

Source: Chicago Metropolitan Agency for Planning (CMAP), Logan Square Chamber of Commerce

FIGURE 5
Historic Bungalows Are Scattered Throughout the Chicago Lawn Area

Legend

☐ Other Structure Types

■ Certified Bungalows (158)

☐ Logged Bungalows, not certified (1422)

☐ Census Tract

☐ Historic Bungalow Model Block
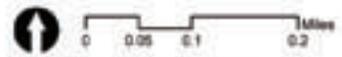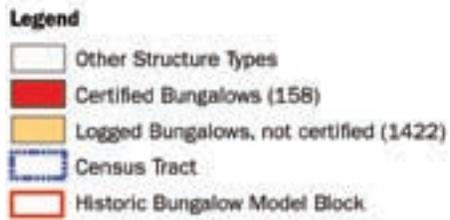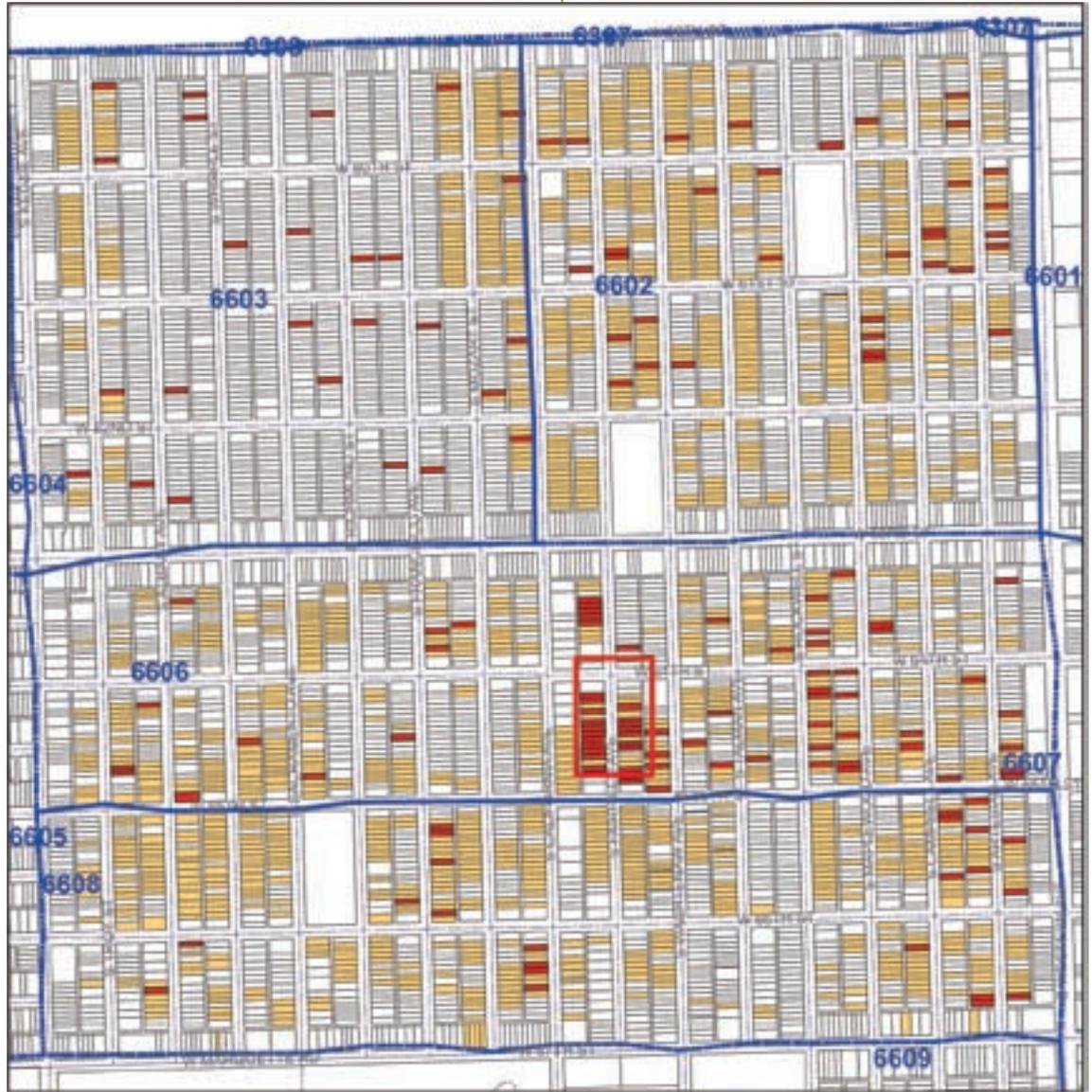
Source: Chicago Metropolitan Agency for Planning (CMAP), Greater Southwest Development Corporation

1940, Chicago architects built thousands of one-and-a-half-story, detached brick homes in an area now called the bungalow belt. In 2000, the city launched the Historic Chicago Bungalow Initiative to support the preservation and upgrading of these homes through a certification process, design guidelines for rehabilitation, and access to technical and financial assistance.

GSDC knew that the resources of the bungalow initiative could contribute to housing stabilization in the community of Chicago Lawn. The certification process is free and simple, qualifying owners for up to $8,500 worth of subsidies. But GSDC had no way to determine the number of eligible Chicago-style bungalows in the area.

In the summer of 2005, GSDC used the Full Circle handheld devices to collect data on 2,444 properties in four census tracts in the community. In addition, the CDC obtained the list of certified bungalows from the city and CMAP geocoded the data to incorporate the information into the Parcel Pointer system (see figure 5).

Inventorying the bungalows in the community and overlaying this information with the city data revealed that only 158 of the area's 1,422 Chicago-style bungalows were certified. GSDC conducted targeted outreach and marketing of the home improvement grants using letters, flyers, home visits, and informational meetings attended by nearly 300 residents. To date, these efforts have resulted in 200 new applications for bungalow certification.

Additional Applications

Bickerdike Redevelopment Corporation—a high-capacity, resident-driven CDC working in Chicago's transitioning northwest neighborhoods—has used the Full Circle system extensively in its housing and community organizing work. For example, staff and interns collected data on land use and building conditions in two census tracts slated for zoning re-map (see figure 6). The maps helped the community determine that the current zoning was appropriate and to make recommendations to the city.

Bickerdike staff also logged the 1,063 housing units it has built in the community into the system, creating maps that have been invaluable for internal strategic planning as well as for demonstrating the CDC's impact to potential funders. Bickerdike is currently using the Full Circle tools to document vacant land parcels and collaborate with other local organizations to identify land for the First Community Land Trust of Chicago, which will preserve affordable housing and increase community control over development in the Humboldt Park neighborhood.

While most Full Circle projects focus on the neighborhood or community level, CMAP recently joined in a collaborative effort to preserve affordable rental housing throughout the city. Led by the Urban Land Institute with support from the MacArthur Foundation, the Preservation Compact is a plan to preserve 75,000 affordable rentals in

Using Full Circle tools, Greater Southwest Development Corporation was able to connect low-income bungalow owners in Chicago Lawn to city funds for upgrading their homes.

The Survey of Building Conditions Informed the Zoning Re-Map

Legend
- Census Tracts
- Excellent (28)
- Good (482)
- Fair (161)
- Poor (12)
- Uninhabitable (2)
- Not Applicable (154)
- Unknown or NA (106
- Not Logged (32)

0   0.025 0.05   0.1 Miles

Source: Bickerdike Redevelopment
Corporation and Northeastern Illinois
Planning Commission

Chicago that could be lost to condominium conversion, demolition, or rising costs. CMAP, along with the city and DePaul University, is assisting in the development of a rental data clearinghouse and early warning system to identify at-risk properties. The data collection effort builds on a study by Lakeside Community Development Corporation that tracked condominium conversions in the Rogers Park and West Ridge communities through a combination of administrative parcel data and field surveys.

CMAP will provide the group training and support in the use of the Full Circle system, along with new county assessor data estimating condo conversions based on changes in land use codes. These new data will be used to identify multifamily rentals that are undervalued in neighborhoods with a strong or strengthening condo market. A team will use the early warning system and the Full Circle tools to monitor condo conversions and analyze contributing factors in eight to ten neighborhoods.

CLEVELAND, OHIO
Fostering Neighborhood Market Recovery

Strategically located on the Cuyahoga River at the southern shore of Lake Erie, Cleveland was one of the country's great industrial centers. With the decline of heavy manufacturing, the city has gradually shifted to a knowledge- and service-based economy. While public-private efforts attempted to revitalize the downtown in the 1990s, the stagnant regional economy has left the city struggling to overcome population decline and a deteriorating job base. The weakness of real estate markets is a particular problem, leading to widespread housing abandonment and blight.

Cleveland has built a rich network of community development institutions to address these challenges. At the center of the network is Neighborhood Progress, Inc. (NPI), an intermediary founded in 1988 to coordinate philanthropic and civic invest-

ments in the city's 36 neighborhoods. NPI provides 14 of the city's 40 or so community development corporations (CDCs) with operating support and research assistance, training and capacity-building services, financing for both residential and commercial projects, and development services for larger-scale projects. Funding comes from local philanthropies including the Cleveland Foundation, the George Gund Foundation, and the Mandel Foundation, as well as from Living Cities (formerly the National Community Development Initiative).

The Strategic Investment Initiative
NPI's Strategic Investment Initiative (SII), a bold, long-term plan to catalyze market recovery in six neighborhoods, is the most comprehensive data-driven community development effort under way in the city.

Parcel-level data on property conditions and transactions, provided by the Center on Urban Poverty and Community Development at Case Western Reserve University's Mandel School of Applied Social Sciences, play an integral role in the initiative.

Launched in 2004, SII focuses resources intensively in a few areas that have the best chance of becoming regionally competitive neighborhoods of choice (Proscio 2003). The goal is to demonstrate that targeted improvements can foster a genuine market turnaround (see box 2). The six neighborhoods were selected based on their location assets, a CDC with a proven track record of success, and a proposal for an anchor project of sufficient scale to catalyze additional private development. In addition to NPI's general operating assistance grants (ranging from $60,000 to $150,000 per year), each SII neighborhood received $466,000 per year for operating support and information resources, technical assistance, and training.

The primary activities in the SII neighborhoods are developing land assembly plans to acquire vacant properties around the anchor projects, and implementing model blocks within smaller areas adjacent to the anchor projects. The model block concept —based on the successful "healthy neighborhoods" approach taken in Baltimore, Philadelphia, and elsewhere—rests on the principle that making small yet visible improvements to properties and streets (such as landscaping, pole lighting, and decorative house numbering) can restore confidence in the neighborhood and engage residents in the revitalization process (see box 3).

Integrating Parcel Data into SII

The Center on Urban Poverty and Community Development at Case Western is a key SII partner. The center is a regional data intermediary that has maintained a neighborhood-level information system—Northeast Ohio

Community and Neighborhood Data for Organizing, or NEO CANDO—for 17 counties in northeastern Ohio since 1992. A parcel-level system for Cuyahoga County was added in 2005. Updated monthly, NEO CANDO contains data on property conditions, ownership, and values, as well as indicators of vacancy and abandonment (e.g., utility shutoffs and low water usage).

Property data from NEO CANDO and other sources provide the basis for decision making for SII's land assembly team. This group of technical experts works regularly with the participating CDCs to carry out land assembly planning and devise acquisition and preservation strategies. The team includes an attorney at the Urban Development Law Clinic at Cleveland State University, one or more part-time law student interns, the developer of the NEO CANDO data system, and two NPI staff members.

The center provides a number of data products to inform the land assembly team's monthly meetings, including a prioritized list of blighted properties, a series of parcel maps, and a spreadsheet for each SII neighborhood, along with an investigative guide to direct and record additional research on specific properties. At the meetings, leaders from the CDCs review the data products to determine targets for acquisition, track the status of efforts, and decide what additional actions to take. Law clinic students conduct research on the priority properties, following the investigative guide for gathering information from the NEO CANDO system and other public and private sources of property data.

All of the tools are housed in a shared Web space provided by the center and accessible to team members from their desktops. The same parcel data and maps created for and regularly updated through the land assembly team process also underlie model block development, neighborhood planning,

and resident engagement strategies in each of the SII neighborhoods.

Community Organizing in Slavic Village

Slavic Village, one of Cleveland's oldest neighborhoods, is an SII target for market recovery. Settled in the mid-nineteenth century by Polish and Czech immigrants working in the nearby textile and steel mills, the community has undergone a major demographic shift as many residents have moved to homes in the suburbs or passed away. The area's housing market is extremely distressed, with high rates of predatory lending, mortgage fraud, and property flipping (see figure 7). In June 2007, Slavic Village had the highest number of foreclosure filings in the country (Christie 2007).

Slavic Village is also home to Slavic Village Development, one of Cleveland's largest, highest-capacity CDCs. For over two decades, the organization has worked to revitalize the neighborhood and engage residents in its

Slavic Village Development undertakes community building in a neighborhood that was especially hard-hit by the mortgage foreclosure crisis.

Source: NEO CANDO (2007); prepared by the Center on Urban Poverty and Community Development, Mandel School of Applied Social Sciences, Case Western Reserve University, Cleveland

activities. In addition to their housing and retail development activities, CDC staff provide assistance to the more than 35 block clubs that meet monthly to address neighborhood issues such as safety and housing. The block groups provide a connection to the SII initiative, serving as a forum where residents can identify problem properties for demolition or other actions.

Through SII, Slavic Village Development has been acquiring properties around Morgana Run, a 135-unit, $35 million market-rate residential development located next to a new 20-mile bike path on a former rail line that connects the neighborhood to Cuyahoga Valley National Park. The CDC also targets home improvements in the adjacent model block zone. While CDC staff were data-savvy prior to SII, the initiative has helped them incorporate mapping into their work, which they have found to be a valuable analytical and communications tool.

What is most remarkable about the SII effort in Slavic Village, however, is the level of community action it has generated. In late 2006, two local leaders—an attorney and an active member of the citywide East Side Organizing Project—and more than 30 residents formed the Vacant Property Task Force. The group meets regularly with NPI and representatives from the city's Code Enforcement Department to address mortgage fraud, property flipping, and related community issues.

Based on a suggestion from the attorney, the NEO CANDO staff developed an innovative way to find individuals who abuse the system. By overlaying mortgage loan transaction data on buyer-seller combinations with foreclosure filings, the team was able to identify a specific person who was flipping properties on a massive scale. This individual would take out subprime loans to buy up homes at sheriffs' sales, make cosmetic repairs, and then sell the units to another

individual who also obtained subprime financing. The buyer immediately defaulted on the loan, sending the properties back into foreclosure. The two then divvied up the profits, leaving the lenders with unpaid mortgages and adding to the neighborhood's high vacancy rates.

The evidence was enough to capture the attention of the state attorney general and the county prosecutor, who is now pursuing legal action. Members of the resident task force are currently at work on a white paper describing how they uncovered these destabilizing forces in their neighborhood, which they will share with other communities facing similar issues.

Additional Applications

As SII entered its second three-year phase in July 2007, foreclosure prevention became a new priority. To develop an early warning system, the Center on Urban Poverty and Community Development added foreclosure filings from the Cuyahoga County Court and water shutoff data from the utilities company to the NEO CANDO system (see figure 8). If a foreclosure proceeding has been filed on a property and the water is still on, resources can be directed to help the owner retain the home. If a proceeding has been filed and the water has been shut off, the property is likely to be abandoned and therefore becomes a priority for an intervention such as landbanking or redevelopment.

Property data are also informing other neighborhood improvement efforts in Cleveland. The National Vacant Properties Campaign, along with local partners NPI and the Cleveland Neighborhood Development Coalition, initiated a citywide effort to reclaim vacant properties for productive use. These organizations convened the Vacant and Abandoned Property Action Council, which includes leaders from the public and private sectors involved in preventing,

FIGURE 8
Combining Water Shutoff and Foreclosure Data Helps Target Properties and Determine Appropriate Interventions
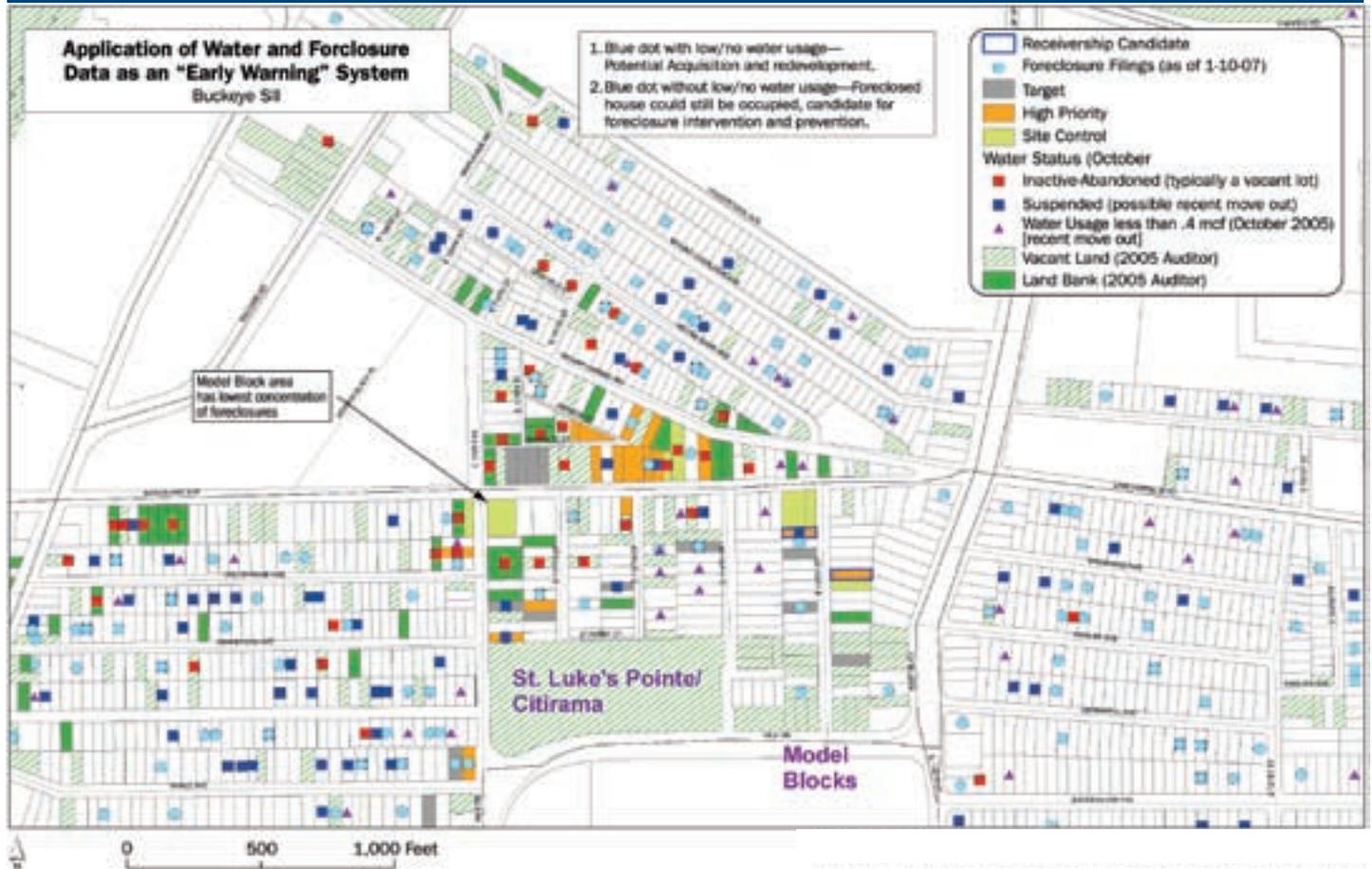
Source: NEO CANDO (2007); prepared by the Center on Urban Poverty and Community Development, Mandel School of Applied Social Sciences, Case Western Reserve University, Cleveland

reclaiming, and redeveloping abandoned properties. One of the council's goals is to continue to strengthen the NEO CANDO parcel data system.

Cleveland Mayor Frank Jackson also continues to support the SII approach by incorporating certain elements into citywide revitalization efforts. Jackson launched a new neighborhood reinvestment strategy in early 2007 with the goal of creating mixed-income communities of choice. To assess current conditions, the city developed a neighborhood typology based on the analysis of seven property characteristics. Much

of the data came from the NEO CANDO system. Neighborhoods were categorized in one of five ways: regional choice, stable, transitional, fragile, and distressed (City of Cleveland 2007).

This typology is being used to align limited public investments such as home repair loans and code enforcement with specific neighborhood conditions. Jackson has also launched efforts to help local CDCs stabilize property markets, including tripling the city's demolition budget and allocating resources to the creation of model blocks in transitional and fragile neighborhoods.

MINNEAPOLIS–ST. PAUL, MINNESOTA
Shaping Institutional and Policy Solutions to Regional Challenges

The Twin Cities metropolitan area—which includes the central cities of Minneapolis and St. Paul, Minnesota, along with more than 300 local and regional governments—is one of the strongest regional economies in the country, but rapid growth has created a number of challenges. The combination of concentrated poverty and urban decline in the 1980s, subsequent middle-class flight to the suburbs, and policies favoring the movement of people and jobs to the suburban fringe have strained the region's infrastructure and contributed to social and racial inequities. Employment centers are increasingly far from the urban core, resulting in longer commutes, growing congestion, and limited access to jobs for people of color, who tend to live in the central cities. The large and growing immigrant population—from places as diverse as Mexico, Southeast Asia, and sub-Saharan Africa—also lacks access to opportunities.

Communities and government agencies recognized that neighborhood and parcel-level data were needed to understand and address these complex dynamics. Moreover, the data had to cover not only the two central cities, but also the seven counties that make up the region. Three institutions have been crucial in building a strong infrastructure for parcel-level data sharing in the Twin Cities: the Center for Urban and Regional Affairs (CURA) at the University of Minnesota, the City of Minneapolis, and the regional data intermediary MetroGIS.

Building the Urban and Regional Data Infrastructure

As an applied research center, CURA links the resources and tools of the university to

nonprofit organizations, businesses, neigborhoods, local governments, and state agencies. The center has led the charge in bringing new information technologies to bear on urban and regional issues, and is widely recognized as the go-to resource for geographic data and mapping. Along with advanced tools to assist with problem analysis and decision making, CURA provides technical assistance to ensure community institutions can access and apply those tools effectively.

In 2001 the City of Minneapolis received a three-year federal Technology Opportunities Program (TOP) grant to work with CURA to develop an integrated property database to address housing deterioration and abandonment. This system combined the city's efforts at neighborhood-based planning through its 20-year Neighborhood Revitalization Program (NRP) and its goal to create an enterprise GIS system.

Implemented in late 2002, the Web-based Minneapolis Neighborhood Information

System (MNIS) receives nightly parcel-level data updates from the city assessor, planning, and inspection department databases. The system is a collaborative project of the city, CURA, and community users. The city maintains the hardware, CURA provides the programming and user support, and neighborhood organizations sit on the steering committee in exchange for training, project assistance, GIS expertise, and access to property information. Since 2001, 25 groups—at least half of the neighborhoods in the city—have participated. Although the MNIS-equivalent does not yet exist in St. Paul, several community organizations have formed the St. Paul Community GIS Consortium, providing users access to St. Paul/Ramsey County data.

Minneapolis–St. Paul is also home to one of the strongest regional data collaboratives in the country. MetroGIS emerged from the well-developed system of regional governance. The Metropolitan Council was

The Stadium Area Advisory Group (SAAG) discusses preliminary findings from community meetings regarding the University of Minnesota's relationship with adjacent neighborhoods.

established in 1967 to coordinate planning and development within the metro area and to address interjurisdictional issues. In 1994, the Metropolitan Reorganization Act greatly expanded the council's mandate to include all regional sewer, transportation, and land use planning (Orfield 1997).

That same year, the council took the lead in organizing and sponsoring a regional data collaborative. Launched in 1995, MetroGIS is a stakeholder-governed mechanism for sharing geographic data in the region. The intermediary coordinates the production, maintenance, and documentation of regional data and provides a one-stop shop—the DataFinder Web site—for information clipped to specific geographic boundaries (Johnson 2005). After many years of negotiations, MetroGIS secured data-sharing agreements with each of the seven counties for a regional parcel layer with a set of common attributes.

This extensive infrastructure has made it possible to develop new applications of parcel data for a variety of urban and regional issues. This case study focuses on two areas of community development practice and policy: the impacts of universities on neighborhood property markets, and the prevention of widespread mortgage foreclosures.

Resolving Town-Gown Conflicts

Like other large universities and medical centers, the University of Minnesota plays a major role in shaping the physical, social, and cultural environment of Minneapolis. Its campus is a vibrant center where tens of thousands of students and residents converge daily to work, learn, and socialize. At the same time, the university's size, control over land use and development, and plans for expansion have put pressures on the housing markets and infrastructure in surrounding neighborhoods. These pressures have grown in recent years as the university has


sought to expand dormitory space to increase the proportion of students living on campus.

When the state passed legislation in 2006 to fund construction of the university's new football stadium, the bill required the institution to assess its impacts on neighboring communities and provide consensus recommendations for action. The committee established to implement this mandate, the Stadium Area Advisory Group, was made up of representatives of community organizations, business associations, local government, the state fair, and university students. CURA was responsible for conducting data and mapping analyses of the four surrounding neighborhoods that together contain 35,500 people, 4,080 parcels, and 11,865 housing units. A variety of parcel-level data informed the analysis, including past and
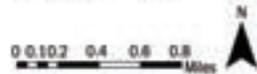
Many single-family homes around the University of Minnesota have been converted to student housing.

FIGURE 9
Mapping Revealed the Growing Incidence of Relative Homesteading
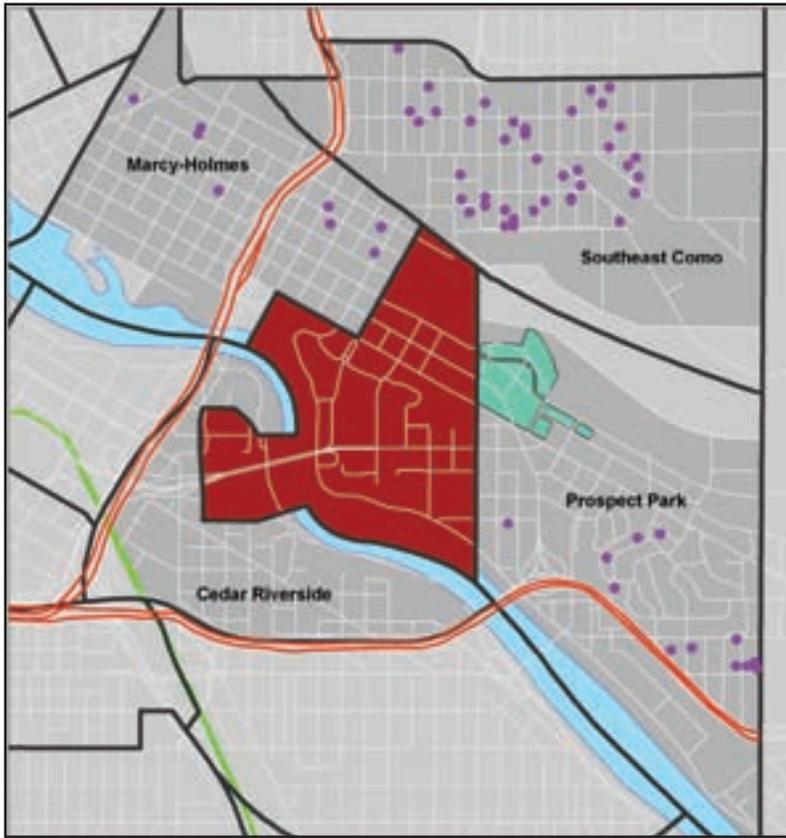
Legend

▇	University of Minnesota Campus
━	Interstates
▨	Stadium/Bioscience Research Site
━	Hiawatha LRT
•	Relative Homesteaded Properties

Relative Homestead Properties 2006

Neighborhood Name	Relative Homestead Properties	Total Homestead Properties	Percent Relative Homestead
Cedar Riverside	—	642	—
Como	40	850	4.7%
Marcy Holmes	8	872	0.9%
Prospect Park	12	948	1.3%
Total Nhbds.	60	3,312	1.8%
Minneapolis	783	83,560	0.9%

0 0.10.2 0.4 0.6 0.8 Miles

N

Data Source: City of Minneapolis (2006); map created by the Center for Urban and Regional Affairs (CURA) at the University of Minnesota

single-family homes. The study team determined that 224 properties in the four neighborhoods had been converted between 2000 and 2006. Some investor-landlords were turning older single-family homes into rooming houses, while others were demolishing the original buildings to build poor-quality, multi-bedroom structures. About a quarter of the conversions were due to "relative homesteading" (see figure 9). In these cases, parents of students purchase properties for their children to live in during their university years. Because the units are not subject to rental constraints, several students often live together in the units.

Many of the new rental properties were therefore either illegal or violated housing codes, and the city's inspections/code enforcement staff had not inspected the housing. These conditions contributed to an artificial rise in single-family property values, eroding affordability and deterring families from purchasing homes in the area.

New understanding of these housing market impacts was achieved through an iterative process. The university researchers brought their initial data analyses and maps to vet with members of the task force, which included representatives from the city's planning and public works departments, the primary neighborhood development organizations, and the Office of University Relations. The group met once every week or two over a five-month period. Team members also engaged additional community stakeholders in the process, meeting with every neighborhood organization and business group in the area at least once.

Vetting the initial findings with neighborhood stakeholders helped the study team verify the information and refine their research questions. At times, they discovered from residents that the city data on ownership or other property characteristics were inaccurate. The process also revealed the

current housing tenure and market value, as well as current land use, age and condition of the stock, demolitions, and university data on the residential locations of faculty and staff.

A number of important insights emerged. Increased demand for student housing was being met through both new construction of private rental units and conversion of

relative homesteading phenomenon, which the study team was then able to investigate and map.

The data and maps also helped task force members craft solutions. For example, the maps showing the residences of university faculty and staff in the four neighborhoods pointed to some possible approaches to stabilizing the area (see figure 10). One strategy would be for the university to offer incentives to employees to live in the near-campus neighborhoods, as urban institutions elsewhere have done (Hoereth et al. 2007).

In addition, the data made clear that the four neighborhoods, while diverse in their socioeconomic and housing characteristics, were similarly affected by their proximity to the university. But because of the devolved system of neighborhood planning in the city, the Neighborhood Revitalization Program funded each area separately. The impact analysis suggested that the four neighborhoods could better address their common issues through a coordinated effort.

The University of Minnesota, the City of Minneapolis, and the Stadium Area Advisory Group ultimately recommended that the legislature declare a University Community Partnership District that would include the four neighborhoods and create an alliance governed by university, city, and neighborhood representatives. In May 2007, Governor Tim Pawlenty signed a higher education bill that included an allocation of $750,000 to establish the University of Minnesota–Minneapolis Area Neighborhood Alliance.

Meanwhile, the city and the university agreed to take immediate action. The city's Department of Regulatory Services committed to inspecting all rental properties within the University Community Partnership District in 2007–2008. The university also agreed to conduct training for students on tenant rights and responsibilities, and to explore a

FIGURE 10
The University Used Parcel Data to Analyze Faculty and Staff Housing
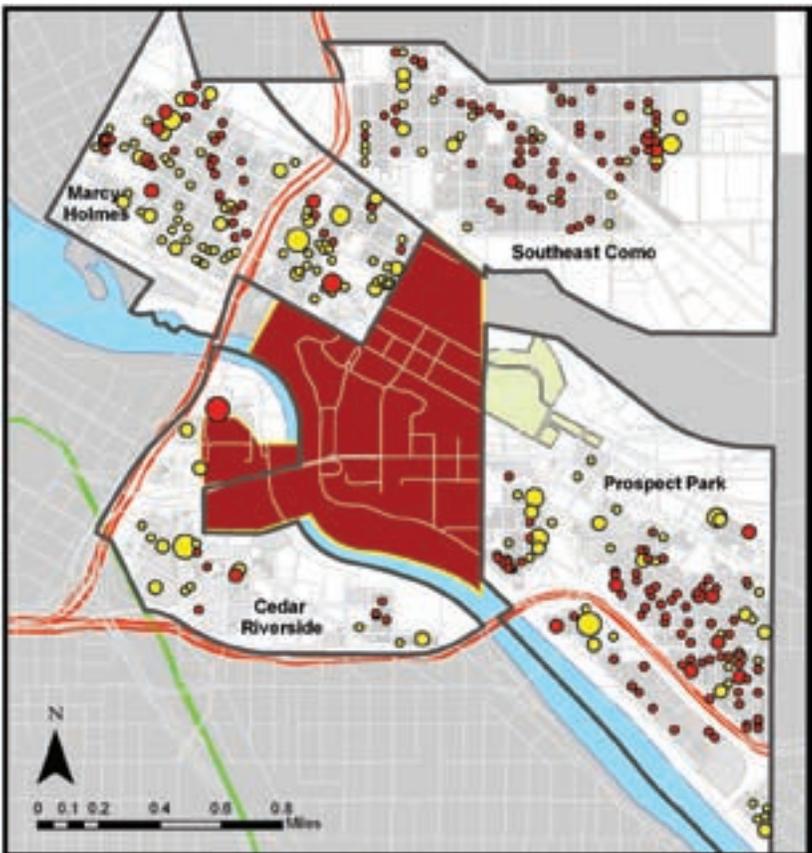
Legend

- All Neighborhood Parcels
- Residential Parcels
- University of Minnesota Campus
- Stadium/Bioscience Research Site
- Interstates
- Hiawatha LRT

Homestead
- 1
- 2–3
- 4–5
- 6 or more

Non-Homestead
- 1
- 2–3
- 4–5
- 6 or more

Parcel Homestead Status

	U Employee Parcels		All Parcels		% Employee Parcel of All
Homestead	185	54%	2,544	62%	7.3%
Non-Homestead	156	48%	1,536	38%	10.2%
Total	341		4,080		

Data Source: Minneapolis Neighborhood Information System (MNIS) and the University of Minnesota (2006); map created by the Center for Urban and Regional Affairs (CURA) at the University of Minnesota.

future partnership with one or more of the public schools in the district.

In addition to forming an innovative university-community collaboration, the initiative resulted in other important

outcomes. Participants in the meetings gained a shared understanding of why the neighborhoods were experiencing decline. The process brought stakeholder groups that were unused to working together into new partnerships. City staff members who initially came to the meetings as observers over time became engaged participants. Once the university saw how its future as a top-tier research institution was linked to conditions in the surrounding neighborhoods, it became much more involved in community issues. And finally, all of these activities sent a warning to landlords that neighborhood residents were taking back control of their community.

Responding to the Mortgage Foreclosure Crisis

While mortgage foreclosures in and around the Twin Cities were clearly on the rise in 2006, the extent of the problem and its root causes were largely unknown. Recognizing the need to address the problem regionwide, representatives from Minneapolis and St. Paul, along with seven nonprofit housing development, policy, and funding organizations, formed the Foreclosure Prevention Funders Council in February 2007. The council's goals were to identify foreclosures and determine the causes; coordinate financial resources to focus on foreclosures; and create new financing and innovative remediation and rehabilitation tools to address the problems associated with vacant and boarded buildings.

Creating an information infrastructure was a critical first step in achieving these goals. HousingLink, a regional fair housing data intermediary and member of the council, partnered with CURA to take on the arduous task of data collection. Assembling the information involved collecting data on sheriffs' sales (public auctions of foreclosed properties) from seven counties,

six of which had only paper records. Although Hennepin County did maintain electronic records of sheriffs' sales, the files lacked some of the key data elements that then had to be obtained from the county recorder's office. HousingLink also collected mortgage documents on foreclosed properties from that office.
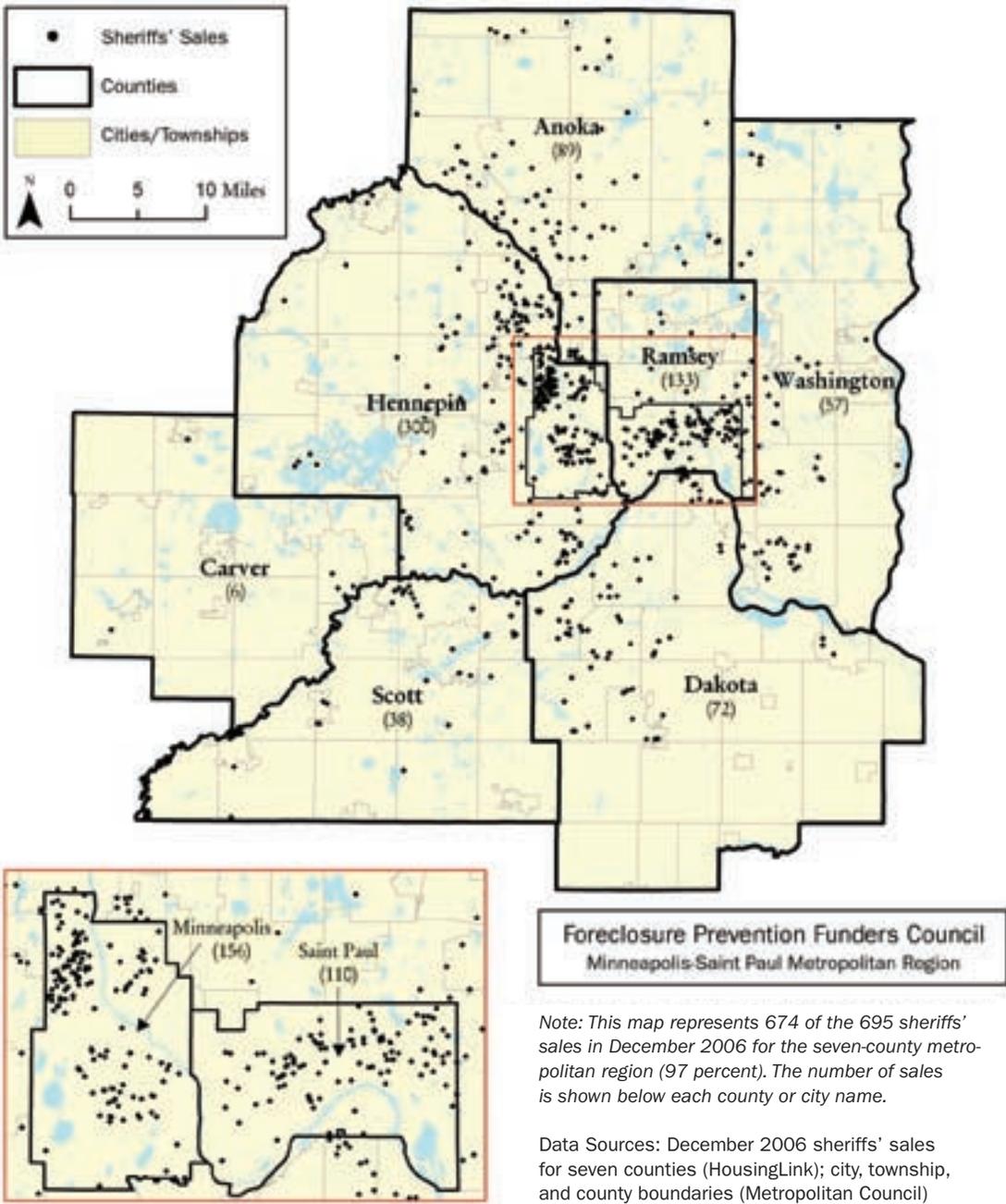
With these data in hand, HousingLink was able to determine that the number of regionwide foreclosures had nearly doubled (from 3,759 to 7,039) in 2005–2006, with increases ranging from 47 percent in Carver County to 125 percent in Ramsey County. The problem was highly concentrated: 44 percent were located in Hennepin County, with half in Minneapolis and half of those in North Minneapolis (see figure 11). In addition, fully 80 percent of the foreclosed homes had mortgages that were one to five years old, and 14 percent had mortgages that were less than one year old.

The Foreclosure Prevention Funders Council met biweekly to discuss such findings and develop interventions, provide resources for homeowners facing foreclosure proceedings, and limit the negative side effects of vacant properties. The difficulties with data access led the council to develop shared solutions and begin discussions with the regional and state sheriffs associations on opportunities to streamline collection. In the summer of 2007, the council expanded to a statewide focus, adopted the name Minnesota Foreclosure Partners Council, and worked with HousingLink to gather and map sheriffs' sales data from every Minnesota county.
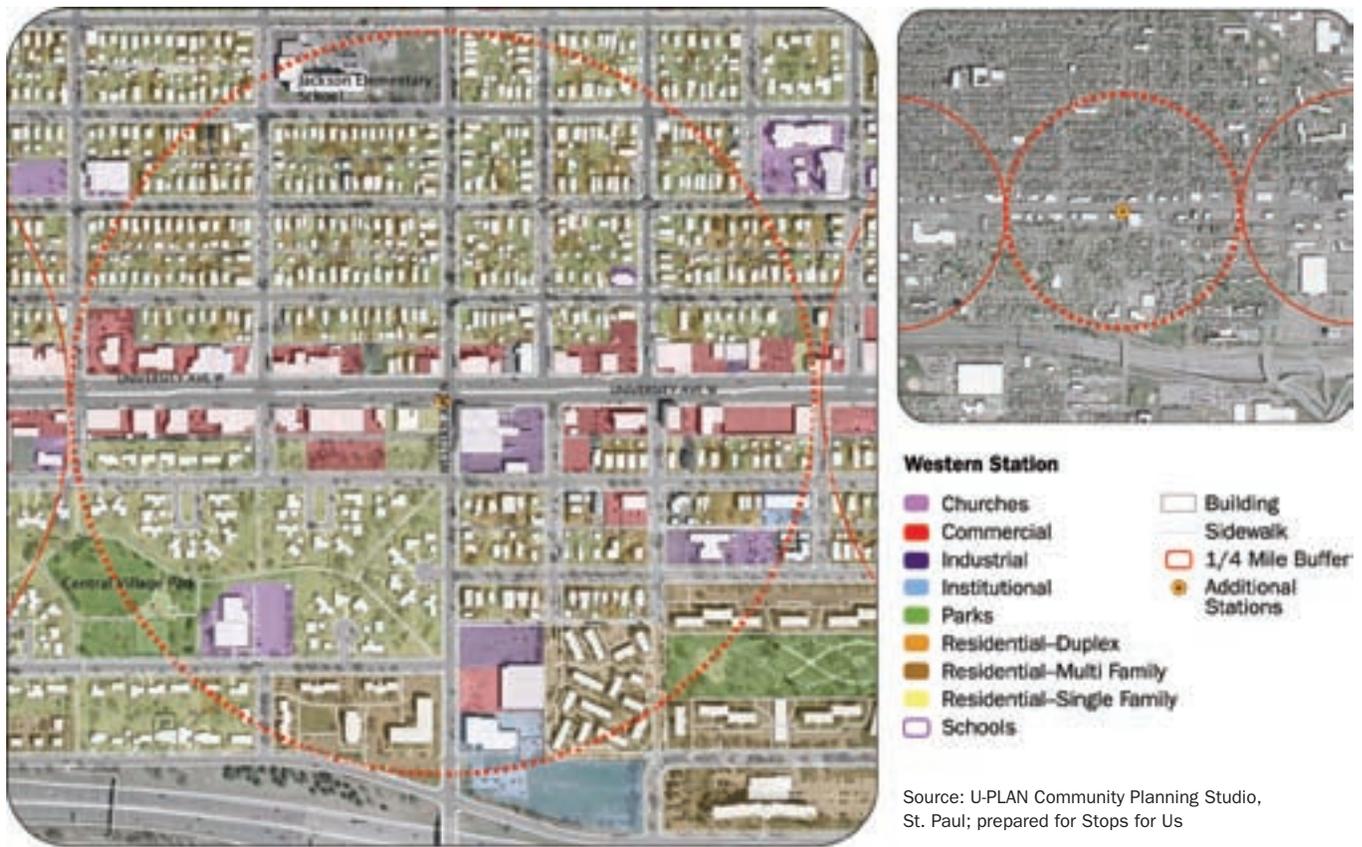
Additional Applications

The City of Minneapolis is now working with the Minnesota Foreclosure Partners Council and CURA to retool the MNIS system to identify at-risk properties. The early warning system will build on research

FIGURE 11

Foreclosures Are Concentrated in Hennepin County and Particularly North Minneapolis

Note: This map represents 674 of the 695 sheriffs'
sales in December 2006 for the seven-county metro-
politan region (97 percent). The number of sales
is shown below each county or city name.

Data Sources: December 2006 sheriffs' sales
for seven counties (HousingLink); city, township,
and county boundaries (Metropolitan Council)

Source: HousingLink (Joel Larson, cartographer) for the Foreclosure Prevention Funders Council

Western Station

- Churches
- Commercial
- Industrial
- Institutional
- Parks
- Residential–Duplex
- Residential–Multi Family
- Residential–Single Family
- Schools
- Building
- Sidewalk
- 1/4 Mile Buffer
- Additional Stations

Source: U-PLAN Community Planning Studio, St. Paul; prepared for Stops for Us

on the neighborhood-level correlates of foreclosures to create a more accurate parcel-level model. Graduate students in community development at the University of Minnesota are using public data on housing condition, estimated market value, and last sale date/price to develop and test the model.

Another innovative application of parcel data under way in Minneapolis–St. Paul is Minnesota 3-D (M3D). This TOP-funded project is a dynamic, Internet-based GIS application that integrates labor market, housing, and development data for the metro area into a single tool for economic and community developers. The M3D project is a partnership between CURA and the state's

Department of Employment and Economic Development (DEED), with additional support from various local and regional government agencies.

Finally, the U-PLAN Community Planning Studio, a partnership of community groups led by the University United coalition, the University of Minnesota, and the St. Paul Design Center, is using MetroGIS data to engage local businesses and residents in planning for a proposed light rail line that would connect downtown St. Paul and downtown Minneapolis. This storefront planning center uses mapping, visualization tools, and data to help people visualize and plan for transit-oriented development projects (see figure 12).

PHILADELPHIA, PENNSYLVANIA
Targeting Outreach and Investment Strategies

Philadelphia stands at a critical moment in the cycle of urban decline and renewal. Downtown Center City is experiencing a major surge in real estate development, a drop in crime rates, and a return to a vibrant urban culture. New investment is spilling over into surrounding communities, with some neighborhoods seeing dramatic upgrades as private developers arrive for the first time in decades.

But sustained growth is uncertain and not all Philadelphians have benefited from the revitalization successes. Unemployment remains high, the suburbs still capture most new job growth, and many neighborhoods in the city and inner-ring suburbs continue to battle blight, abandonment, and distress (Whiting and Proscio 2007; Mallach 2006). Tens of thousands of vacant buildings and lots are visible reminders of the city's ongoing challenges.

While for many years the city's political leaders focused primarily on downtown redevelopment, broader neighborhood

revitalization is now firmly on the city's agenda. The five-year Neighborhood Transformation Initiative (NTI), launched in 2001 by former mayor John Street, provided nearly $350 million in municipal bonds and city operating dollars to acquire vacant and abandoned properties, demolish dangerous buildings, and prepare sites for redevelopment (Fox and Treuhaft 2005). Data on the city's 560,000 parcels have been a crucial input for community organizations, community development intermediaries, policy institutes, government agency employees, and researchers as they analyze, develop, implement, and evaluate revitalization efforts.

The Philadelphia Neighborhood Information System

Created in 1998 by the Cartographic Modeling Laboratory (CML) at the University of Pennsylvania, the Philadelphia Neighborhood Information System (NIS) was one of the first Web-based systems to gather mappable data from multiple administrative agencies at a variety of geographies. The system includes five applications:
- *ParcelBase*, a password-protected database that provides housing and real estate data at the parcel level;
- *NeighborhoodBase*, an open-access database of aggregated property data and socio-demographic data for a number of geographies;
- *MuralBase*, which locates and describes murals located throughout the city;
- *CrimeBase*, which provides crime data at a variety of geographies; and
- *SchoolBase*, which provides an array of school performance and assessment data.

Unlike many community information systems, the Philadelphia NIS is built from the parcel level up and combines more than 180 indicators such as ownership, sales, code violations, tax delinquency, and vacancy

status. The information is updated regularly through data-sharing agreements between the CML and seven city agencies.

In addition to developing and maintaining the system, the CML holds regular trainings, provides technical assistance for users, and performs data analysis and mapping services for a fee. The number of community organizations that are registered users now stands at 288, including many CDCs that use the system to target their development activities and refine their street-level surveys. Nearly 350 government agency employees also use the system regularly.

The following applications demonstrate the power of using the NIS system, in combination with CML's mapping capabilities, to develop a program providing legal support to homeowners with clouded property titles, to evaluate the impacts of public and private investments, and to streamline the disposition of vacant properties.

Untangling Titles for Low-Income Homeowners

Philadelphia VIP/LawWorks is a nonprofit organization that provides legal services to low-income Philadelphians and community organizations. From their casework, staff knew that many homeowners had "tangled" titles—a legal right to own their homes, but without clear title. In such cases, homeowners cannot sell their homes or transfer them to their children, obtain grants or loans to make needed repairs, apply for utility discounts or tax abatements, or even arrange payment plans for delinquent real estate taxes or utility bills. The consequences can be severe, putting individual families at risk of foreclosure and potentially destabilizing entire neighborhoods.

VIP/LawWorks wanted to provide legal services to help low-income homeowners in this situation gain clear title to their properties, and successfully secured resources from

FIGURE 13

Thousands of Philadelphia Homeowners May Have Unclear Title to Their Properties
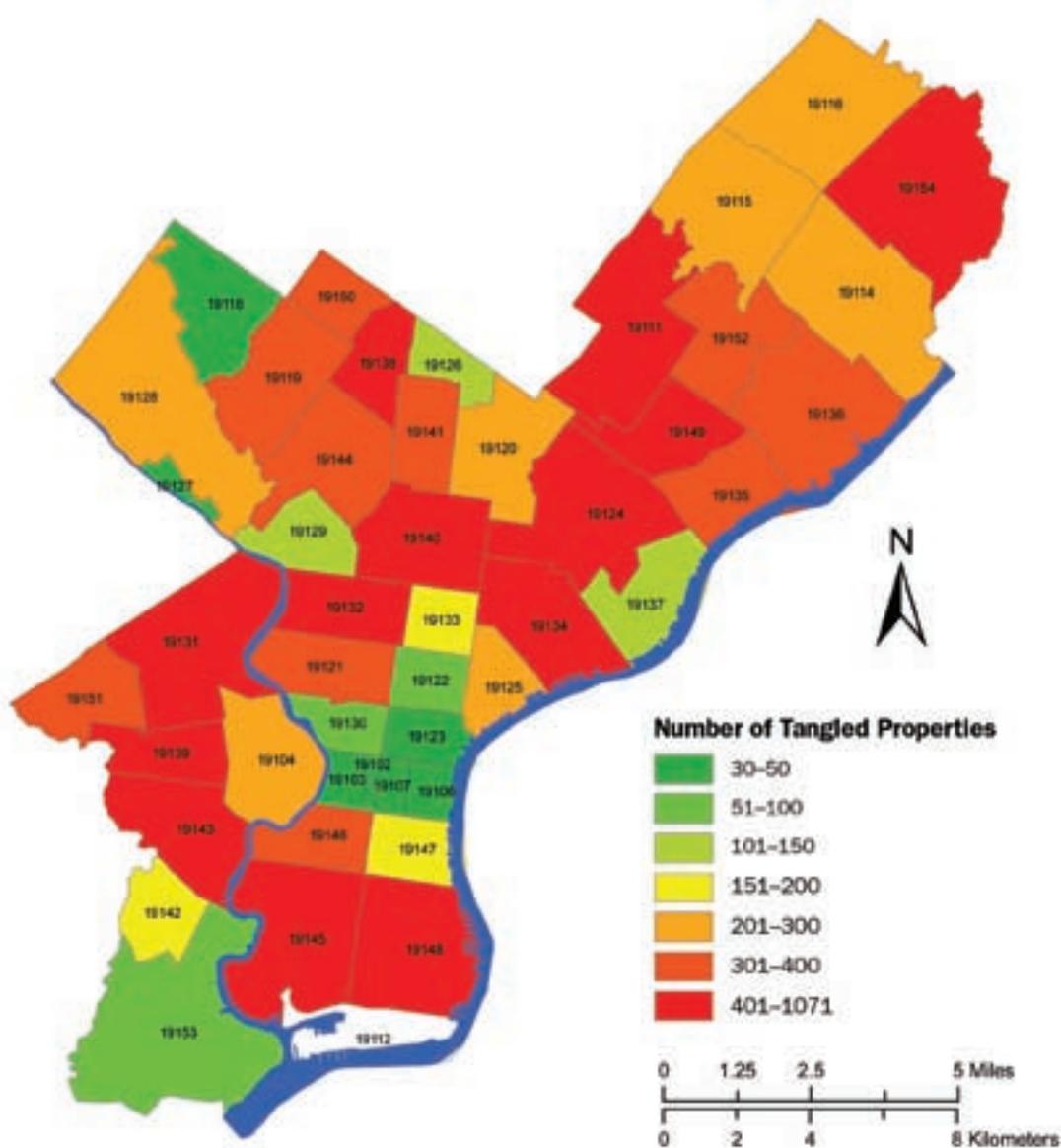
Source: The Cartographic Modeling Lab, University of Pennsylvania (March 2007)

the city's Office of Housing and Community Development to set up a Tangled Title Fund. The fund provides grants of up to $2,500 to cover the costs of title clearance such as probate filing fees, court-ordered publications, inheritance taxes, title insurance, and transfer taxes (Gastley 2006).

To assess the true extent of the problem and to find efficient ways to reach the people who might need their services, attorneys at VIP/LawWorks turned to the ParcelBase application and CML's data analysis services (see figure 13). Given that many problems stem from not transfering the title following

Parcel data helped Philadelphia LISC and the Mt. Airy USA CDC develop a "corridors plus" investment strategy for Germantown Avenue.

nership and outreach effort in West Philadelphia based on an adopt-a-block model. The public interest law firm and CDC have marketed the legal services in a specific block with a high share of tangled title properties and have begun to help clients in the neighborhood. The hope is that focusing efforts in this area will demonstrate the positive impact that untangling titles can have, not only for individual homeowners but also for entire neighborhoods.

Coordinating Community Investments

In a time of dwindling resources, community development practitioners have had to become much more strategic about the way they invest. In 2006 the community development intermediary Philadelphia Local Initiatives Support Corporation (LISC) reviewed its investments in the city over the past 25 years to inform its planning and to optimize the impact of future outlays.

CML's mapping analysis, using parcel-level and neighborhood census data, was crucial in this evaluation. CML linked LISC's $40 million in direct investments and $600 million in leveraged investments to their locations through geocoding. Other contextual data were added to the maps, including neighborhood assets such as transit stops and corridors, as well as challenges such as crime and vacancies.

The maps revealed that LISC's past investments lacked both spatial targeting and coordination. For example, residential and commercial investments were made independently and often in different neighborhoods. The analysis also pointed to several opportunities for LISC to align its investments in ways that would create greater synergy and help achieve broader goals, such as connecting neighborhoods to the regional economy and fostering sustainability through transit-oriented development.

the death of a homeowner, they reasoned that linking death records with current ownership records was a good place to start.

Their analysis identified 14,000 possible cases of tangled titles in Philadelphia, representing an enormous number of families in danger of losing their most important financial asset. CML mapped the potential cases by zip code to show where the problem was concentrated. Aligning the maps with CDC catchment areas helped VIP/LawWorks scan for potential partners in developing an effective marketing strategy.

In 2007 VIP/LawWorks and the People's Emergency Center launched a pilot part-

The data displays provided invaluable input for the organization's 2006 planning retreat, where staff and board members worked together to shape a new investment strategy. Out of this exercise came the idea of a "corridors plus" approach to connect commercial and residential investments more directly. The Philadelphia LISC team decided to focus on neighborhoods near the eight areas targeted through its commercial corridor reinvestment initiative. That initiative had already funded CDCs to make grants and loans to improve business facades, the streetscape, and nearby residences between 2002 and 2005.
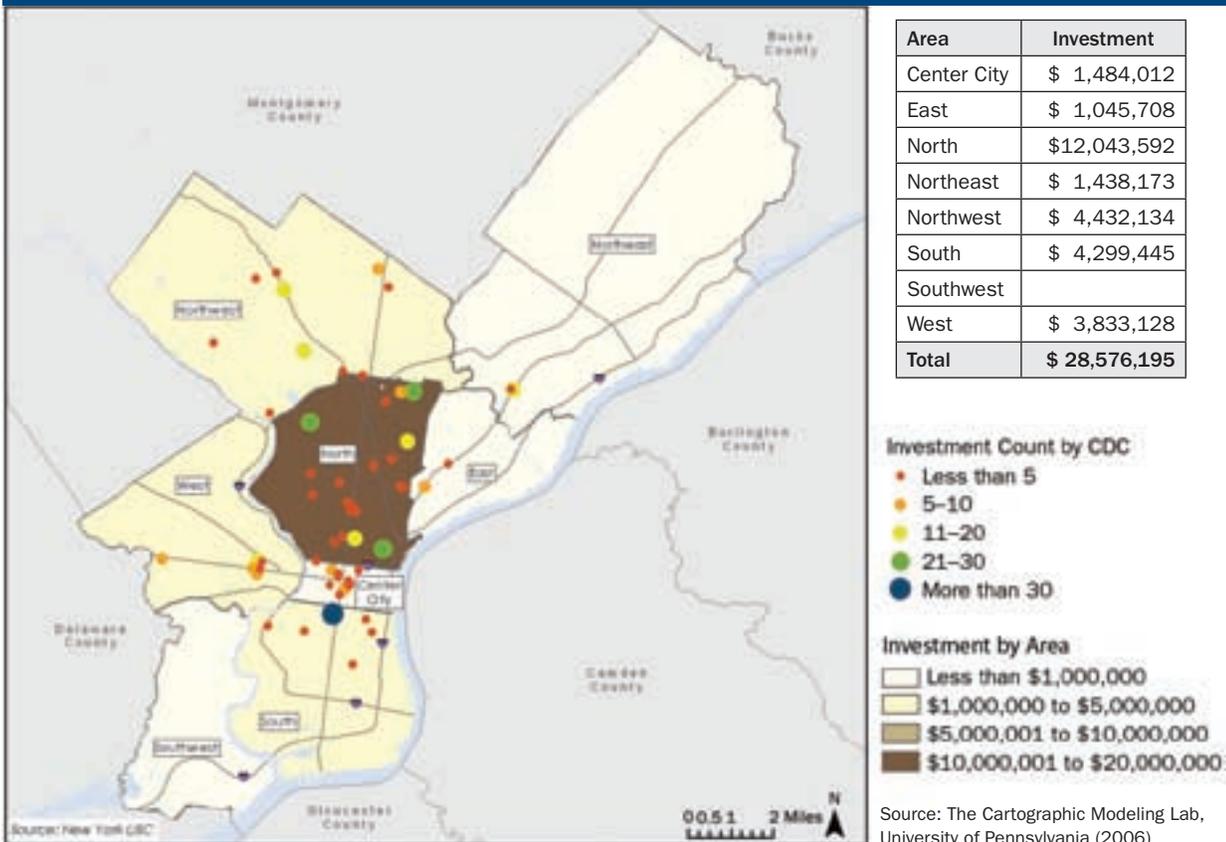
LISC then had to select a pilot neighborhood in which to work. An additional data layer—the dollar value of CDC investments in neighborhoods—helped to guide this choice (see figure 14). Community development practitioners from the City of Philadelphia, the Delaware Regional Valley Planning Commission, local foundations, citywide nonprofit agencies, and CDCs were invited to a meeting where LISC presented the maps and its new investment strategy. A consensus formed that West Philadelphia should be the pilot neighborhood, both because it is an area with significant needs and because of the opportunities provided by a new bus line connecting the neighborhood with Delaware County.

Tracking the Status of Vacant Properties

The launch of the Neighborhood Transformation Initiative (NTI) in 2001 stirred interest within government to have a more

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FIGURE 14

LISC's Analysis of 1996–2006 Investments Led to a More Focused Funding Strategy

Area	Investment
Center City	$ 1,484,012
East	$ 1,045,708
North	$12,043,592
Northeast	$ 1,438,173
Northwest	$ 4,432,134
South	$ 4,299,445
Southwest	
West	$ 3,833,128
Total	$ 28,576,195

Investment Count by CDC
- Less than 5
- 5–10
- 11–20
- 21–30
- More than 30

Investment by Area
- Less than $1,000,000
- $1,000,000 to $5,000,000
- $5,000,001 to $10,000,000
- $10,000,001 to $20,000,000

Source: The Cartographic Modeling Lab, University of Pennsylvania (2006)

accurate, timely, and integrated parcel data system. While ParcelBase added value by integrating the city's data layers, the underlying parcel map layer had a 20 percent error rate. There was also a growing need for real-time data for decision making. NTI allocated $5 million to improve the city's property information systems, including such projects as creating a seamless digital parcel basemap for the city, a unified land records system to consolidate property data across agencies, and a vacant property management system.

The vacant property management application, BUILD (Building Uniformity in Land Development), tracks properties as they make their way through multiple city agencies during the processes of acquisition, assembly, and disposition. Implemented in 2007, the Web-based application integrates real-time parcel data from the Department of Licenses and Inspections, Board of the Revision of Taxes, Department of Revenue, and Department of Records.

The application is available to agency employees via the city's intranet and to the public via the Internet. Users can save queries within the system to continually track their status. In the near future, the city plans to add an automated "shopping cart" function that will allow private parties to submit online requests to acquire city-owned properties and a component that will enable housing staff to easily review and evaluate submitted requests.

Additional Applications

Researchers at the University of Pennsylvania Fels Institute of Government have used ParcelBase data to conduct applied community development policy research. In 2005, for example, the Institute and CML evaluated the City of Philadelphia's residential property tax abatement program. Working in partnership with LISC and the National Vacant Properties Campaign, the Institute and CML are currently analyzing the performance of properties sold at sheriffs' sales

The new BUILD Web-based parcel data system provides up-to-the-minute information on Philadelphia's 60,000 vacant properties.

The Neighborhood Gardens Association has helped to preserve the Fitzwater 2000 Garden, an award-winning oasis that local residents created from two vacant lots.

to determine what policies and strategies are needed to ensure that the disposition of vacant land helps to strengthen communities.

The University of Pennsylvania has also used ParcelBase data to monitor a number of indicators in the West Philadelphia neighborhoods where its community revitalization projects are centered. A series of reports tracked changes from 2001 to 2005 in rents and home sales; faculty, staff, and student residency; vacant land; demolitions; housing and commercial real estate development; and demographic data on the university-supported neighborhood school.

In addition, many Philadelphia community organizations use ParcelBase in their efforts to reclaim vacant and abandoned properties. For example:

- The Pennsylvania Horticultural Society uses parcel data to identify owners of vacant land that can serve as community gardens, parks, and public greens.
- The Neighborhood Gardens Association/ A Philadelphia Land Trust uses Parcel-Base to obtain information on properties to acquire for community gardens. In addition to checking a site's dimensions, ownership, and tax status, the group maps the surrounding area to assess the context for the acquisition.
- The Office for Community Development of the Archdiocese of Philadelphia looks at vacancy indicators, property ownership, and tax liens to select properties for acquisition and rehabilitation, and uses the square footage data to estimate cost and assess feasibility.
- Community groups incorporate the neighborhood and parcel data from the Philadelphia NIS into fundraising proposals and board presentations. Maps showing rental and home prices, vacancies, and community assets such as schools and libraries help these organizations illustrate neighborhood housing market conditions, demonstrate the impacts of their activities, and plan for future work.

WASHINGTON, DC
Managing the Affordable Housing Inventory

Like many large cities across the country, Washington, DC, saw an unprecedented surge in house prices in the first half of this decade. Between 2000 and 2005, the median single-family house price climbed an average of 25 percent annually, rising from $159,000 to an astounding $485,000. At that level, a household would have to earn almost twice the area median income to purchase a home. Rents also rose sharply relative to incomes, boosted in part by a wave of condominium conversions.

By 2005 when housing affordability had reached crisis proportions, Washington (along with every other major U.S. city) did not have the capacity to monitor or manage the problem. No information existed on how many affordable housing units had been lost or were still at risk, let alone what the numbers were on a neighborhood basis. The

city's response was among the nation's first attempts to build a more systematic, data-driven approach to managing the affordable housing inventory.

The Underlying Information Systems

While many studies of housing stock change have been prepared over the years, nearly all of these analyses are based on the census or other sample surveys that are not conducted often enough to support short-term management decisions. The only way to access more frequent data is to excerpt information from regularly updated, parcel-level administrative systems operated by government agencies.

The most important ingredient in solving this challenge for the District of Columbia was the real property database developed by the Office of the Chief Technology Officer

(OCTO) primarily from information maintained by the Office of Tax and Revenue. The second component was the data warehouse operated by *NeighborhoodInfo DC*, a collaborative venture of the Urban Institute and the Washington, DC, Local Initiatives Support Corporation (LISC), with the support of the Annie E. Casey and Fannie Mae Foundations. The data warehouse receives and archives quarterly updates from the real property database and incorporates recurrent information on property and neighborhood conditions from a variety of other sources. Particularly important are files from the U.S. Department of Housing and Urban Development (HUD) on properties in the district that it assists, and excerpts from other national files such as those mandated by the Home Mortgage Disclosure Act (HMDA).

The data in the *NeighborhoodInfo DC* warehouse have been used in a number of policy-focused applications. The most well known are the *Housing in the Nation's Capital* reports prepared by the Urban Institute to examine changes in local housing conditions (Turner et al. 2006). These reports, in turn, were the primary source of data for the plan completed by the Mayor's Comprehensive Housing Strategy Task Force in 2006, which gave new priority to the preservation of affordable housing (Kingsley and Williams 2007).

The annual *Housing in the Nation's Capital* reports offer only general recommendations on housing issues in the district and the region. What was needed was a way to deliver the information in a form that would help stakeholders, both inside and outside of government, apply the data in decision making throughout the year (see box 4).

The first step was to create a series of quarterly *Housing Monitor* reports. Developed by *NeighborhoodInfo DC* staff, these Web-based reports include a citywide summary of key findings, plus detailed data for individual wards and neighborhoods. In addition to

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BOX 4
Incorporating Parcel Data Systems into Local Decision Making

Using property-level data to support multi-stakeholder decision making is a sophisticated process that typically involves five steps.

1. Gathering parcel-level information about an issue of concern (e.g., increases in vacancies and foreclosures).

2. Using additional parcel- and neighborhood-level information to understand the context for the phenomenon and to identify root causes and potential policy responses.

3. Performing initial data analyses and producing displays such as tables and maps that convey trends.

4. Reviewing the data with stakeholders to identify additional queries and next steps.

5. Tracking decisions and monitoring progress toward goals.

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standard sections on basic housing market conditions and affordability, each report focuses on a special theme such as trends in home sales, mortgage lending, and ownership (Tatian 2007). This work is helping to build a better understanding of how the city's neighborhoods are changing and what forces are driving the change.

Monitoring Section 8 Units

With more frequent and detailed information available, the next step was to devise methods to apply these and other data in decision making about affordable housing. This required moving from generalities to the circumstances and needs of specific properties. The basic idea was to identify residential properties removed from the affordable stock in recent years and to categorize remaining units according to risk of loss.

Because of the difficulty of identifying affordable properties in administrative data systems, *NeighborhoodInfo DC* staff decided to start by monitoring the pipeline of projects assisted under HUD's Section 8 program.

These properties warrant special attention because many of the contracts will expire in the next few years, allowing landlords to opt out of the program—an attractive choice for many owners of properties in gentrifying neighborhoods.

Monitoring of Section 8 units began on a trial basis in late 2005, with quarterly updates since then. Management meetings engage the full range of actors involved in the

preservation effort. Staff of the District's Department of Housing and Community Development (DHCD) play a central role, but representatives of several CDCs and other nonprofits working under DHCD grants are equally important participants. These groups provide technical assistance to tenants so they can prepare for and address potential threats to affordable rental properties, either by helping residents

TABLE 3
Washington, DC, Section 8 Multifamily Reports

3a. Preservation Summary: Active and Lost Housing Units, 2000–2006

Year	Active Units (start of year)	Lost Units		
		Total	Expired	Terminated
2000	12,715	141	141	0
2001	12,574	304	304	0
2002	12,270	89	89	0
2003	12,181	225	220	5
2004	11,956	212	208	4
2005	11,744	295	295	0
2006	11,449	123	123	0
2007	11,326			
Total	—	1,389	1,380	9

3b. Ward Summary: Contract and Unit Expirations, 2000–2007

Ward	Units Expired 2000–2006	Current Active (January 1, 2007)		Projected Expirations January–December 2007	
		Contracts	Units	Contracts	Units
1	79	21	2,020	8	353
2	179	15	1,232	3	212
3	0	2	58	1	40
4	0	1	54	0	0
5	328	15	1,776	1	149
6	76	12	1,632	7	989
7	51	11	1,228	5	741
8	667	26	3,326	10	1,611
Total	1,380	103	11,326	35	4,095

Source: HUD's Multifamily Assistance and Section 8 Contracts Database, tabulated by *NeighborhoodInfo DC* (October 2007)

purchase the buildings or by working with the owner, the city, and others on financial restructuring to keep the property affordable.

The database is updated before each meeting with the latest HUD information on Section 8 properties. Information about the properties and their neighborhoods is then integrated with other sources in the data warehouse. Nonprofit technical assistance providers also add updates on the status of the properties they are working with, as well as information on changes in other properties they may have heard about.

At the meetings, participants have in hand a summary of what happened to the Section 8 projects/units whose contracts expired over the last year, the number of projects/units with contracts scheduled to expire in the next few years, a listing of individual properties in each category, and a set of tables and maps that display this information by ward and neighborhood (see table 3 and figure 15). Also included is a table presenting detailed information on each property in the system, including actions planned, factors related to the landlord's probability of opting out, and other neighborhood conditions and trends.

Using these data, the group reviews what happened to the Section 8 pipeline over the preceding quarter and reassesses priorities, checks on assignments, and evaluates preservation strategies. After the meetings, the database is updated to record new or changed assignments and to incorporate information about individual properties that comes to light during the discussions.

Additional Applications

NeighborhoodInfo DC plans to expand its coverage to other affordable rental properties in the district that are at risk of loss. Identifying additional subsidized properties will start with a merger of HUD and city datasets with records in the data warehouse. *Neighbor-*

FIGURE 15
Preservation Efforts Rely on Close Monitoring of Expiring Section 8 Contracts

Source: HUD's Multifamily Assistance and Section 8 Contracts Database, tabulated by *NeighborhoodInfo DC* (April 2006)
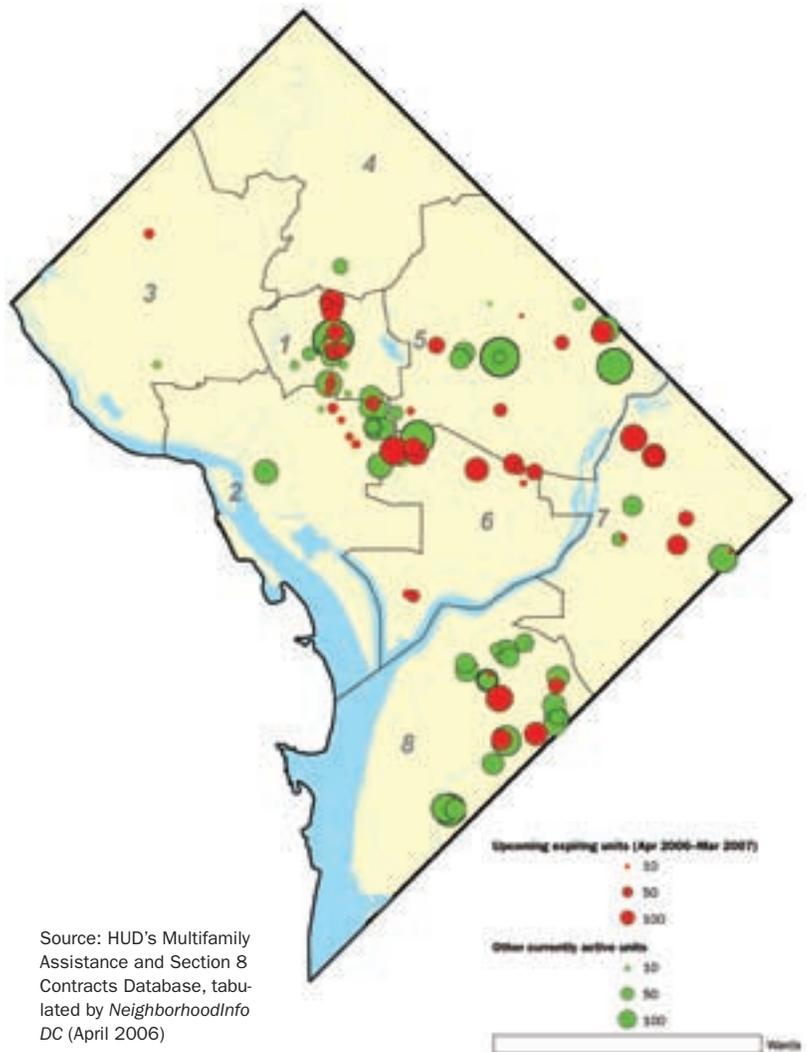
hoodInfo DC will then obtain information about private buildings that rent at reasonable levels and secure regular reports from other city agencies on conditions that indicate risk of loss (e.g., early notice of a landlord's intent to rehabilitate or sell). Technical assistance providers have already begun to provide information on at-risk affordable properties other than those on the Section 8 list.

Another future improvement will be to publish the full quarterly report and database

The Local Initiatives Support Corporation of Washington, DC, helped tenants purchase the Fairmont apartments, a former Section 8 property.

on the Web. Users will be able to access all of the citywide screens and click on a map or listing to bring up the relevant data for individual neighborhoods. It will also be possible to generate maps for other variables in the system. Participants in management meetings will be able to look up the status of particular properties and update the information directly in the database. In neighborhoods where affordable housing is at especially high risk, the team may develop additional tools to identify and address other problems such as high levels of subprime lending and foreclosure notices.

In addition to the affordable housing monitoring tools, *NeighborhoodInfo DC* hopes to create similar applications for other types of users. These tools are expected to include data displays to help community groups plan and implement neighborhood improvement strategies; automated procedures to help the city's Department of Housing and Community Development select the most appropriate actions for individual properties; and models to help neighborhood groups and community development corporations estimate the impacts of alternative policies and programs.

Conclusion and Recommendations

Today America's neighborhoods are again at a crossroads. The fallout from the subprime crisis and broader disruptions in urban economies and housing markets may well threaten the nascent revival of many inner cities that was in evidence early in this century. Clearly, community development practitioners must "work smarter" to sustain that positive momentum.

The case studies highlighted in this report suggest that creative applications of new land information systems may be critical to the success of these efforts. Given the access, tools, and capacity to apply parcel data, practitioners in cities across the country are developing more effective ways to conduct sophisticated analyses, support day-to-day decision making as well as long-term planning, engage residents and local businesses in community action, target residential and commercial investments, and more. The examples cited here are just a small sampling of the possibilities that robust, integrated data systems open up for the practice of community development.

Investment in the infrastructure, institutions, and processes that support these advanced community development applications is sorely needed to realize the vast potential that parcel data holds for the community development field. Public and private institutions alike have essential roles to play in bringing emerging local solutions to sufficient scale to have measurable impacts on neighborhoods, spurring further innovation in systems development, and disseminating best practices in the use of parcel data.

Federal Government

The federal government has played an important role in the development and application of model parcel data systems and should continue to do so. In particular, the successes of the Technology Opportunities Program (TOP)—a Department of Commerce initiative that provided matching grants for innovative uses of digital technologies between 1994 and 2004—amply demonstrate the long-term value of small infusions of startup capital. Federal policy should also support the regional data intermediaries and national intermediary networks that work to disseminate innovation. Specific recommendations include:

- making support for land information systems and their application to community development a key component of the next president's urban policy;

The Harold Washington Unity Cooperative in Chicago's gentrifying Humboldt Park neighborhood provides homeownership opportunities through a delayed coop conversion by the Bickerdike Redevelopment Corporation.

- reinstating and amply funding the Technology Opportunities Program to promote continued innovation; and
- establishing a national matching fund to support new and existing regional data intermediaries as well as national intermediary networks.

State Government

State agencies are important gatekeepers of housing, labor market, health, transportation, and other public data. These agencies should share their resources with the developers of regional data systems and support applications of parcel data in such areas as economic development and affordable housing.

Local Government

Local agencies are the primary producers and users of parcel data. The more agencies that participate in the development of integrated parcel data systems, the more powerful and applicable the systems will be. Local agencies can advance this process by:
- promoting the benefits of data sharing and providing incentives to develop integrated systems and advanced community development applications;
- incorporating best practices into community development initiatives, innovating new ways of using parcel data, and contributing to the building and use of local parcel data systems; and
- participating in the development of regional datasets.

National Community Development Intermediaries

Many national organizations exist to support community development practitioners. These organizations should partner with data intermediary networks to build awareness of parcel data systems and advanced community development applications. Among the goals of this campaign should be expanding low-cost public access to parcel-level data and establishing mechanisms to ensure improvements in data quality.

Foundations and Other Funding Sources

Local and national foundations, along with other funders of neighborhood, housing, and community development initiatives, should integrate applications of parcel- and neighborhood-level data into their grant-making generally and their multisite programs specifically by:
- funding grantees to incorporate these tools into their work and contributing to application development;
- supporting development of regional data intermediary networks and connecting their grantees to these networks;
- holding forums where grantees can learn about innovative uses of parcel data;
- advocating for the need for robust data systems and applications;
- convening public, private, and nonprofit actors to discuss the challenges and opportunities involved in developing local and regional parcel data systems; and
- facilitating data-sharing partnerships.

The value of these investments in advanced community development applications cannot be overstated. Providing practitioners with the resources they need to apply parcel data to program development, organizing, and advocacy will make community building much more efficient and effective, at the same time that it spurs further innovation. Building this capacity will bring the nation much closer to the goal of creating healthier, more sustainable, and more equitable communities.

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Resources

CHICAGO

Chicago Metropolitan Agency for Planning
www.cmap.illinois.gov

Full Circle Community Mapping and Planning Project
www.fulcir.net/FC/Index.htm

Local Initiatives Support Corporation, New Communities Program
www.newcommunities.org

CLEVELAND

Center on Urban Poverty and Community Development, Case Western Reserve University
http://povertycenter.case.edu

Neighborhood Progress Inc., Strategic Investment Initiative
www.neighborhoodprogress.org/cnppsii.php

Northeast Ohio Community and Neighborhood Data for Organizing (NEO CANDO)
http://neocando.case.edu

Urban Development Law Clinic, Cleveland State University
www.law.csuohio.edu

MINNEAPOLIS–ST. PAUL

Center for Urban and Regional Affairs, University of Minnesota
www.cura.umn.edu

MetroGIS
www.metrogis.org

Minnesota 3-D Project
http://map.deed.state.mn.us/m3d

PHILADELPHIA

BUILD Property Search
http://nti-build.gov

Cartographic Modeling Laboratory, University of Pennsylvania
www.cml.upenn.edu

Philadelphia Neighborhood Information System
www.cml.upenn.edu/nis

WASHINGTON, DC

NeighborhoodInfo DC
www.neighborhoodinfodc.org

NATIONAL

Community Indicators Consortium
www.communityindicators.net

National Neighborhood Indicators Partnership
www2.urban.org/nnip

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Jeff Matson, Associate Program Director, MNIS/M3D, Center for Urban and Regional Affairs,
     University of Minnesota

Brian McMahon, Director, U-PLAN Community Planning Studio

Kris Nelson, Program Director, Neighborhood Planning for Community Revitalization,
     Center for Urban and Regional Affairs, University of Minnesota

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Philadelphia

Catherine Califano, Chief of Staff, Office of Housing and Community Development, City of Philadelphia

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Washington, DC

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Patrick Simmons, Program Officer, Fannie Mae Foundation

Peter Tatian, Director, *NeighborhoodInfo DC,* Urban Institute

Other

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James Lucht, Director of Information Technology, The Providence Plan, Providence, Rhode Island

Antoinette Pietka, Bureau of Housing and Community Development, Portland, Oregon

Neal Richman, Director, UCLA Center for Neighborhood Knowledge, Los Angeles, California

Charanjeet Singh, Director of Technology Research and Applications, UCLA Center for
     Neighborhood Knowledge, Los Angeles, California

Participating Organizations

PolicyLink
www.policylink.org

PolicyLink is a national research and action institute that works collaboratively to develop and implement local, state, and federal policies to achieve economic and social equity. By Lifting Up What Works—using research to understand and demonstrate the possibilities for positive change—PolicyLink presents innovative solutions to old problems. PolicyLink believes that the wisdom, voice, and experience of local constituencies are critical to the search for solutions to the nation's problems and strives to connect those constituencies—especially people in low-income communities and communities of color—to the legislators, government agencies, foundation officers, business leaders, and others who develop and implement policy, particularly in the areas of affordable housing, community strategies to improve health, and equity in public investments.

Urban Institute
www.urban.org

Established as a private, nonprofit corporation in Washington, DC, in 1968, the Urban Institute has become nationally known for its objective and nonpartisan research and educational outreach on social, economic, and governance problems facing the nation. It provides information and analysis to public and private decision makers to help them address these problems, and strives to raise citizen understanding of the issues and tradeoffs involved in policy making. Through broad conceptual studies, program evaluations, administrative and technical assistance, and other research, Institute researchers and consultants make data and findings available to the public and to public officials concerned with formulating and implementing more efficient and effective government policy.

Lincoln Institute of Land Policy
www.lincolninst.edu

Lincoln Institute is a private operating foundation whose mission is to improve the quality of public debate and decisions in the areas of land policy and land-related taxation in the United States and around the world. The Institute's goals are to integrate theory and practice to better shape land policy and to provide a nonpartisan forum for discussion of the multi-disciplinary forces that influence public policy. The Institute seeks to inform decision making through education, research, demonstration projects, and the dissemination of information through publications, the Web site, and other media. Lincoln Institute programs bring together scholars, practitioners, public officials, policy advisers, and involved citizens in a collegial learning environment.

Transforming Community Development With Land Information Systems

With recent innovations in integrated parcel data systems, community development practitioners now have greater access to the property-level information that is so vital for analyzing and monitoring neighborhood change. In this report, researchers at PolicyLink and the Urban Institute provide case studies detailing how pioneering organizations and partnerships in five cities and regions—Chicago, Cleveland, Minneapolis–St. Paul, Philadelphia, and Washington, DC—are applying these systems to such challenges as:

- **Neighborhood market recovery.** In Cleveland, parcel data are being used to inform land acquisition decisions and model block efforts in six neighborhoods targeted for revitalization.

- **Mortgage foreclosure prevention.** University-community partnerships in Cleveland and Minneapolis–St. Paul are developing early warning systems to identify properties at risk of foreclosure and to design effective interventions.

- **Asset protection for low-income homeowners.** Community organizations in Chicago and Philadelphia have used parcel data to target services and resources to help low-income owners maintain and improve their homes.

- **Commercial district revitalization.** Using Web-based GIS tools, community groups in Chicago have surveyed local commercial districts to support economic development and transit-oriented development planning.

- **Community organizing.** A resident task force in one of Cleveland's most distressed neighborhoods used data on loan transactions to identify and take legal action against property flippers.

- **Affordable housing preservation.** An enhanced parcel data system is supporting collaborative efforts to preserve Section 8 units and monitor the affordable housing stock in Washington, DC.

These and other applications described in the report demonstrate the vast potential that advanced land information systems hold for the creation of equitable and sustainable communities.