



METROPOLITAN POLICY PROGRAM

Data and Decisions: Parcel-Level Information Changing the Way Business Gets Done

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Section 1 Introduction and Summary

In late 2004, the Urban Institute (UI) and local data intermediaries in five cities began work on a pilot project on innovative uses of information, sponsored by the Brookings Institution's Urban Markets Initiative with support from a number of other national and local funders.¹ The intermediaries (in Baltimore, Indianapolis, Milwaukee, Providence and Washington D.C.) are all institutional partners in the National Neighborhood Indicators Partnership, NNIP.² For this project, each of them has developed one or more new *decision support tools to enhance local capacity to guide and manage urban land markets*.

This paper documents and interprets the results of this work as of the end of its first year. It has been written primarily for local officials and nonprofit groups involved in the community development process, but it should be of interest to private developers as well. The remainder of this section explains the project concepts and summarizes findings and recommendations. Section 2 provides more detailed accounts of what occurred in each of the five sites. Section 3 draws conclusions and considers what offers about how best to take advantage of the potential experiences suggest.

Project Concept

The project was based on two hypotheses. The first was that recent improvements in accessibility to data on land parcels in American cities creates an important opportunity to improve decision making by investors in urban real estate: public and private, non-profit and for-profit. Local agencies are automating their administrative records and a growing number of cities are integrating data across agencies and making selected information at the parcel level available to the public, sometimes via the web (for example, on property sales transactions, code violations, parcel ownership, assessed values, tax arrears, and vacancies/abandonments).

The second hypothesis, however, was that the payoff from this opportunity was likely to require the development of new decision support tools. Simply having more data does not mean it will be used effectively, if at all. Support for systems development is likely to erode unless there are clear indications that the new data are actually being applied in a way that

improves outcomes people care about. Accordingly, the concept behind this project envisioned the need for new tools: structured procedures that manipulate and present data to directly support real decision-making processes of market actors; i.e., *so that information becomes actionable*.³

Urban land markets function primarily through the decisions of large numbers of private actors. However, the actions of governments and other civic actors also have important effects on land market outcomes. As we saw it, priority is warranted for the development of information-tools that will help these non-private actors play their role in land markets more effectively.

Although the work is not complete, the experience of this project to date supports these hypotheses. In all five sites:

- The underlying information systems appear to be solidly institutionalized—contents and accessibility are being expanded rather than cut back
- Workable tools have been built or are under construction with serious ongoing engagement by real decision makers

Data Systems Development

As noted, the decision support tools that are the focus of this project depend on the existence of advanced parcel-level data systems. Our first findings relate to the progress of such systems in our study sites. Indeed, systems development has proceeded quite far in all five. All seem to have gone through similar stages in the development process.⁴

The first stage of importance for this work is when the automated administrative records of the Assessor (parcel level tax records) and other departments are brought together and regularly updated to create one integrated system. One of the cities in this project, Milwaukee, probably had the first such system of any major U.S. city—the Master Property File (MPROP) initially implemented in 1975.

The next critical advance was when the integrated system was moved from a main-frame computer to an internal network within city government (or on the internet with access limited to city staff); that is, so that a wide range of city employees could access it from their desktop. Local teams talk of this as perhaps the most important step in enhancing useability. The technology has only made this possible over the past few years (Milwaukee's MPROP, for example, first became web enabled in 1998). Once the systems were in this position it was easier to make further improvements. This includes expanding the types of data in the system beyond those required for operational purposes. For example, several of the cities have added data on vacant and abandoned properties obtained through special surveys.

A final stage of importance (again, achieved by all five of our cities) is when at least important parts of the parcel-level data in the system are made available to the public via the web. In most cases they allow users to look up information about individual parcels (e.g., finding out who owns a specific property, its assessed value and whether it is up to date on its tax payments), although they generally do not allow them to add up or manipulate data about groups of parcels. Maps showing property characteristics, at the parcel level, however, can now be accessed on the Milwaukee and Providence web-sites and that capacity is being planned in Baltimore and Indianapolis.

The Tools and How They Work

As cities proceed through the stages of system development outlined above, the practical uses of data by an expanding range of market actors is more likely, but not assured. The experiences of the five local teams in this project suggest that additional analytic work and tool building is required as well.

The sites recognized, of course, that simply making parcel-level data available over the web will stimulate applications. Sophisticated users (probably more often found in private firms than public agencies or community groups) will find ways to apply it.⁵ Individual private developers, for example, can use the data to make better decisions about where to

callout here.

Table 1. Purposes, Functionality and Users; Decision Support Tools in Five Cities

City	Strategic Theme/Purpose	Functionality	Users
Baltimore	<i>Stimulate reinvestment</i> Position vacant properties for effective resale to investors	Web display identifies properties For sale - map & linked tables show characteristics of property & neigh.	(1) Potential investors (2) City/CDC planners
Indianapolis	<i>Mix of approaches</i> Provide fact-based approach for awarding/monitoring CDBG grants	Std.fact sheets for proposals; Management reports	(1) City devel. office (2) CDC strategy group
Milwaukee	<i>Stimulate reinvestment</i> (1) Assess when neighborhood ripe for reinvestment; (2) coordinate CDC and City reinvestment activity	(1) Charts/maps showing trends in Sales/devel.; (2) Maps/tables show properties planned for reinvestment	(1) CDCstrategy group (2) City devel. office
Providence	<i>Slow disinvestment</i> Identify problem buildings & assess possible treatments	Tables of data on individual properties; Lists of properties meeting criteria re action types; sort lists by specified indicators to create priority sequences	(1) City officials (2) CDCs, neigh.grps
Washington	<i>Preserve affordable housing</i> Preserve Section 8 properties	Tables show no. of Section 8 properties facing contract expiration (with status); Separate tables, detailed data on each	(1) City housing office (2) Advocacy/TA nonprofits

make investments and about the specifics of site assembly. But more is likely to be needed to help government agencies, Community Development Corporations (CDCs) and other community groups improve their decision making.

One approach to serving these users is the development of “neighborhood typologies.” These attempt to classify a city’s neighborhoods according to significant variations in real estate market conditions. If the typologies do a good job of characterizing neighborhood market environments they can suggest how both public agencies and private investors should vary their approaches in different types of neighborhoods. Knowing, for example, how particular neighborhoods sit on a spectrum from declining to gentrifying could help the actors establish priorities for different types of investments and preventive or development actions.⁶ However, while they offer edification, these typologies do not put decision-makers in a context where they have to act directly on the information provided. They do not offer guidance on how actions should vary for different properties within a given neighborhood.

This recognition is what stimulated the interest in the sites in developing tools that would further guide their decisions about individual properties. At the most basic level, these tools work in the same way. They sort and categorize individual properties in relation to public and private actions appropriate for them based on comparative analysis of characteristics of the properties and their neighborhood markets. Table 1 identifies the users and explains more about how the tools work. In summary:

The Baltimore tool is designed to provide a web-based set of screens that identify properties available for sale and provide a considerable amount of descriptive data about them and their surrounding neighborhoods. Available properties are grouped into categories (for example, by type/size/price) expected to match the interests of different types of investors: for example, would-be homeowners at different income levels versus large commercial real estate firms. When fully implemented, the investors will be able to pull down screens (tables and maps) with detailed characteristics of properties and surrounding neighborhoods important to investment decisions. They will be able to sort properties by selected characteristics to facilitate comparison and choice.

Indianapolis is developing a number of displays to assist in managing its CDBG grant process. First, proposals for grants will now be required to attach data sheets drawn down from the central system on the properties they proposed for development (in the past, CDCs and other developers could provide their own data, but doing so was time-consuming and not verifiable or standard across applications). The City has established a neighborhood typology that suggests which revitalization actions are likely to be the best fit for the market circumstances of the different types of neighborhoods. These materials are being translated into quantifiable criteria that will allow the computer to do preliminary sorts of the proposals in the review process. After the grants have been made, key indicators drawn from the integrated database will be regularly monitored and reports on progress will be reviewed and discussed by all participants.

The first of the **Milwaukee** tools features tables, charts, and maps showing trends pertaining to thresholds when (based on analysis of recent trends) sub-neighborhoods may become ripe for reinvestment. This tool has already shown how prospects have improved in one sub-neighborhood in ways local CDCs had not suspected. For the second tool, CDCs and other groups have shared data on the characteristics and development schedules of all of their current projects so that, by seeing each other's work in process, they and city officials can implement overall revitalization in a more coordinated manner. The software supports queries and displays project information and schedule milestones in a "case management" framework that facilitates relating status to needs for various types of corrective actions.

Providence's new web-based tool allows users to create listings of properties according to any criteria they choose (for example, characteristics that might identify good candidates for rehabilitation, demolition, or some other intervention) and then to sort the listings any way they want (for example, by number of code violations or recent change in assessed value) to create priority sequences for different programmatic responses. They can then pull down screens showing detailed data (including photographs) for individual properties. Two new features are associated: (a) a comments box, to enable users to write in their own observation about the property and (b) a "surrounding properties display" showing a map and characteristics of properties surrounding the one selected.

Developments in **Washington D.C.** include an automated quarterly report on changing neighborhood level trends in housing affordability, featuring the status of Section 8 projects facing contract expiration. The data on individual Section 8 properties and their circumstances are being used as a basis for designing property-specific preservation strategies. Information about the nonprofits now working to assist tenants prepare for change in these properties is being used to eliminate gaps and overlaps in assignments.

Recommendations

While they recognize that a period of trial and error lies ahead, participants have been generally optimistic about the future for the development and productive application of tools like those developed in this project. Cross-site consideration led to suggestions in three areas about how best to take advantage of the potential:

- Efforts should be made locally to create an environment conducive to further tool development, including: (1) identifying champions and establishing/strengthening local data intermediaries to support the process; (2) taking advantage of using the data and tools to broaden collaboration in community development; (3) establishing a process such that the development of each tool leads naturally to the development of others.
- The range of topics to be addressed should vary depending on the type of local market at hand. Those that focus on slowing disinvestment and stimulating reinvestment will be key in weak markets whereas expanding the overall housing supply and preserving affordable housing will be the priorities in strong market. In each area, tools will be needed to help in: (1) assessing trends and the timing of the need for intervention; (2) deciding on the appropriate types of interventions for specific properties; and (3) program monitoring and coordination.

- Efforts are also warranted to avoid three risks to future development: (1) poor data quality; (2) unreasonable expectations about automated decision making; and (3) temptations to charge for access to data.

Section 2 Tool Building Experiences in Five Cities

BALTIMORE:

POSITIONING VACANT PROPERTIES FOR RESALE TO INVESTORS

The Data System. In the last several years, the City of Baltimore has made significant progress in applying geographic information and technology to support service delivery and managerial challenges. Mayor O'Malley, gave the work impetus with his focus on the development of the *CityStat* program and the establishment of the Mayor's Office of Information Technology, but activity has been underway in many other City departments as well. A general enterprise data warehouse has been developed to centralize critical city data for geographic integration, including property assessor's information, complaint data, housing violation data and permit data. A web based capacity has been developed (called "Housing View") that delivers easy to read parcel level maps showing such information and offering the ability to look up tabular data on individual parcels (available to city staff only at this point). Another web site, "Baltimore City I-Map," is being made available to the general public. It maps cultural features (landmarks and monuments, etc.), public facilities, and road classifications, along with parcel boundaries and building footprints city-wide. The City has also recently developed a market-oriented typology of neighborhoods (the idea noted in Section 1).

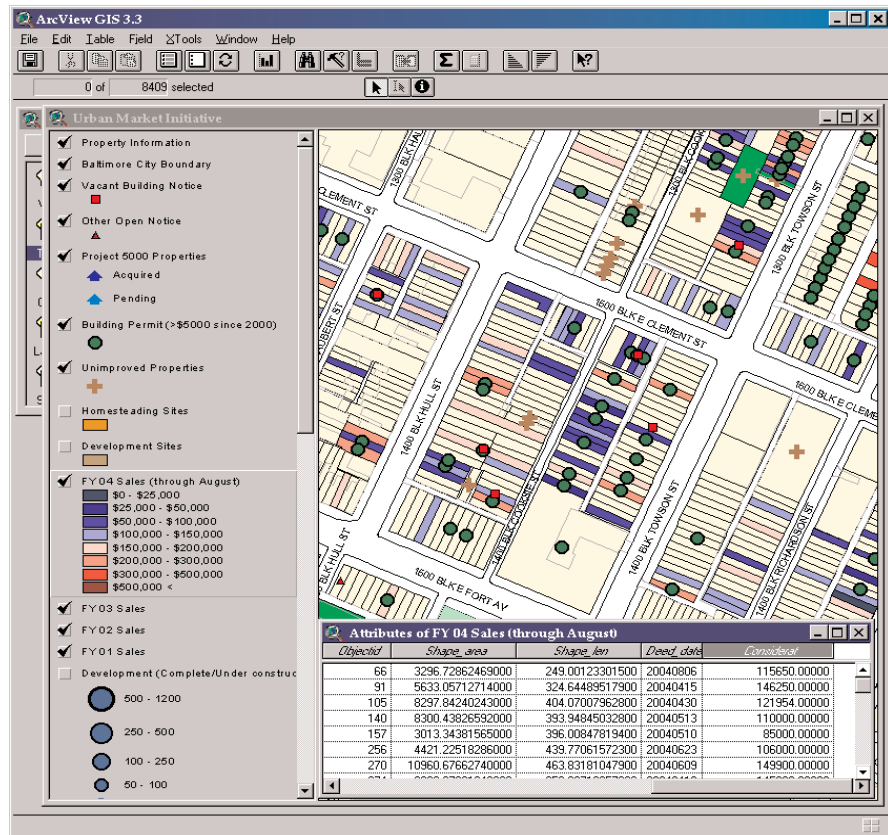
Decision Context: Ambitious Land Banking in the Public Interest. The City of Baltimore is currently involved in an ambitious plan to restore thousands of abandoned units to livable and marketable condition. The plan, also spearheaded by Mayor O'Malley, is known as "Project 5000" and set the stage for this project. The City has already stepped up its process for acquiring vacant properties and has assembled detailed information about them. The UI/NNIP project has focused on helping officials conduct more effective land marketing and disposition.

A decision support tool is being built to provide much better focused information to potential investors and to help the City sort and package the properties for resale to ensure good matches between supply and demand. Research on how different investors are likely to value various characteristics of properties in this inventory has been conducted and has influenced tool design at several points along the way. The City's Housing and Planning agencies, along with the local NNIP partner (the Baltimore Neighborhood Indicators Alliance), are playing the lead roles in this process, working in concert with the Live Baltimore Marketing Center, a nonprofit organization devoted to marketing Baltimore City neighborhoods.

Developing the Tool: Positioning Vacant Properties for Resale to Investors. In first few months of the project, the team held several meetings to investigate possible data-sharing arrangements with community partners and soliciting their initial input as to content and format of the prototype tools. It was decided to develop a customized web presentation of available data likely to be useful to potential investors in their search for properties to acquire.

The site will present a variety of information, similar to the style of the City's existing internal "Housing View" site, but it will emphasize information that experience in the property disposition program has shown to be of interest to purchasers. The Housing Department evaluated sources, geographic levels, and types of sale data to guide its choices

Figure 1. Prototype of Baltimore Development Opportunities System



regarding the structure and display of the site and related presentations. The first major task under this project was the building of a Disposition Database on all the properties acquired through Project 5000. This data based will feed information to the new web site.

The prototype site (still under construction when this was written) will feature maps and listings of properties available for sale, grouped into categories (for example, by type/size/price) as expected to match the interests of different types of investors (see Figure 1). Categories differentiate between parcels to be marketed on an individual basis and those to be marketed individually or in clusters for large-scale development. Among the former, subcategories include: (a) parcels to be marketed to prospective homeowners directly; (b) those to be marketed through realtors; and (c) those that are city-owned but are to be made available for sale at a later time.

Users will be able to click for screens (tables and maps) with detailed characteristics of individual properties in the above categories and for information about surrounding neighborhoods important to investment decisions. Would be investors can then sort properties by selected characteristics to facilitate comparison and choice. The data on surrounding neighborhoods will include a considerable amount of parcel-level information from the Housing View system not previously released to the public; for example, code enforcement status, building permits, typology designations, building vacancy.

An important addition will be the release of data on the city's general and specific development plans for neighborhoods, including information on specific investments (recent past and in planning) by both private developers and public agencies. This opportunity has spurred the creation of a Development Tracking Database for use by internal management staff (see Figure 2 for prototype). This will allow agencies to uniformly track a develop-

Figure 2. Prototype of Baltimore Development Tracking Database

Project # 150 Name Test

Project Description

Vetted? NO

Sq footage: 0

Status: Conceptual

Zoning

Total Cost \$0.00

Dev Type: -- Select One --

Industry Master Plan

Transit Proximity Lot Consolidation

Notes

Street#	Street Name	Neighborhood	Block #	Lot #
0	-- Select One --	-- Select One --	0	0

Record: 1 of 1

Project Summary

Project #	Project Name	Status	Total Cost
14	Swann's Wharf	Under Construction	\$0.00
15	Camden Court	Under Construction	\$34,000,000.00
16	Morgan View Apartments	Complete	\$31,569,993.00

ments' status, funding sources, unit types, and other relevant information as it moves through the various phases from concept to completed development. Arcview shapefiles are being created (over 150 projects so far) so that the development information can be represented through GIS. (Only selected status information from this system will be presented on the public site).

It is expected that user-testing will be conducted in conjunction with a program of interviews and focus groups after the prototype is completed. The interviews and focus groups will be designed to learn more about how different types of potential investors make their investment decisions as well as about what data on property and neighborhood characteristics, and what forms of data presentation, are most valuable for them in the process. This information, along with user-test results, will be the basis for further improvements to the initial tool and for the development of additional tools (structured application category) to help sort and package properties for further marketing.

Next Steps and Broader Applications. As the team designed the prototype for the property disposition site, they began to recognize that it offers broader potential. The information in the current design, selected to help prospective investors decide which sites to purchase (basic conditions and trends, and now development plans, at both the neighborhood and parcel levels) is the same type of information that neighborhood development planners (in CDCs, other nonprofits and neighborhood associations, and city planning departments) have always wanted to have to make their own work more effective.

The neighborhood summary information should be helpful in particular for strategic planning. However, the data at the parcel level should permit much more clarity and effec-

tiveness in targeting assistance and coordinating the work of implementation across organizations than has been possible before. Having this information in an easy to access and user friendly form should also make it much easier to engage neighborhood residents in the processes of planning and monitoring progress. The team is now considering how to take advantage of these opportunities in the next stages of its work.

INDIANAPOLIS:

PROVIDING A BASIS FOR MAKING AND MONITORING COMMUNITY DEVELOPMENT GRANTS

The Data System: In 1986, major institutions in Indianapolis/Marion County (including public agencies, utility companies, NNIP's partner The Polis Center at Indiana University, and others) came together to form a public-private GIS consortium called IMAGIS. This group led the development of the first digital parcel base layer, which was then turned over to the Department of Metropolitan Development for maintenance. In the 1990's, the assessors of the City's nine component townships, who maintain separate versions of the parcel layer for their operations, began to collaborate with IMAGIS to ensure consistency across the files. Though the parcel map is maintained in a separate system from related data files, users can link property attributes, foreclosures, boardings, tax sales, and other information through the parcel ID or address. Government operations files, such as assessors' data, inspections and permits are routinely shared across agencies. Public access for residential property data is currently limited to a fee-based web site where users can look up property information and permits by property address or owner name. The Polis Center is working closely with the City in the development of a "My Neighborhood" component of the City's web site that will combine the parcel-level data from the city with neighborhood-level data from Polis' own indicator system and provide access to the public via web services free of charge.

Decision Context: Under the leadership of Mayor Peterson, the Indianapolis city government took several steps towards being more strategic about community development. Though tackling different problems, the stakeholders recognized the importance of developing comprehensive place-based approaches and defining and measuring success. As one example, the mayor launched the Abandoned Housing Initiative in Spring 2003, which sought to take action on vacant or illegally occupied properties. As part of this initiative, the city developed for the first time a comprehensive inventory of vacant houses. Since then, the city has implemented policy changes to speed up the process of moving abandoned houses towards redevelopment.

As part of an effort directed by the Community Development Strategy Group (a diverse group of civic leaders) the Mayor and the Indianapolis Coalition for Neighborhood Development co-hosted a Community Development summit in October 2004 where over 400 residents and community leaders came together to initiate a renewed vision for strengthening Indianapolis neighborhoods. The group has hosted several open forums since in individual neighborhoods.

To have a better understanding local market conditions to guide actions, the Department of Metropolitan Development created a four-category Housing Typology (shown in Figure 3) based on cluster analysis of vacancy rates, assessed housing value, and owner-occupancy. Identifying appropriate policies for different kinds of neighborhoods also is a feature of the Great Indy Neighborhoods Initiative, a demonstration project designed to showcase the benefits of comprehensive community development and strengthen and improve local neighborhoods. The Community Development Strategy Group estimates that the Greater Indianapolis Neighborhoods Initiative will impact between six to twelve neighborhoods at a cost between \$2 million and \$4 million over a three-year period.

The Community Development Strategy Group has also been meeting around the

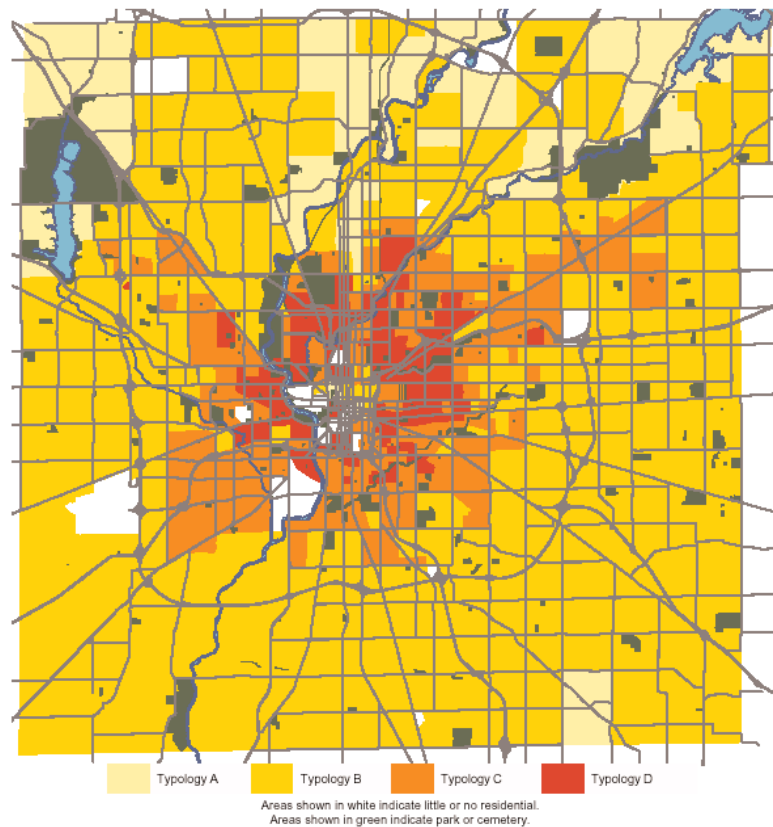
Figure 3. Indianapolis Housing Typology

Typology A - Attractive, high-end residential with high property values, high owner occupancy, and very low vacancy rates.

Typology B - Healthy areas with above average property values, high owner occupancy, and very low vacancy rates.

Typology C - Visible signs of decline but not highly concentrated. These communities have below average property values, below average owner occupancy rates, and above average vacancy rates.

Typology D - Significant deterioration of housing stock with dense concentrations of vacant buildings. These communities have low property values, low owner occupancy rates, and high vacancy rates.



Healthy Communities Network Pilot, an internet-based community quality of life management system called the Healthy Communities Network. The members selected indicators to track in nine taxonomy areas: arts and recreation, economy, education, government, health, natural environment, public safety, social environment, and transportation.

Developing the Tool: Adding a Data-Driven Component to the Evaluation of CDBG

Grants. The original tool proposed by The Polis Center was to center on early warning of, and treatments for, vacant properties in the Abandoned Housing Initiative described above. By early 2005, however, with a job change by the coordinator of that Initiative and a resorting of policy concerns, that project no longer commanded priority. Accordingly, the staffs from the Polis Center, the Community Development program, the Unsafe Building program, and the Indianapolis Coalition for Neighborhood Development (the CDC coalition), met to identify an alternative tool.

Together they decided to work on improving the process for evaluating Community Development Block Grant (CDBG) applications. In the past, CDCs and other neighborhood groups had submitted over 400 applications, with no consistent information on the needs and conditions of the individual property or of the surrounding area. Now all parties agree in principle that CDCs applying for city funds will be required to use a standard analysis based on the SAVI property and neighborhood information to support their proposals. Once the new system is in place, the city officials can judge the relative merits of the proposals based on not just the project characteristics, but on a fuller understanding of how the project goals fits with the parcel and surrounding neighborhood conditions.

The idea seems sensible, but given the many stakeholders in the grant process, any change to the system requires careful consensus-building among the city officials and CDCs. The Polis Center as a neutral party has been providing conceptual and technical know-how along the way. The Indianapolis Local Initiatives Support Corporation (LISC), is also a strong proponent of data-driven decision-making and has acted as a champion of the revised CDBG process over the past few months.

Before choosing indicators, the city representatives realized that the first step had to be clarifying its goals for the program. They created for the first time a written list of goals describing the desired outcomes for families and neighborhoods, drawing items from the Comprehensive Plan, Blueprint to End Homelessness, and other city documents. With those in place, The Polis Center paired the policy goals with the project-level information required and the available neighborhood level indicators. The software will automatically code which typology category that the parcel falls into, helping the city officials understand if the proposals are appropriate for the market condition of the area. The users can also analyze how the funding is distributed across different market types.

The team has been reviewing the indicators proposed for the report. Once there is agreement, the Polis Center plans to run the applications from prior years through the proposed reporting tool. By reviewing the reports for projects that were successfully funded in past years, the team expects to uncover intuitive elements not captured in the concrete data elements. They will see if there are any indicators that will improve the reports, and then finalize the format.

Next Steps and Broader Applications. While the testing of the indicators is being completed, the Polis Center will develop the user interface for the tool. The applicants will type in the codes for the parcel or multiple parcels they are proposing to develop, and the system will return a report listing the Polis-based indicators relevant to the policy goals the project addresses. The applicant will next fill in the project level information required. A printed version will be submitted with their application, and the report contents will be saved to the system to form a master file for the evaluators. In this way, city officials can sort applications by program goal and scan to see, for example, which projects supporting homeownership are in the lowest ownership areas.

In the standard sequence, the city will disseminate information about the application process and new evaluation criteria in the Spring and issue the formal Call for Proposals in June. A next stage for the team will be to adapt the evaluation system to also help to monitor the grants that were awarded. For indicators that can be updated annually or more often, both the city and CDC staff can see how the indicators are progressing in relation to the program goals.

There will likely be some adjustments in the content, format, and procedures as this system is implemented. The process has already forced the city to be more transparent about the list of goals and objectives it wants to accomplish, but to date there hasn't been much setting of priorities or general proportions among goals on the list. For example, how much of the funding should go to revitalizing vulnerable neighborhoods versus maintaining stable ones? Or what share should be devoted to human service projects compared to bricks-and-mortar projects? It is unclear if the city will take this opportunity to outline concrete targets like this, or leave these questions to the discretion of the evaluators. As the process moves forward over the next few months, it will provide a testing ground to see if the city and its nonprofit partners can achieve its ambitions of being more strategic about community development.

callout here.

MILWAUKEE:

TESTING SEVERAL TOOLS IN ONE NEIGHBORHOOD

The Data System. Milwaukee's Master Property File (MPROP) is the oldest and most fully developed system across the five cities in this project. Established in 1975, it now contains more than 90 elements of data describing each of the approximately 160,000 parcels in the city, integrating source data from the administrative files of numerous city agencies. Since it was implemented the data have become invaluable and are currently used by nearly every city department for a variety of purposes. The system is now maintained by the City Department of Administration's Information and Technology Management Division.

MPROP first became accessible to the public via CD-ROM in 1994 and the data were first made available over the web in 2000. It is now housed in an ORACLE system that pulls data from the various departmental data sets periodically. In 1982, maps created by draftsmen were digitized as CAD based files so that parcel level data could be displayed as symbols on a map, but a polygon-based parcel file for the entire city was not created until 1998.

Decision Context: A Convergence of Improvement Efforts in Washington Park. This effort focuses on applying a mix of information tools in one neighborhood—Washington Park, a west-side neighborhood that is also the focus of an Annie E. Casey Foundation's Making Connections initiative. The City government, the Local Initiatives Support Corporation (LISC), and the local NNIP partner (the Nonprofit Center of Milwaukee) are all involved in making this a reality. LISC was the catalyst for forming what is now the key development entity: Washington Park Partners (WPP), a coalition of CDCs and other nonprofits focused on the revitalization of the area.

In 2004, LISC involved the WPP, residents and other stakeholders in the preparation of a "Quality of Life" plan to envision ways to improve the neighborhood in terms of housing, commercial, and service development. The planning process involved more than 150 people that live and work in the area and made considerable use of the database provided by the City and the Nonprofit Center. The plan has seven strategic themes: promote neighborhood identity; focus neighborhood redevelopment in strategic locations; develop a comprehensive housing program; create a safer neighborhood; improve the well being of the residents; improve job skills and employment opportunities; and improve recreation and open space facilities.

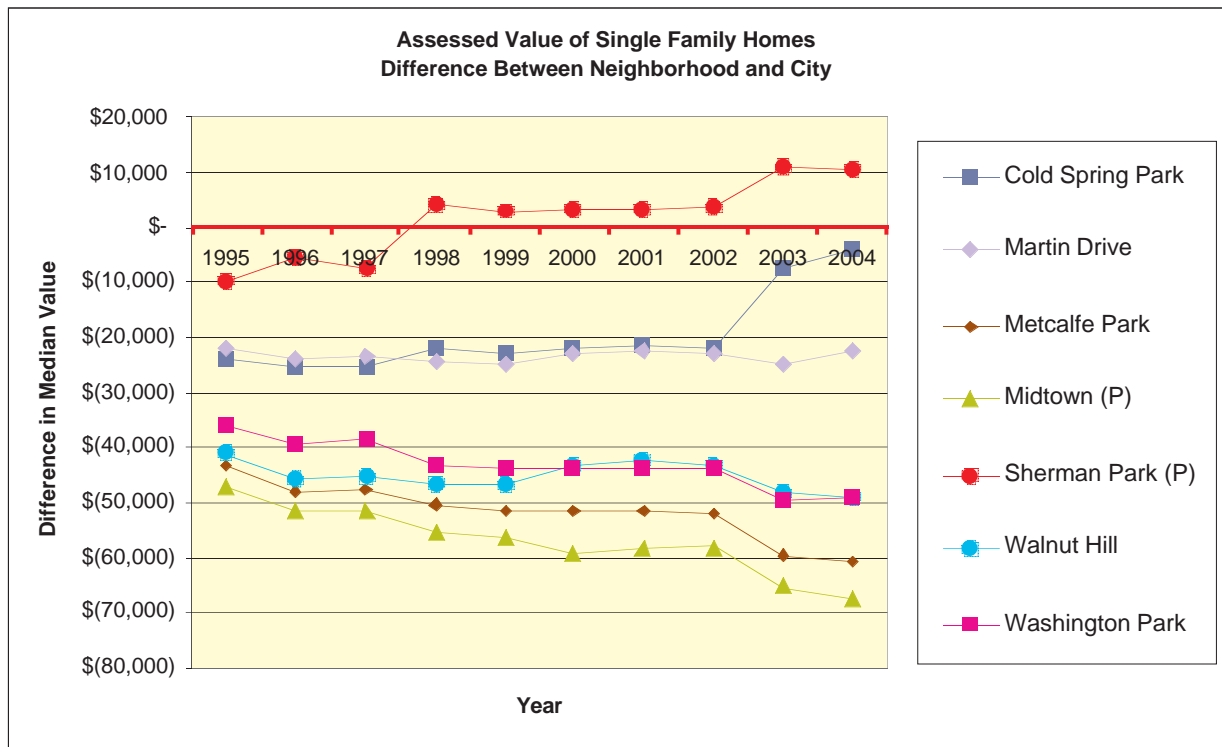
The housing program component has been an important emphasis in the plan's implementation and has been the focus of this project's local tool building efforts. A special housing committee was also formed to think through the challenges brought about by recent trends in housing market circumstances. Washington Park is made up of a number of sub-neighborhoods almost all of which have been severely distressed for some time, but there are now initial signs of reinvestment and even gentrification in parts of a few of them.

Developing the Tools: Testing a Set of Tools for Land Management in One Neighborhood.

The team has worked on several tools bringing data to bear to improve the effectiveness of revitalization efforts in Washington Park. The broader strategy is to provide data and tools that will support the individual actors in performing their own work more effectively while, at the same time, providing other tools (and using the same tools in different ways) so as to help all of them work more coherently together to achieve the comprehensive goals of the Quality of Life plan.

Two tools have been developed to date. The first is an analytic routine that attempts to show when sub-neighborhoods cross thresholds that make them ripe for development. It features tables, charts, and maps showing trends for a number of housing indicators (see Figures 4 and 5 for examples). The initial analysis showed that, in spite of the overall image of the area as one of distress, some sub-neighborhoods were performing much better than others in terms of housing reinvestment.

Figure 4. Sample Chart Analyzing Washington Park Sub-Neighborhoods

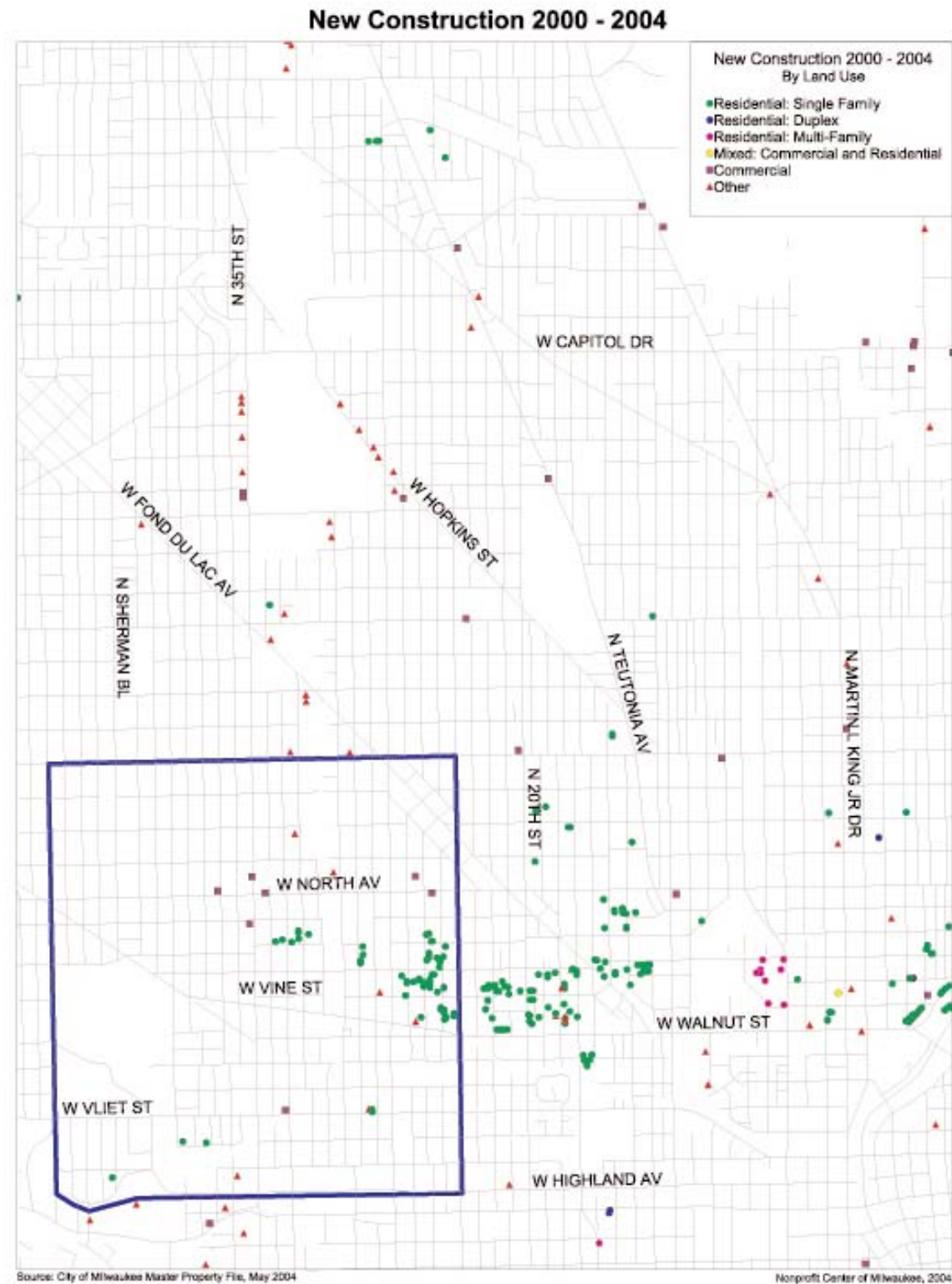


The mapping component of the tool was first applied to the St. Martin de Porres sub-neighborhood. Year-by-year map sequences on sales prices showed activity there to be sluggish in the early 1990s. Then after one developer made a set of purchases in 1995, sales volumes began to increase generally around the initial set. Study of that sequence is has set threshold parameters used as the sequencing component is being applied to another sub-neighborhood, Metcalf Park. The perception has been that Metcalf Park is one of the most troubled neighborhoods in the city, yet the data are showing conditions not unlike those in St. Martin de Porres when reinvestment there began to accelerate. Housing committee work with the tool has been the basis for a plan to begin strategic reinvestment in Metcalf Park in the hopes of creating a similar response.

In the second tool, CDCs and other groups have shared data on the characteristics and development schedules of their current projects so that, by seeing each others work in process, they and city officials can implement overall revitalization in a more coordinated manner. The tool is an adapted use of software packaged designed to support social service “case management” for vulnerable families: the internet-based Efforts to Outcomes package (ETO). This software supports queries and displays project information and schedule milestones on tables and maps in a case management framework that facilitates relating status to needs for various types of corrective actions. It is also being used to monitor social service activity in the local Casey Foundation initiative and having both types of data in the same system should work to further coordination.

One application will be to link a project now underway to help low-income families in the neighborhood become homeowners, to the CDC production pipeline. This project is offering counseling and other support to help interested families take actions to improve

Figure 5. Sample Map Analyzing Washington Park Construction



their credit scores. At the moment, the CDCs have no means to give preference to neighborhood residents over outsiders as their ownership units become available for purchase and the linking of data through the ETO system should support a reasonable approach for doing so.

Next Steps and Broader Applications. Another tool in process is the development of an Access database that will allow the community housing groups that are a part of WPP add their rich on-the-ground knowledge of individual parcels to information derived from the extensive city administrative records. The benefit will be the capacity to manipulate both sets of information together in Access. It is also expected that additional property specific data will be added in from City records on rehabilitation loans and grants.

A further opportunity will be the analysis of data from the system to better understand how properties slide in and out of “problem buildings” status. Surveys that collect data related to that status have been conducted in Milwaukee’s troubled neighborhoods for many years. Up until just a few years ago, each year’s survey showed increases in the number of buildings boarded up and in the number of previously boarded-up properties that had moved into the vacant lot category. In the past few years, however, that pattern has been reversed, with more improvements to problem buildings in evidence. The data from these surveys over the years should offer a rich resource for analysis on the determinants of change at the building level as neighborhood prospects change directions.

PROVIDENCE:

HELPING MARKET ACTORS FORM STRATEGIES FOR PROPERTIES AND NEIGHBORHOODS

The Data System. The Providence story is unique in that the local NNIP partner (the Providence Plan) played a sizeable role in helping the city develop its first integrated parcel-level system PROLIS (the Providence Land Information System) in 1997. Starting with assessors records as a base, the system now includes regularly updated information from 10 agencies on the city’s 42,000 parcels. Starting in 2004, improvements in data integration and other enhancements have been implemented as the system is transitioning to become the broader “Govern” system. The first release of system data on the web actually occurred via the “Neighborhood Mapper” feature on the Providence Plan’s web site in 2002 - a development funded by a US Department of Commerce TOP grant. The feature offered several map layers and permitted to users pull down fixed tables of characteristics for individual parcels by clicking the parcel’s location on the map.

Decision Context: Information Support to Address Opportunities in a Mixed Market. In spring 2003, the Rhode Island Governor’s Growth Planning Council turned its attention to the issue of abandoned properties in Providence. Their report detailed the social and economic detriments of blighted property and called for a response from local government, community organizations, and the private sector. The primary response has been the Urban Land Reform Initiative (URLI), operated jointly by the Providence Plan and the City’s Department of Planning and Development (work also supported by the state Health Department, the Rhode Island Foundation, and the local Fannie Mae Partnership Office). The purpose of the initiative is to develop an urban land reform strategy for the city and its plan rests heavily on making better use of the parcel-level information system.

The theme of enhanced information use has been emphasized by the administration of Mayor David Cicilline in its efforts to bring more transparency and efficiency to city governance. The theme is exemplified by “ProvStat,” which uses data intensively in recurrent reviews of the demands on and performance of City departments (modeled after Baltimore’s CityStat system, and launched in January 2002 with Providence Plan technical assistance).

An early step to prepare for the URLI, was the Providence Plan’s survey of vacant and

abandoned structures in the city (funded by the Fannie Mae Foundation). The survey provided staff with the opportunity to think through the factors that effect property decline and problem buildings status in Providence (and to build those lessons into subsequent tool development). In the survey, non-utilization and physical neglect were identified in over 1,500 properties and the data about them were added into the central system.

The mission of URLI, initially focused solely on the problems of abandonment and neighborhood decline, has shifted as Providence has experienced considerable expansion in property values and real estate market activity over the past two years. This creates a more positive environment for turning around previously abandoned buildings, but it also brings new pressures associated with gentrification and loss of affordable housing in some areas. The shift, however, adds complexity and, as such, has added to local recognition of the need for better information about real estate in a more useable form to develop effective strategies. Needed is the sort of information tool development that was a part of the URLI plan from the beginning.

Developing the Tool: Quick Data Retrieval and Analysis of Problem/Opportunity Properties. The tool developed by the Providence Plan under the UMI project—the Urban Land Reform Property Information Tool - moves well beyond the capacity of the previous Neighborhood Mapper. The first step was adding information to the database and better organizing it to identify “problem building” status. Research followed by discussions with potential users led to the selection of five key indicators: tax lien advertisements and sales, housing code violation notices (NOVs), public works (DPW) environmental tickets, struc-

Figure 6. Search Screen: Providence Urban Land Reform Land Information System

Figure 6 shows the search screen of the Providence Urban Land Reform Land Information System. The interface includes a navigation bar with tabs for "About the Project", "Property Search", "Summary Data", and "Issues & Policy". Below this is a sub-navigation bar with "Introduction", "Basic Search", "Advanced Search", "Tutorial", and "Training". The main content area is divided into two columns. The left column contains a "Property Search" section with instructions for "Plat, Lot", "Street", "Owner", "Neighborhood & Ward", "Land Use", "Land and Building Size", "Total Assessed Value", and "Abandonment and Utilization". The right column contains a "Search By:" section with input fields for "Plat - Lot", "Owner", and "Address". Below this is a "Choose Geography:" section with dropdowns for "Neighborhood" (set to "West End") and "Ward" (set to "All"). This is followed by a "Choose Land/Building Characteristics:" section with dropdowns for "Land Use" (set to "One Family Residence"), "Land Sq. Ft." (set to "All"), "Building Sq. Ft." (set to "All"), and "Total Value" (set to "All"). A note states "Information ABOVE is current for the December 31, 2004 Tax Roll." At the bottom of the right column is a "Utilization Survey" section with a dropdown set to "Suspected Abandoned" and a "Search" button. A disclaimer note states "This list was originally made in 2004 and includes both buildings and vacant lots. This is NOT an official determination by the City of Providence." The footer contains the text "The Providence Plan | City of Providence DPD".

Figure 7. Results Screen: Providence Urban Land Reform Land Information System

You are here: [Search](#) > Results

Providence Urban Land Reform Land Information System

Search Results (Click Plat/Lot for Detail) [Search Again](#)

Records 1 to 3 of 3 Sort by

Plat/Lot	Address*	Land Use	Owner (12/31/03)	Lot Sf.	Bld Sf.	Recent Incidents
030-0031-0000	29 Sprague St	One Family Residence	Steven Tegu	3,877	1,778	1
030-0292-0000	106 Wilson St	One Family Residence	Mayra Paduani	3,790	1,464	0
036-0266-0000	15 Lytherland Pl	One Family Residence	Kirby Goff	2,134	698	0

[Search Again](#)

* Address shown may not be sole address for property (particularly for commercial or industrial).
[The Providence Plan](#) || [City of Providence DPD](#)

ture fires, and foreclosures (data are provided on each indicator individually and an unweighted index score is also calculated). Other newly developed parcel-specific data (for example, from the vacancy survey and on types of ownership) were also added to the files.

The tool itself is web based. As illustrated in Figure 6, the first new feature is the Search Form that permits the user to specify a series of characteristics in the database. The system then generates a *Results Page* (Figure 7), a table listing of all properties that meet the specified criteria along with key information about those properties. For example, the user could select a neighborhood and then select, within that neighborhood, all properties that have had NOV and DPW tickets since January 1994—properties which are likely to demand attention and could well be candidates for rehabilitation in the current market environment.

The next new feature is a *Sort Capacity*. After generating the Results Page, users can re-sort the property listings by any variable they choose that exists in the system. In the example above, the user might want to sort by the total number of NOV and DPW ticket incidents, which might be one way to define problem severity status (or priority for intervention). Users can then quickly try out alternative criteria on the Search Form and for the Sort feature and compare results.

After this kind of process is complete, users are then likely to want to learn more about the characteristics of individual properties on their lists. The new ULRI tool, allows them to select individual parcels from the table (or a map, as was possible before). They are then presented with a page (Figure 8) showing a photo of the property along with a considerable amount of descriptive information. Two new features are associated: (a) a comments box, to enable users to write in their own observations about the property and (b) a “surrounding properties display” showing a map of properties surrounding the one selected enabling the user to find descriptive information about them.

So far, the tool has been made available on the web only to ULRI project partners (including a number of CDCs as well as City Agencies). The uses have varied. CDCs have used it mainly to more efficiently identify and prioritize properties that would be good candidates for development and then to obtain data needed for the development process (e.g., identifying and locating current owners). City departments have recognized the potential value of the tool for neighborhood planning although the City does not have a comprehensive program along those lines at present. They have commented on its value, however, for many day-to-day operational uses: for example, identifying owners with multiple addresses,

Figure 8. Property Detail Screen: Providence Urban Land Reform Land Information System

You are here: [Search](#) > [Results](#) > Detail

Providence Urban Land Reform

Land Information System

Property Detail

[Back to Results List](#)

Plat-Lot-Unit: 030-0031-0000

[Map this Property](#)

Property Address	29 Sprague St
Neighborhood	West End
Ward	11
Owner (12/31/04)	Steven Tegu
	29 Sprague
	Providence RI 02907-2525
Tax Code	One Family Residence
Zoning	
Year Built (Primary)	1930
Land Value	\$16,800
Building Value	\$109,100
Total Value	\$125,900
Lot Area (sf)	3,877
Building Area (sf)	1,778
Residential Units	1
Owner-Occupied	Yes
Nonutilization Tax	No
As of December 31, 2004	



Picture date unknown. Taken during 2001 revaluation.

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Property Distress

Warning Signs

Property Tax Lien

Times Advertised Since 1999	1
Times Advertised in Past 2 Years	1
Most Recent Advert	8/18/2005
Times Sold Since 1999	0
Times Sold in Past 2 Years	0
Most Recent Sale	-
Was most recent sale redeemed?	-
As of September 9, 2005	

Notice of Code Violation

Notices Since 2004	0
Notices in Past 12 Months	0
Most Recent Notice	6/6/2003
As of June 13, 2005	

Environmental Ticket (\$250+)

Tickets Since 2004	0
Tickets in Past 12 Months	0
Most Recent Ticket	-
As of September 30, 2005	

Structure Fire

Fire Runs Since 2004	0
Fire Runs in Past 12 Months	0
Most Recent Fire Run	-
As of February 28, 2005	

Warning Sign Summary

For Individual Property

Recent Incidents	1
Most Recent Incident	8/18/2005
Most Recent Sale	-
Incidents Since Last Sale	1

Within Vicinity of Property

BLOCK GROUP: 1200 3

Recent Incidents	13
Foreclosure Sales in Past 12 Months	1
Tax Liens Advertised in Past 2 Years	11
Tax Liens Sold in Past 2 Years	0
Code Violation Notices in Past 12 Months	0
Environmental Tickets in Past 12 Months	0
Runs for Structure Fires in Past 12 Months	1

The term "Recent" refers to the past 2 years for tax lien advertisements and sales and to the past 12 months for code violations, environmental tickets, structure fires, and foreclosure sales. Property Vicinity is defined by Census Block Group.

Foreclosure History

As of October 28, 2005

No Foreclosures

Source: Providence Journal Legal Notices (2004 forward). Represents advertised date of foreclosure sale, not confirmation of sale.

Status: **Suspected Abandoned**

As of August 2004

Status is NOT an official City determination. Unutilized properties were visually deemed to have no obvious current use. Suspected abandoned properties were both unutilized and with serious signs of physical neglect.

Property Sales

As of May 31, 2005

Date	Buyer	Seller	Price	Book	Page
No sales reported					

Sources: City of Providence and Warren Information Group (1997 forward). Sale transactions may involve buyers, sellers, and book-pages in addition to those reported. Be aware that sales price may be affected by other properties or conditions that were part of the transaction.

verifying addresses before sending out violation notices, identifying properties with recent changes in ownership.

The comments box has proved useful. Comments have led to the discovery of errors in city records and of new building-specific problems needing attention that would not have been spotted in normal City operations.

Next Steps and Broader Applications. In addition to property and neighborhood specific uses discussed above, the Providence Plan and its partners have used their data more broadly in several instances, most importantly in relation to the tax sale process. In the late 1990s, data from the system showing that large scale slumlords were acquiring an undue number of properties in the tax sale pipeline led to a legal change to curtail that abuse. More recently, another Providence Plan analysis of the data convinced lawmakers to enact further change, most importantly to allow public agencies to intervene directly and assist when low-income owners of properties in the pipeline are at risk of losing them. This change in the law is likely to spur another wave of applications of the tool to identify, and design appropriate assistance packages for, at-risk owners.

Providence Plan staff feel that increasing awareness of the availability of good data in the system, in itself, is motivating new demand for applications. One example is that, based on presentations of recent system enhancements, the City asked the Providence Plan to provide analysis to support a much improved method for its comprehensive property tax assessment.

All of this work has caused the team to give heightened priority to data quality. They decided, for example, not to release data received from City agencies where they have found quality problems. This recognition has given rise to the concept of a system that has a “front page” (the high quality data) and a “back page” (lower quality data that can only be accessed by selected in-house users). The idea is that it is better to incorporate the back page data into the system’s framework because doing so will be likely to encourage quality improvement more rapidly than if it was left out of the system altogether.

callout here.

WASHINGTON, D.C.:

MANAGING THE PRESERVATION OF AFFORDABLE HOUSING

The Data System. The integrated parcel-level database in Washington D.C. (the Computer Assisted Mass Appraisal database, CAMA) was developed, and is operated by, the City’s Office of the Chief Technology Officer (OCTO), based mainly on property information maintained by the Office of Tax and Revenue (OTR).⁷ The system was first fully in place at OCTO in 2003 and selected data were first made available to the public via the web this year (2005). Substantial portions of the source data, however, have been shared regularly with Washington’s NNIP partner, *NeighborhoodInfo DC*, since 2004. *NeighborhoodInfo DC* (operated as a joint venture of the Urban Institute and the DC Local Initiatives Support Corporation, LISC) is also now regularly sharing data in its files (tract and zip-code level information from a variety of other national as well as local sources) with OCTO.

Decision Context: A Hot Market and the Loss of Affordable Housing. The housing market in Washington, D.C., has been much stronger than those in the other four pilot cities, thus preserving affordable housing is a high priority. Between 1995 and 1999, sales prices of owner housing units (adjusting for inflation) actually went down slightly (-0.2 percent per year), but between 1999 and 2004 they went up at an unprecedented rate (+15.8 percent per year—Turner, et al, 2005). A mix of both neighborhood and parcel-level indicators are needed to assess pressures on the affordable stock, especially gentrification. To this end, a “Neighborhood Assessment System” (NAS) was proposed in 2003 to help city staff, advocates and residents track and act on community changes. This project is receiving its primary support from the Fannie Mae Foundation and is being designed and implemented

by the Urban Institute in the context of *NeighborhoodInfo DC*.

In late 2004, the local team met to discuss plans with the DC Office of Planning, staff of the Mayor's office focusing on the issues of gentrification and affordable housing, Fannie Mae Foundation staff focusing on the same issues, the staff of DC LISC, and OCTO. HUD staff responsible for data on Section 8 Expiring Use were also interviewed and HUD data files on that topic were drawn down.

The first stages of the work entailed (1) acquiring new the parcel data that is required; (2) using it and other data in *NeighborhoodInfo DC*'s existing data warehouse to create a new website for dissemination; and (3) conducting the base analysis to support tool building. The new data were obtained by the end of the year, and the refurbished and enhanced web site, www.NeighborhoodInfoDC.org; was completed and made public in February 2005.

Recent trends in property sales, mortgage lending and other indicators were then analyzed in terms of their threat to affordable housing. Neighborhoods that have recently gentrified were studied more intensively. Neighborhood change city-wide was subjected to multivariate analysis to gain a better understanding of how different indicators interact over time to affect housing affordability (Tatian, 2005).

Developing the Tool: Section 8 Expiring Use Monitoring Report. Meetings with stakeholders about available data and the analysis noted above led to the realization that although the loss of affordable housing was regarded as an emerging crisis, no one was really monitoring the issue; that is, showing how many and what types of losses were occurring in what neighborhoods and how these patterns were changing over time. Accordingly, it was decided that the initial NAS tool should be a quarterly report on this topic.

The initial version (prepared in August) incorporated data on background conditions (for example, housing price changes) city-wide and by neighborhood, but focused on tracking changes in the inventory of Section 8 projects reaching contract expiration (derived from the HUD file). This focus was a natural starting place in this environment since research has shown that City efforts to preserve the Federal subsidy stream for such properties can be extremely cost effective (Bodaken, 2002). Often, a comparatively small investment of local resources can stave off what can amount to a very painful loss.

Figure 9 shows the tool's summary table, including: (a) the number of Section 8 projects (and housing units) that reached their scheduled expiration dates over the past year (by quarter) and what happened to them (actually expired, extended, sold to nonprofit, etc.) and, (b) the number of projects (and units) with contracts scheduled to expire over the coming year (also by quarter). Supporting tables showed the same information by ward and neighborhood. The report also included separate exhibits, such as the one in Figure 10, with detailed information on characteristics of each individual property, actions planned (and groups assigned) to preserve it, factors related to the probability of landlord opt-out, and other neighborhood conditions and trends.

The DC Department of Housing and Community Development (DHCD) provides grants to several CDCs and other housing advocacy nonprofits in the city to help tenants prepare for potential transfers of ownership of affordable rental properties such as Section 8 projects (in some cases to purchase the properties themselves and in others to work with the City and others to find other ways to continue the property in an affordable status). UI staff obtained information from each of the groups involved on the specific properties they were working with, and this turned out to be an important feature of the new report. Combining the lists and relating them to the expiring use schedule, it was possible to identify possible conflicts and gaps in assignments.

Participants in the August meeting set up to review the first report included representatives of DHCD, its grantees, and a number of other community intermediaries working on the housing affordability issue in the city. DHCD asked its grantees and others use the report as a basis for planning their future work in relation to the Section 8 pipeline.

Figure 9. Washington, D.C. Section 8 City Summary Report

**Section 8 Multifamily Report: City Summary
July 2005**

Washington, D.C.

Current Active	Total	Contracts		Assisted Units	
		100		10,353	
Renewals/Expirations (past four quarters)	Total	Contracts		Assisted Units	
		Renewals	Expirations	Renewals	Expirations
		63	11	6,377	1,408
		15	0	1,394	0
		24	7	2,647	1,046
		11	1	1,200	50
Upcoming Expiring (next four quarters)	Total	Contracts		Assisted Units	
		Renewals	Expirations	Renewals	Expirations
		40		4,005	
		27		2,157	
		Contracts		Assisted Units	
		Renewals	Expirations	Renewals	Expirations
		7		1,387	
		4		321	
		Contracts		Assisted Units	
		Renewals	Expirations	Renewals	Expirations
		2		140	

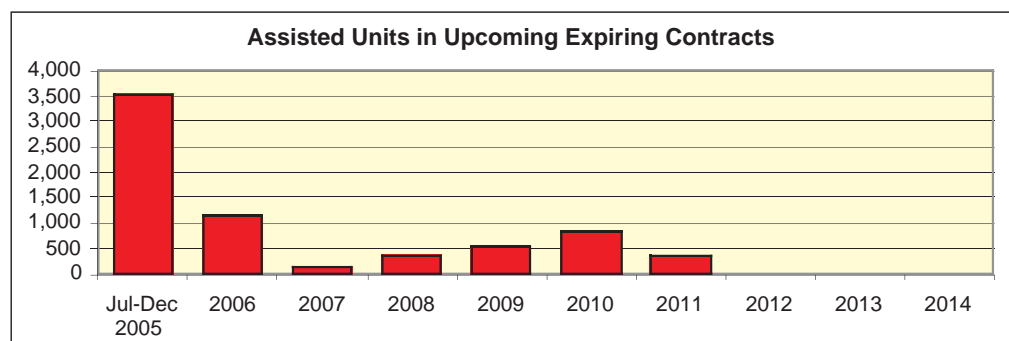


Figure 10. Washington, D.C. Section 8 City Detail Report

Section 8 Pipeline Report: Detail for Upcoming Expiring Contracts (next four quarters)

July 2005

Washington, D.C.

Expiring July - September 2005

1301 7TH ST NW, Washington, DC 20001 / Contract no.: DC39M000033

Name: GIBSON PLAZA
 Ward 2 | Cluster 7 (Shaw, Logan Circle)
 ANC 2C | PSA 308 | Tract 48.02
 Expires: 07/31/2005 {expiration risk?}
 Program: LMSA
 Num. assisted / total units: 122 / 217 [56%]
 Affordability: Below 80% FMR
 Owner: First Rising Mt. Zion Baptist Church Hsg. Cor, 601 N NW ST, Washington, DC 20001
 Tenants being assisted by: Manna CDC (current)

1523 VERMONT AVE NW, Washington, DC 20005 / Contract no.: DC398023015

Name: PHYLLIS GIESELER
 Ward 2 | Cluster 7 (Shaw, Logan Circle)
 ANC 2F | PSA 307 | Tract 50
 Expires: 07/31/2005 {expiration risk?}
 Program: Sec 8 SR
 Num. assisted / total units: 2 / 3 [67%]
 Affordability: Between 80% & 100% FMR
 Owner: Gregory & Holly Porter, 1523 Vermont Avenue, N.W., Washington, D.C. 20009, DC 00000
 Tenants being assisted by:

1730 7TH ST NW, Washington, DC 20001 / Contract no.: DC39M000035

Name: LINCOLN WESTMORELAND I
 Ward 2 | Cluster 7 (Shaw, Logan Circle)
 ANC 2C | PSA 308 | Tract 49.01
 Expires: 07/31/2005 {expiration risk?}
 Program: LMSA
 Num. assisted / total units: 82 / 108 [76%]
 Affordability: Between 80% & 100% FMR
 Owner: LINCOLN WESTMORELAND HOUSING INC, 4901 Newport Ave, Bethesda, MD 20816
 Tenants being assisted by: Manna CDC (current)

Next Steps and Broader Applications. DHCD plans to use updates of the NAS report as a basis for its coordination of preservation efforts more broadly in the future. Quarterly meetings reviewing the Section 8 portions of the report are expected to result in reassessments of priorities, and adjustments of technical assistance assignments to eliminate gaps and overlaps. In addition to managing the provision of technical assistance to tenants, however, DHCD staff also see the possibility of using the data to identify and prioritize needs for direct City intervention (for example, that might involve title transfers and city assistance with rehabilitation and ongoing operations).

The most urgent request of the participants in August, however, was for Neighborhood-Info DC to expand coverage to include information on the status of other rental properties at risk of being lost to the affordable stock. This is likely, for example, to involve obtaining early notice when landlords report to the city their intent to rehabilitate or sell buildings that now rent at reasonable levels. It will also involve a merger of another HUD data set

with city records to identify Low Income Housing Tax Credit (LIHTC) properties.

The current tool yields paper reports, but the Fannie Mae Foundation is currently supporting a planning process to be completed in 2005 for the co-branding of its *DataPlace* site for NeighborhoodInfo DC, including the web-development of the full-quarterly report. Users will be able to access any of the current report city-wide screens and to click on a map or listing to bring up the relevant data screens for individual neighborhoods. It will also be possible to generate maps for variables in the system (point locations of specific properties or key indicators at the census tract level).

In addition, within neighborhoods identified as having a high risk of loss of affordable housing, the team is considering the development of additional tools to identify and prioritize properties and families facing different types of risks and then help plan and monitor action programs to address the risks. For example:

- Identify: (1) sub-neighborhoods with high levels of subprime lending and foreclosure notices, or (2) individual owner-occupied properties with serious tax arrearage.
- Identify properties that are attractive candidates for acquisition in a program of strategic land assembly enabling the public sector to get ahead of the curve in neighborhoods in the early stages of gentrification

Section 3 Taking Advantage of the Potential

How should the field move beyond these initial experiences? Representatives of each of the five site teams and UMI and Brookings staffs met together several times during the course of this project to review progress, but this broader question was also discussed. The following are conclusions of the authors, but they are drawn in part from these discussions.

Creating an Environment to Further Tool Development

As noted in the case studies in Section 2, all of the cities are either working on (or at least thinking about) developing additional tools. This seems to have occurred naturally. As a team is working on one tool, opportunities to develop other tools in related areas are likely to suggest themselves. However, for the most valuable payoff to occur, this project suggests that each city should develop an environment that encourages expanded applications of their much improved data sets to real decision making.

While the local stakeholders cannot tackle every issue at once, the process should be structured so that over time each city will build up a suite of computer-assisted tools to guide and direct (and subsequently monitor) different types of initiatives to strengthen its local real estate market. The cases suggest that building the right kind of environment is likely to require three things:

First, is the existence of at least a few champions and technical support professionals who understand both the substance of the decision problem at hand and the potentials of the data and technology. Individuals who meet these specifications existed in each of our five sites. In all cases, the leading champion was a government official or community leader, but they were prompted to move ahead only after being sold on the possibilities by one or more of the technical professionals on the team. The champions were able to get the other relevant decision makers to the table by describing how the tool would work in a way that convinced them it was likely to lead to more justifiable decisions and simplify the decision process.

The second requirement is that tool development go hand in hand with the building and strengthening of relationships among stakeholders that need to be involved - tool development and use can be a strong impetus for coalition building. The issues that were the subject of tool development in all five cities, in fact, like most issues in public policy concerning urban land markets, are the kind that ultimately require a range of players (public

and private) to reach at least a rough consensus about what to do. We think a good case can be made that environments rich in data and decision support tools can make an important difference both motivating and helping to sustain productive coalition building.

The third requirement is the ongoing development of decision support tools, be carried out so that the implementation of one tool leads to the development of others. For the applications developed in these sites, the data in and of itself (or even analysis by the champion or technical staff) was insufficient to get the decision-makers (the key stakeholders) to pay attention. What did get their attention was the tool that brought together the data they needed in a form that was easy to understand and work with. As the work proceeded, it naturally led them to think about related issues that would affect their success and the champions and technical professionals conceptualized other tools and uses of data that would help them in these other tasks.

If the environment evolves in this way, we think there is a good chance that it could more broadly change the way business gets done in urban community development and land management. The experience of this project suggests to us that the application of parcel level information to improve decision making by a broad range of actors in urban land markets is now poised for rapid acceleration. With improvements in the technology over the past few years, the underlying data systems can be expanded and made accessible for many new uses at dramatically reduced costs and tools can be developed and operated economically. It does not seem much of a stretch to envision this new environment motivating fairly fundamental changes in the processes by which local governments go about land management. The data and the tools raise expectations about performance in an atmosphere of transparency and, thereby, create incentives that should encourage more effective performance from all participants.

Topical Framework

What kinds of tools should be developed? We cannot specify all of opportunities at this point but the work done in the five cities does suggest the possible event space. Tools are likely to be developed in all of the policy categories for different market environments noted in Table 2. The initial differentiation is between “weak” and “strong” market environments. Originally, we thought these terms would apply to cities as a whole, but the project showed us that they are more relevantly applied at the neighborhood level. All five of the cities have some neighborhoods of both types, although the proportions indeed vary.

Table 2. Strategic Approaches by Type of Market Context

Weak Market Context	Strong Market Context
<i>Slow disinvestment</i>	<i>Preserve affordable housing</i>
Identify problem buildings by type	Identify properties at risk of loss
Match properties to action types	Match preservation actions to properties
<i>Stimulate reinvestment</i>	<i>Expand housing supply & assistance</i>
Analyze neighborhood trends	Track housing price changes
Identify properties for reinvestment	Mixed income developments
Coordinate actions across programs	Inclusionary zoning

In weak markets, there are two imperatives: slowing disinvestment in the existing stock and stimulating new investment. In the former category, one important need may be for a tool that identifies properties at high risk of abandonment and links them to packages of support that would prevent that outcome. This was the initial idea behind tool development in Providence, but as work was underway there the team recognized the opportunity for a broader set of “problem building” categories (that can be related to a broader range of types of public response) and tool development was broadened to follow suit.

Baltimore has focused on a specific need in the “stimulate reinvestment” category: building a tool that helps the City more effectively market distressed properties it has acquired to new investors. But as that tool was being designed, the team has also seen opportunities to reorient design to support a broader range of community development decision making. Milwaukee’s efforts are also in the same general category. The team from that city developed two tools. The first offers trend analysis that helps CDCs identify the best time to begin to reinvest in a distressed neighborhood with nascent indications of potential for improvement. The second, however, assembles data on the CDC projects underway in several neighborhoods to support more effective coordination and management of the pipeline, and further related tool development is being planned.

As we move from weaker to stronger urban land markets, priorities shift. In Washington, the highest priority was seen as a tool to help prevent losses of Section 8 project subsidies as contracts expire. The work is now being expanded to identify a wider range of affordable housing threatened by gentrification and to strategically link those properties to actions (neighborhood-wide and/or parcel specific) that might prevent the loss. The team is also involved in a related effort to track and report on housing price changes by neighborhood on a quarterly basis. (Interestingly, since this project was initiated, housing price inflation has accelerated in parts of Providence so the team there is now interested in adapting Washington’s approach in addition to the continuing use of its tools applicable to more distressed neighborhoods.)

Indianapolis is working on a tool that could theoretically guide decisions along the whole spectrum of market conditions from weak to strong. It is a tool that brings data and explicit criteria to bear in the process of allocating Community Development Block Grants (CDBG) funds to individual projects and also builds in reports to facilitate performance monitoring.

Within each of those categories, we think there will be need for three types of tools—those that facilitate.

1. Assessment of trends
2. Allocating program activity to specific properties, and
3. Program monitoring and coordination

Consider the first category on Table 1, for example: slowing disinvestment. This involves a host of program activities that deal with problem buildings—activities that are often not well coordinated. In this area, tools in the “assessment of trends” group would include analytically-based “early warning devices” that might show, for example, when properties reach a high risk of abandonment.

The tools that allocate program activity would work like the tools developed in Providence. Queries would allow the user to select all buildings with characteristics that make them appear well suited for a particular type of program action (e.g., demolition, boarding up, rehabilitation) and then rank the properties that are listed according to indicators that would suggest their comparative priority for action.

Once decisions are made about actions, additional tools can be developed to support program monitoring and coordination—to track progress against defined schedules of activity in a manner that prompts further decisions about corrective actions that may be needed during implementation. A tool that simply provides information on the action plans (parcel-level specificity) of the various public and private actors working in a neighborhood could in itself be major contribution to program coordination.

callout here.

Addressing Risks to Tool Development

Even though the potential is strong, the viability of these approaches could be undermined by several risks. Data intermediaries and others promoting these approaches need to be vigilant to avert risks that could threaten them. The experience of this project suggests that the following three are prominent among them.

Data quality remains critical; to improve the data, start to use them. This conclusion has come out most strongly in Providence to date, but the issue arises in all cities. The Providence team discovered that some of the data they thought important for their work was of much lower quality than they expected. Government counterparts cautioned strongly against making it available to most users because bad data even in one area might destroy the credibility of the overall initiative. The conclusion of the team, however, was not to drop the weak data from the system altogether. Rather, while the higher quality data can be placed on the “front page,” it is useful to maintain a “back page” for weaker data accessible to only a few internal users. The rationale is that moving the weak data inside the system and having some professionals outside of the source agency analyzing it would be more likely to lead to its improvement than simply leaving it behind.

Don’t take away all of the discretion. While there is strong interest in decision-support tools in all cities, remarks by decision makers suggest they do not want the tools to make the decisions for them. Neighborhood typologies, for example, can be helpful in suggesting generally the types of policies and programs appropriate for different types of neighborhoods, but the advice we are getting is to “not take them too seriously.” In other words, it should be expected that decision makers will not always follow such advice exactly. They may well know things about the neighborhoods that are critical to strategy but which quantitative data alone will never adequately convey. The same thing is true of other decision support tools; if the model presents a ranking of properties most attractive for some programmatic action, it should not be expected that that ranking will be followed precisely. The tools and the data behind them can move all the players toward more effective courses of action, but given the many intangibles involved, the final decisions cannot be delegated to the computer.

Don’t charge much, if at all, for access to the data. As parcel-level databases have been automated more frequently over the past two decades, a number of local governments (facing serious budget pressures) have seen that there were ways to make money out of them. Some of commercial firms are willing to pay for exclusive rights to sell such data to the public, often for quite hefty fees. None of the five cities in this project have adopted that practice, but members of the site teams registered concerns about it being a barrier in other places they knew about. Milwaukee County, for example, sells its data in this manner, with the result that it is not feasible to construct a freely available integrated system on property data for the metropolitan area. Our teams in these sites see this practice as seriously shortsighted for the jurisdictions that follow it, as do the bulk of the nation’s GIS professionals (GITA, 2005). It can be argued that the taxpayers have already paid for the creation of the data and should not have to pay for access to them again. It can also be argued that the use of the data by real estate professionals and other practitioners (along with the further application of decision support tools as discussed in this report) create enormous benefits to localities through more efficient workings of the land market and that these by far outweigh the actually quite limited revenues the localities can obtain from selling rights to the data.

Annex A

Site Teams and Supporting Institutions

Baltimore. NNIP Partner: Odette Ramos and Peter Armstrong, Baltimore Neighborhood Indicators Alliance (BNIA); City Officials: Martha Baker, Baltimore City Planning Department, Stephen Janes, Robert Pipik and Kurt Sommer, Baltimore City Department of Housing and Community Development. Live Baltimore Marketing Center.

Indianapolis. NNIP Partner: Sharon Kandris, GIS Director, The Polis Center at IUPUI (Indiana University-Purdue University Indianapolis); City Officials: Andy Frazier, Special Assistant to the Mayor for Community Development; Andy Swenson, Department of Metropolitan Development; William Taft, Director, Indianapolis Local Initiatives Support Corporation (LISC); and Rick Petrecca, Director City/County GIS.

Milwaukee. NNIP Partner: Michael Barndt, Coordinator, Neighborhood Data Center at the Nonprofit Center of Milwaukee; City Officials: Nancy Olson, Director of Information Management and Technology, Alvaro Garcia, Grants Manager, Department of Neighborhood Services; Leo Rief, Director of Milwaukee Local Initiatives Support Corporation (LISC).

Providence. NNIP Partner: Patrick McGuigan, President, James Lucht and Eben Dowell, The Providence Plan; City Official: Thomas Deller, Director of Planning and Development. Others: Lori Capaldi, RI Economic Development Corporation (RIEDC).

Washington DC. NNIP Partner: Peter Tatian, Jacob Cowan, and G. Thomas Kingsley, the Urban Institute, and Oramenta Newsome, Director, DC Local Initiatives Support Corporation (LISC) (the Urban Institute and LISC jointly operate NeighborhoodInfo DC); City Officials: Robert Mulderig and Lamont Lee, Department of Housing and Community Development; Barry Miller, Deputy Director Office of Planning; David Seidman, GIS Director, Office of the Chief Technology Officer (OCTO). Others: Patrick Simmons and Lessie Powell Evans, Fannie Mae Foundation.

Annex B

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Endnotes

1. While Brookings provided the central grant to support this project, considerable additional funding was provided by the Fannie Mae and Annie E. Casey foundations, along with a number of local foundations and agencies in the individual sites. Annex A provides a list identifying project team members and supporting organizations in each of the five sites.
2. To learn more about NNIP, visit <http://www.urban.org/nnip>. Concepts and history are found there in Kingsley and Pettit, 2004.
3. See Sabety and Carlson, 2004.
4. A broader review covering the development of such systems in the 100 largest U.S. cities is provided in a study by PolicyLink and the Urban Institute (Chandler, et al, Forthcoming).
5. The uses of parcel data provided via the web are illustrated, for example, by the experience of the Neighborhood Knowledge Los Angeles (NKLA) system (developed and disseminated by NNIP's Los Angeles partner at UCLA) and by the analytic work of Metro Edge, Social Compact and others.
6. The work that probably did the most to stimulate recent interest in this approach was the typology developed for Philadelphia in the late 1990s by The Reinvestment Fund (described by Brophy and Vey, 2002). Three of the cities participating in this project have developed and used similar typologies: Baltimore, Indianapolis, and Washington.
7. A parcel level shape file (polygons) to support GIS applications is under construction for Washington DC, but is not yet complete. GIS work now depends on geo-coded points that represent approximate locations of all real property lots in DC. The points are related to parcel numbers and addresses so as to allow mapping of relevant data at this level.

Living Cities: The National Community Development Initiative is the founding funder for the Urban Markets Initiative. Living Cities is a partnership of leading foundations, financial institutions, nonprofit organizations, and the federal government committed to improving the vitality of cities and urban communities.



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