Measuring Up:

Productivity and Performance in the HOME Program

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Foreword

Developing affordable housing for low-income Americans has become an increasingly complex and challenging job for the nation's states and local jurisdictions. Funding from the HOME Investment Partnerships Program is a valuable resource for states and local jurisdictions to design and implement housing programs that address local housing needs. The HOME Program provides flexibility to participating jurisdictions, who can choose what types of housing programs and activities are most important to meet the housing needs of their low- and very low-income residents.

With these entitlement funds comes an obligation to see that resources are used wisely and effectively. *Measuring Up: Productivity and Performance in the HOME Program* provides guidance and technical assistance to HOME Program participating jurisdictions to help them meet this obligation. It provides practical guidance on how to measure the productivity and overall performance of HOME-funded programs. Measuring program productivity and performance generates important information to program managers about how programs are operating, what is working, and what can be improved. In turn, managers can use this information to refine and improve program operations and make informed investment decisions.

Measuring Up is geared to help participating jurisdictions measure program performance and analyze program impact from the local perspective. Participating jurisdictions who use these methods to evaluate their programs are the most likely to succeed in making sound decisions about how to use HOME funds—and will be able to maximize each HOME dollar to leverage the greatest benefit and impact for their clients and communities.

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Introduction

Purpose of this Publication

This publication, *Measuring Up: Productivity and Performance in the HOME Program*, provides guidance and technical assistance to HOME Program participating jurisdictions (PJs) that are interested in improving their efficiency. *Measuring Up* describes performance measurement, provides guidance on how to implement a performance measurement system, and explains how performance measurement can lead to improvements in the productivity of housing agencies.

Organization and management guru Peter F. Drucker aptly noted, "You can't manage what you don't measure, and what you don't manage doesn't get done." Performance measurement is a critical management tool that provides important information to help managers manage. In other words, performance measurement helps managers make informed decisions about program design, staffing, and structural organization in order to meet organizational objectives.

On a state and local level, most housing and community development agencies regularly monitor and report on their accomplishments in terms of how much money is spent, how many loans are underwritten, and how many housing units are produced. Few agencies consistently examine the relationship between their accomplishments and the resources invested in them. Without an analysis of this relationship, it is impossible for a manager to know if programs are operating at the most efficient level possible. Still even fewer agencies take the time to measure the effectiveness of their programs, in terms of the program's impact on homeowners, tenants, or neighborhoods. Without an analysis of program effectiveness, it is impossible to draw conclusions about the value of and need for the programs.

> ***"You can't manage what you don't measure, and what you don't manage doesn't get done."***
>
> *— Peter F. Drucker*

On the Federal level, the U.S. Department of Housing and Urban Development (HUD) has had a longstanding interest in building the capacity of its grantees so that they might use productivity measurement to manage their funding more efficiently. Foremost, HUD wants to see that its funds are used effectively in order to meet as many needs as possible. Over a decade ago, HUD's Office of Community Planning and Development issued a notice entitled *Productivity Guidelines for Community Development Block Grant (CDBG) Single Family Rehabilitation Programs*.[1] This publication was issued in response to concerns about the excessive administrative cost and limited production of CDBG-funded single-family rehabilitation programs. The notice provided national "benchmarks," or targets, against which grantees could measure their program efficiency (e.g., cost per unit completed). *Measuring Up* moves beyond those early national benchmarks to guide communities in thinking about locally-based measurements against which to monitor and gauge performance.

The Federal government continues to press for efficiency in program administration. In 1993, Congress passed the Government Performance and Results Act (GPRA). This Act directly links Congressional decision-making on program

Performance measurement helps managers avoid difficult situations like these:

In a public hearing, a council representative asks why the average development cost of one unit of housing is $110,000 in the city's affordable housing program, while it is only $80,000 in the private market.

An inspector on staff does not complete nearly as many inspections in a week as the manager suspects he should be able to. The manager does not know whether the employee has a heavy workload, or if he is not efficient in his work.

A CDC has an unexpectedly high drop-out rate in its homebuyer assistance program, and it does not know why or what to do about it. It risks recapture of funds by the PJ.

spending to the effectiveness and efficiency of programs in achieving statutory objectives. GPRA emphasizes:

- Program effectiveness and results;
- Increased service quality and customer satisfaction; and
- Improved public accountability.

With the passage of GPRA, it became more important than ever before that HUD be able to articulate the accomplishments of the Department and its grantees. To a large extent, the future of HOME Program funding is directly linked to the productivity and effectiveness of its PJs.

Since PJs are given flexibility to make choices about how to use HOME funds, it is only logical that they be held accountable for those choices. *Measuring Up* provides technical advice to help PJs use performance measurement to take the guesswork out of programmatic decisions. This publication assists PJs in defining organizational problems, developing a methodology for implementing performance measurement within their organizations, analyzing the efficiency and effectiveness of their programs, and generating and using local benchmarks that consider local housing goals, as well as other economic and political factors, to monitor performance over time.

Organization of this Model

This model guide is written primarily for HOME Program managers. It is organized as follows:

Chapter 1: An Introduction to Performance Measurement addresses the most basic of questions: what is performance measurement, and how can it help program managers and staff achieve greater results in their programs? The chapter presents a theoretical framework for understanding issues related to performance measurement, and describes several important benefits of measuring performance.

Chapter 2: Measuring Productivity examines ways to use measurement as a tool for improving productivity within local programs. The chapter provides step-by-step guidance in how to measure productivity and efficiency in program operations, including identifying problems, assessing data collection needs, implementing data collection procedures, and analyzing findings. By analyzing key factors, such as the time required to complete each step in the production process, the relationship between steps, and the accuracy of the work produced, PJs can often identify practical steps that might result in increased production of units or more timely expenditure of program funds.

Chapter 3: Measuring Program Outcomes goes one step further and focuses on ways to examine the outcomes of programs—that is, the benefits programs are producing for program participants and the community as a whole. Given relatively flat funding rates but ever-growing community needs, it is important for program mangers and staff to be able to compare outcomes against program goals to ensure that HOME funds are being used strategically to address the most pressing needs within a community. This chapter provides specific guidelines on how to measure program outcomes for a variety of HOME-eligible housing activities.

Chapter 4: Bringing It All Together summarizes the key lessons of the model, and provides a vision for how combining productivity and outcome measurement can keep PJs focused on their affordable housing goals. Comprehensive case studies are incorporated within the chapter to illustrate the application of the principles in the publication.

About the Model Guides

This publication is one of a series of model guides published by the Office of Affordable Housing Programs of the U.S. Department of Housing and Urban Development. The model guide series offers technical assistance and practical guidance to PJs in HOME Program implementation. To get a free copy of this model program guide, see HUD's Office of Affordable Housing Programs online library at http://www.hud.gov/offices/cpd/affordablehousing/ library/modelguides/index.cfm.

End Note

1 U.S. Department of Housing and Urban Development, "Productivity Guidelines for Community Development Block Grant Single Family Rehabilitation Programs," CPD-90-12, March 9, 1990.

Chapter 1:

An Introduction to Performance Measurement

In the context of growing needs, absent growing resources, housing program managers must find a way to get more out of every dollar allocated to their programs. Performance measurement is a process of data collection and analysis used to improve organizational results. When it is used judiciously and strategically, it can help managers improve the efficiency and effectiveness of their programs.

This chapter provides an overview of performance measurement, including a description of productivity and program outcome measurement, and explores why measuring performance is important. The chapter also presents an overview of the program outcome model, and describes basic measurement methodology.

What Is Performance Measurement?

Performance measurement is an organized process used by managers to gather information to determine how well programs and projects are meeting needs, and then to use that information to improve performance and target resources more precisely. There are two critical components of performance measurement: (1) productivity; and (2) program impact (or outcome).

In housing programs, productivity reflects the level of efficiency (quantity, quality, and pace) with which a participating jurisdiction (PJ) undertakes its activities. Program impact, on the other hand, reflects the extent to which those activities yield the desired outcomes in the community. Typical "desired outcomes" for affordable housing programs include neighborhood revitalization, improved quality of life for participants, or an increase in the affordable housing stock.

Productivity

Productivity is the relationship of resources invested (inputs) to the quantity and quality of what is produced (outputs). Typically, productivity measures help a program manager answer the question, "What is the organization producing?" Most housing organizations use the basic housing production measures identified in Figure 1.1 below.

Figure 1.1
Standard Output Measurements in HOME Programs

Program	
Rehabilitation programs	Number of housing units rehabilitated
New construction programs	Number of housing units constructed
Tenant-based assistance programs	Number of households assisted
Homebuyer assistance programs	Number of households assisted

These simple measures are measurements of program outputs—the actual program accomplishments. Measuring program accomplishments is useful to program managers because the measurements provide a way to define how much work the agency has done. For programs with established goals, these measurements also help managers determine whether or not the agency is meeting its goals. Finally, if accomplishments are tracked from year-to-year,

Measuring Productivity: The Thomastowne Case Study

Imagine you are the newly hired housing director of the Thomastowne Housing Division. Traditionally, Thomastowne has had a strong rehabilitation program, but had no experience undertaking a new construction activity. The previous director, at the mayor's urging, had invested the agency's HOME funds in a new construction development at a strategic site in town. The ribbon-cutting ceremony for the project is held your first week on the job. Fifteen well-designed homes beam in the sunshine. The mayor and neighborhood residents applaud the agency's accomplishment. You, too, are very impressed with what you see.

On your way back to the office, you talk to the project manager of the job. She expresses some concerns about the marketability of the units, as only two of the fifteen units have been sold. You wonder how this could be, and decide to review the project files. In your review, you learn three disturbing facts:

- The project costs were unreasonably high: the units cost $175,000 to construct, the appraised value is $160,000, and the area median is only $120,000. The units were sold for $100,000.
- The construction process was unexpectedly long: the project was initially approved for funding seven years ago.
- A key document, a market study, was never conducted to assess the marketability of homeownership units at this location.

You know you have substantial work ahead.

managers can compare how much work is done from one year to the next, and make assessments about the agency's progress.

Most program managers understand the need to measure program outputs, and rely on this data to inform others (such as elected officials and neighborhood residents) about the agency's accomplishments.

As the Thomastowne case study (see page 4) illustrates, the measurement of accomplishments only (in this case, fifteen units of newly constructed housing) can be misleading when the accomplishments are not evaluated in relation to resources (time and money). At a time when most agencies find that their financial and staff resources are insufficient relative to housing needs in their jurisdictions, it is critical that managers examine productivity in terms of program accomplishments *relative* to resource expenditure. For most agencies, staff time and housing dollars are the most significant resources to measure. Tracking tools and reporting systems for staff can help managers track data on outputs and resource expenditure on an ongoing basis. By regularly reviewing production data, managers can flag and identify problems before they become insurmountable.

Arguably, it is even more critical to evaluate the *impact* of the programs on the overall housing program goal(s), known as program outcomes measurement.

Program Outcomes Measurement

Whenever resources are scarce, it is essential to know where program activities are making a difference and where they are not. The purpose behind outcome measurement is to help ensure that programs address the identified needs within a community as effectively as possible.

Program outcomes are generally defined as the benefits or results of a program. Typically, program outcomes relate to a *change* in condition, status, skills, knowledge, or behavior. Sometimes, however, program outcomes involve helping individuals to maintain their condition or status.

Figure 1.2 provides several examples of outcomes of housing programs.

Figure 1.2

Examples of Housing Program Outcomes

Type of Change	Example in a housing program
Change in circumstance	Neighborhood is revitalized.
Change in status	Renter becomes a homeowner
Change in behavior	Prospective homeowner pays bills on time to improve credit history
Change in functioning	Disabled clients are housed in units that increase their independence
Change in attitude	Perception of neighborhood from unsafe to safe
Change in knowledge	Understands the steps involved in becoming a homeowner
Change in skills	Able to do general home maintenance/repair
Maintenance	Elderly can remain in their homes
Prevention	Quality of housing stock does not deteriorate

Housing program outcomes typically fall into one of two general categories: (1) benefits to program participants or, (2) benefits to neighborhoods. Some benefits to program participants (the individuals and families who move into the housing) include:

- An improved housing unit/living space;
- An increased sense of stability;
- An opportunity to build economic assets; and/or
- Lower monthly housing payments.

Benefits to others in the community might include:

- A decrease in the number of deteriorating structures in the neighborhood;
- An increase in property values in the immediate neighborhood;
- Improved safety and desirability of the neighborhood; and/or
- An improved environment for local businesses.

Performance measurement must be viewed in terms of productivity and program outcomes together, and performance measurement results are generally most valuable when evaluated in terms of the community's own needs.

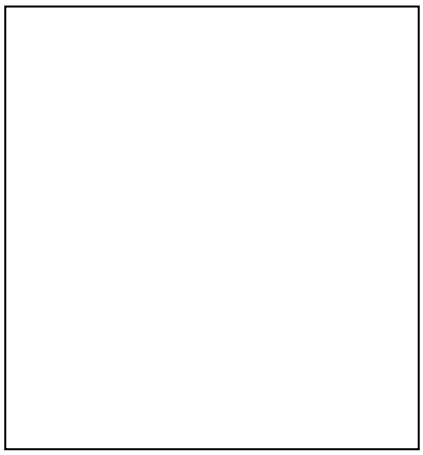
Strategic Use of Performance Measurement

It would be an all-consuming effort for a housing agency to measure nearly every aspect of its performance. PJs need not measure everything. Measurement should be used strategically, and on an ongoing basis, to answer certain fundamental questions, such as:

- Will HOME dollars be committed and dispersed by the statutory/regulatory deadlines?
- Are CHDOs, state recipients, or other housing partners meeting agreed upon milestones and production levels?
- What is the development cost per unit?
- Is the workload distributed fairly among staff?
- How much time elapses between the point of application and completed product?
- How much private money is leveraged in HOME projects?
- Is the target population (in terms of clients, neighborhoods, or houses) being served?
- Are the program outcomes—not just the production goals—being reached?

When a program's performance in response to these big picture questions is not meeting a manager's expectations, or when the PJ's results differ significantly from neighboring PJ's results, measurement can be used to help a manager understand the reason(s) for this unexpected performance.

Similarly, performance measurement can be applied to entire programs to track and monitor progress. For example, a state might use performance measurement to track and evaluate its state recipients, or a local PJ might use it to manage a subrecipient or community based housing development organization. The PJ would establish a range of benchmarks that it expects its housing partner to meet. When the partner fails to perform to the established benchmark, the PJ can use this information to impose sanctions and/or provide technical assistance in order to guide the partner back on track. PJs can also use performance data to inform future funding decisions.



Why Is Performance Measurement Important?

There are a number of reasons why program managers should use performance measurement as a tool:

- **Performance measurement can help stretch a program's HOME dollars further.** While HOME funds are significant, they are not infinite. By using performance measurement to evaluate an agency's productivity and effectiveness, managers are better able to target funds to activities that have the most impact, thereby stretching HOME dollars to assist more low-income households.
- **Performance measurement can lead to better decisions about program design and implementation.** By using performance measurement to identify and diagnose problems, PJs can solve their production problems more effectively. This can lead to improved decisions related to:
  - — Program design (who the program serves and does not serve; how much assistance is available; what neighborhoods are targeted);
  - — Personnel (matching the right people to the right jobs); and
  - — Process (designing procedures that are as effective and efficient as possible).

- **Performance measurement generates data that can simplify reporting.** A systematic approach to reviewing program performance can allow for better-informed long-range planning. PJs that are able to collect and analyze data on an ongoing basis are well-prepared when it is time to complete Consolidated Plans and Consolidated Annual Performance Evaluation Reports (CAPERs).
- **Performance measurement can help managers build a more effective and motivated team.** Performance measurement is key to ensuring that workloads are balanced and that individuals are not overwhelmed. It can also help reduce or eliminate inefficiencies that make employees' jobs needlessly frustrating. In addition, performance measurement can be used to create a system of accountability that allows project managers to delegate more work and allows staff to take more initiative. By measuring performance, managers can identify and reward success. Finally, a stronger understanding of the impact a program is having on the community and the lives of the individuals served may motivate staff and foster pride in the program.

Sample problems that can be solved with performance measurement:

- Determine the cause of a decline in the number of applications for the agency's tenant-based rental assistance program;
- Find solutions to a lengthy proposal review time for development proposals received in response to an RFP.
- Determine whether or not a program's subsidy limits are appropriate for the target beneficiaries.
- Determine whether or not a neighborhood revitalization program is meeting its goals.

- **Performance measurement can help communicate accomplishments and build support for a program.** With data analysis, PJs are able to communicate to investors, public or private, that their money is being used efficiently, effectively, and for its stated purpose. HUD's own use of performance data supports its requests to the congressional budget committees.

Can Performance Measurement Help With Building a High-Performance Team?

A truly effective organization relies on a solid, high-performance team. It is hard to build an effective team without a solid performance measurement system in place. Figure 1.3 on the following page illustrates the variety of ways that measuring performance can impact the effectiveness of an organization.

Figure 1.3

How Performance Measurement Supports High-Performance Teams

What managers can do if they have a performance measurement system in place:	Characteristics of High-Performance Team
❑ Distribute work more effectively and fairly because they know the actual workload of staff members. ❑ Identify when a staff member is much less productive than co-workers, which might indicate a poor job match. ❑ Delegate work more effectively and ensure accountability because staff is better informed.	The right people doing the right jobs
❑ Understand the impact of the agency's work in the community and instill a sense of pride among staff.	"Can-do" team culture
❑ Make decisions based on facts (rather than perceptions), and build staff trust and respect. ❑ Delegate more and micromanage less because there are standards to which staff can be held accountable.	Trust, respect, and appreciation between staff and management
❑ Establish and communicate precise expectations, and evaluate staff more objectively. For example, measurement is the difference between "You must be more productive," and "I need you to close 15% more loans this year."	Clear performance expectations
❑ Identify and respond to success and poor performance. Apply incentive programs and disciplinary actions fairly and consistently. (Having good data minimizes guesswork.)	Performance is measured and rewarded and poor performance is handled as appropriate
❑ Communicate progress and gather input based on clear, practical, easily understood measures. ❑ Use a common expectation against which progress can be understood and communicated to constituents and stakeholders.	Effective internal and external communications about program success
❑ Make structural changes to work systems with confidence because decisions are based on accurate information on how the process is currently working.	Program/process improvement
❑ Determine where training and technical assistance should be targeted, based on measured staff needs.	Training and quality technical assistance

Who Needs to Be Involved in Performance Measurement?

Even though getting everyone involved in performance measurement is neither easy nor practical, being inclusive in the development of a performance measurement system is essential. The type and extent of involvement should be based on the performance measurement effort being developed and undertaken. Consider involving the following groups of people:

- **Staff.** Any performance measurement system must include staff at all levels. Staff has the best information about what is happening "on the ground," and therefore is best able to identify and diagnose problems. Moreover, once problems are identified and new strategies developed, it is the staff that carries primary responsibility for implementation of new procedures. Any change in routine can be challenging and potentially threatening for staff, especially for public employees who operate in an environment where every action is open to public scrutiny and where most information is subject to "sunshine" laws. It is therefore critical to involve staff—particularly middle management and front-line staff—in the design and implementation of the system. It is also essential to involve top management or the day-to-day demands of the program operation may overcome the task. Before they will commit to measurement, however, agency directors and board presidents will need to understand its value for their agencies.
- **Political and community leadership.** First and foremost, performance measures are designed to assess program achievement (productivity and outcomes). It is important that political and community leadership support the measurement effort, and that the measures capture the goals of these groups.
- **Business partners.** When using measurement to undertake improvement efforts, it may become important to involve the PJ's business partners, such as builders, contractors, real estate agents, social service agencies, appraisers, and lenders. These partners will be able to provide valuable information about the interrelationship between the agency's performance and their business needs and capacity.
- **Clients and potential clients.** Particularly when evaluating program outcomes, it is important to gather and consider feedback from clients and potential clients. This group will likely be very diverse and should include clients who are served by the program(s), potential clients who apply but are not served, and potential clients who are eligible for the program but do not apply.

Using the Program Outcome Model as a Framework for Measuring Performance

For the purpose of this publication, performance measurement is perhaps best explained using the "program outcome model." The program outcome model demonstrates the relationship between an organization's inputs, activities, outputs, and outcomes.

*The **program outcome model** demonstrates the relationship between inputs, activities, outputs, and outcomes.*

- **Inputs** include resources dedicated to, or consumed by, the program. Examples include money, staff and staff time, equipment, and supplies. Inputs also include constraints on the program, such as laws, regulations, and requirements or conditions for receipt of funding.
- **Activities** are what the program does with inputs to fulfill its mission. Activities include the strategies, techniques, and types of treatment that comprise the program's production process or service methodology. Examples include marketing, screening applicants, processing loans, conducting inspections, etc. Program activities result in outputs.
- **Outputs** are the direct products of a program's activities and are usually measured in terms of the volume of work accomplished. Common outputs of housing programs include number of low-income households served, number of loan applications processed, or number of units constructed or rehabilitated. The sum of a program's outputs should result in positive outcomes for the program's participants.

- **Outcomes** are benefits for participants during or after their involvement with a program. Outcomes typically relate to a change in condition, status, attitude, skill, knowledge, or behavior. Examples of outcomes for housing programs include improved quality of life for program participants, increased housing stability, improved quality of the local housing stock, or revitalization of a neighborhood.

Most PJs monitor their inputs (e.g., resources invested) and outputs (e.g., units produced), but few examine the *relationship* between the inputs and outputs. It is only through this assessment of inputs relative to outputs that a PJ can know if its program is operating at maximum efficiency, or, if activities need to be modified. However, understanding program productivity is not enough, for it does not indicate whether resources are being targeted towards the right activities. As a result, PJs also need to measure outcomes. In other words, it is the examination of inputs relative to outputs that indicates whether a PJ is "doing things right," but it is the examination of outcomes that indicates whether a PJ is "doing the right things." Both are necessary for high performance.

Figure 1.4 illustrates the program outcome model as it applies to an owner occupied rehabilitation program.

Figure 1.4

Program Outcome Model for an Owner-Occupied Rehabilitation Program[1]

INPUT	→	ACTIVITIES	→	OUTPUTS	→	OUTCOMES
Resources dedicated to or consumed by the program • Money • Staff/staff time • Contractors • Facilities • Equipment **Constraints on the program** • Laws • Regulations • Funders' requirement		**What the program does with the inputs to fulfill its mission** • Intake/loan screening • Initial inspection • Verify contractor eligibility and cost reasonableness • Prepare construction specifications • Underwrite loan • Loan approval • Progress inspections		**The direct products of the program activities** • Number of customers served • Number of loans processed • Number of homes rehabilitated		**Benefits for participants as a result of their involvement in the program** • Increased financial stability for program participants • Increased housing stability for program participants • Revitalized neighborhood • Improved quality/durability housing stock

Performance Measurement Methodology

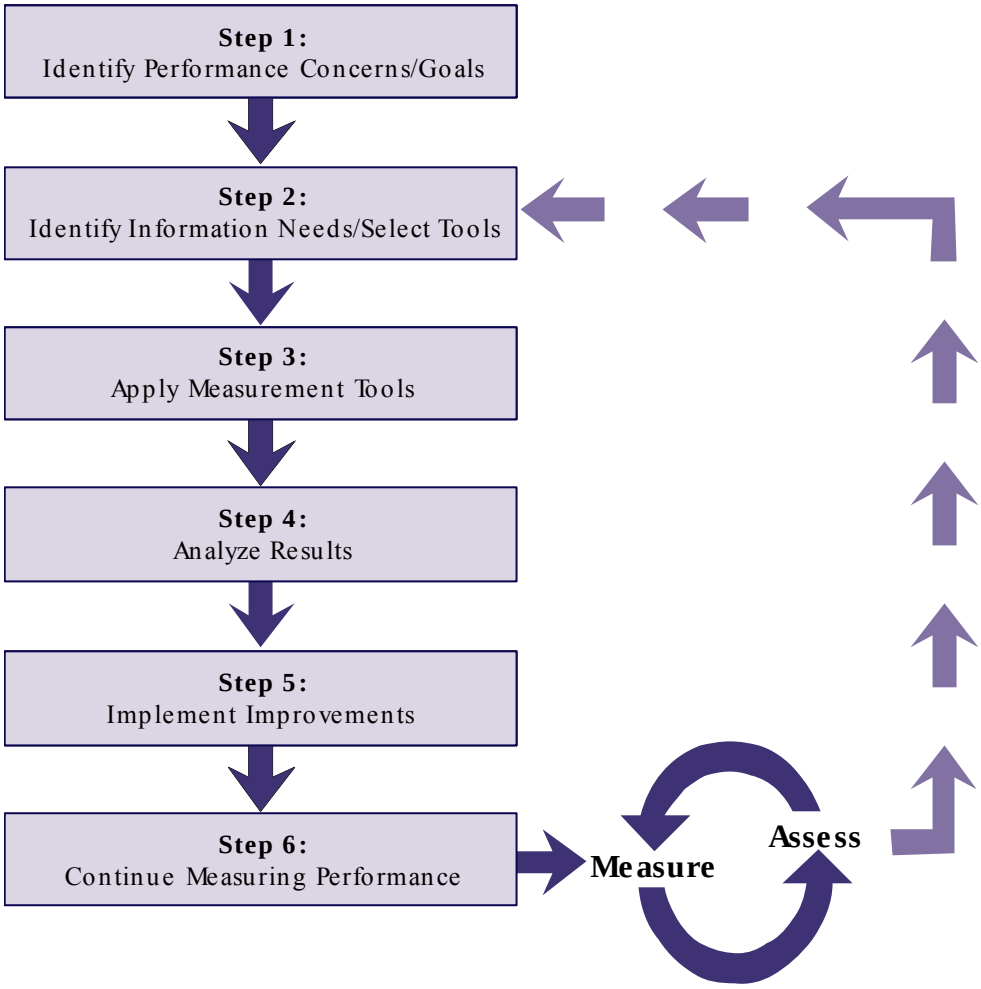
The process of measuring performance in a program is not necessarily a linear one, particularly for organizations that already have some level of performance measurement in place and want to improve existing efforts. However, it is useful to break down the program outcome model into a series of sequential steps that includes:

- Identifying and defining the problem;
- Determining information needs and identifying data sources;
- Measuring and tracking data;
- Analyzing data and identifying areas for improvements;
- Implementing improvements; and
- Continuing measurement of progress.

Figure 1.5 illustrates how the program outcome methodology works. However, organizational needs vary considerably in terms of how much detail needs to be undertaken at each of these steps. For example, some organizations already collect and track data, but need to analyze it more regularly to identify needed improvements; in contrast, other organizations need to improve their data collection and tracking methods. This publication presents all the components of each step, as if an organization is implementing a performance measurement system for the first time. While this may seem overwhelming, it is expected that PJs will use the components of the process that best complement and improve their existing efforts. PJs need not undertake every activity described in this publication to see results. Doing even one or two things can have a positive effect on a program.

Figure 1.5

Performance Measurement—A Model for Continuous Improvement



Chapter 2:

Measuring Productivity in Housing Programs

Measuring productivity is at the core of performance measurement because it specifically defines how much an agency accomplishes. Chapter 2 explores what it means to measure the productivity, or efficiency, of program operations and provides a methodology for solving problems through productivity measurement. Chapter 2 also provides guidance on how to incorporate productivity measurement into existing production processes.

What are the Benefits of Measuring Productivity?

Productivity measurement and analysis, although only one piece of an overall performance measurement system, can by itself be undertaken to help managers solve problems related to the program's purpose, process, schedule, efficiency, and to some extent quality. In other words, productivity measurement and analysis helps program managers:

- **Increase production without increasing resources.** Even though the organization might be meeting its goals, it might be able to operate more efficiently. Breaking down activities may show steps that are duplicative or otherwise unnecessary; it may also reveal how activities can be streamlined. This, in the end, will increase the organization's production and make it more effective at meeting community needs.
- **Identify bottlenecks that are slowing down program activities.** Analyzing the production process can help identify progress toward milestones, and plan for meeting goals more effectively. For example, by analyzing the production process, a manager can estimate when construction must begin on each unit in order to meet an annual rehabilitation goal of twenty units.
- **Hold CHDOs, recipients, subrecipients, and employees accountable for their work.** Focusing on the individuals responsible for and involved in each phase of a program process, and monitoring each person's output, often results in greater accountability since "what gets measured, gets managed."
- **Chart progress against benchmarks to evaluate performance.** If a CHDO, state recipient, workgroup, or an employee generates a certain level of production in one year, recording that level and tracking the production over time can assist a manager in determining whether or not the entity is working at capacity each year.
- **Identify root causes of problems the agency may be experiencing, not symptoms.** It is only through a careful and close examination of the production process, including a breakdown of each step in the process, that a manager can gain insight into the cause of a problem. This type of analysis leads to the identification of an appropriate solution(s) to the problem. For instance, a cursory examination of an organization's production might reveal that it takes anywhere from two to forty days to schedule an initial inspection in a homeowner rehabilitation program. This variation in time might be caused by any number of things—an overworked inspection staff that does not have time to schedule new inspections; an inspector(s) that is not meeting his/her responsibilities; the lack of clear procedures or assignments that result in random, rather than systematic, scheduling of inspections; or clientele that is unavailable by phone.
- **Identify staff training needs.** Findings can indicate areas where staff is having special difficulties, enabling the manager to secure targeted technical assistance or training.

The Productivity Measurement and Analysis Process

The process of measuring productivity in a program can be divided into six steps. This publication focuses on the first four of these steps:

1. Identify performance concerns or goals to address through measurement.
2. Identify needed data and determine potential data sources.
3. Apply measurement tools.
4. Analyze the data and identify areas for improvements.
5. Im plement improvements.
6. Continue measuring performance.

Step 1. Identify Performance Concerns/Goals to Address Through Measurement

Incorporating productivity measurement into programs involves time and thought. Careful planning in this first step, identifying concerns and goals, greatly facilitates the remainder of the process. This identification process should be done somewhat systematically, with two specific objectives:

- Obtain a "big picture" perspective on the issues; and
- Map out the production process and identify key milestones for the program(s) that is(are) to be targeted.

A "Big Picture" Assessment

Before conducting a more detailed review of program operations, managers need to make some decisions about where to focus their energies. Assessing the big picture status of the agency's programs is a good starting point. Two tools to help managers make this assessment include: (1) observing program operations; and (2) examining program expenditure levels.

Observing Program Operations

Eyes, ears, and common sense may be the best tools a manager has at his or her disposal. Managers who pay attention to what is going on in their office can generally learn about the workflow of programs. For instance:

- Are some staff members busy (and/or harried), but others are not? Is there any regularity to these extremes?
- Are there staff members whose jobs require significant coordination with other divisions in the agency who are always in their own workspace?
- Is there any physical evidence that might provide clues about the productivity of the agency? For instance, do some staff members have big piles of files overwhelming their workspace?
- Are staff and other stakeholders complaining about the program (for example, coordinating with other divisions or entities, or the quality or quantity of work produced)? Inside and outside sources of complaints can be a very good indicator of problems that warrant more examination.

At this stage, it is too early in the process to draw any conclusions from observation. For example, it would be a mistake to think that just because one staff person has many files on his or her desk and another does not that one is more productive. Likewise, staff who always appear busy could be very disorganized or simply overworked-or both. In other words, observation alone will not lead to an understanding of the cause of a particular problem. It can, however, help an astute manager "flag" programs or issues that require more examination.

Once work flow within the agency has been observed, it is important to begin the process of looking at whether or not there is any correlation between those observations and the production information the agency does have. There is one source of production data that is available to all PJs-HUD's Integrated Disbursement and Information System (IDIS).

IDIS Technical Assistance Hotline

1.800.273.2573

Using IDIS data

IDIS data is only helpful if it is accurate and complete. If the agency's IDIS data is not reliable, the agency should address this problem before embarking on any additional performance measurement efforts.

Basic Production Levels

IDIS provides PJs with an indication of how well a program is functioning. IDIS provides key baseline information on basic program indicators, including program commitments, disbursements, and total units produced.

There are four IDIS tools that are particularly helpful when it comes to monitoring productivity:

- **The HOME SNAPSHOT.** Based on data entered into the IDIS system, HUD generates a production report for every HOME PJ. These reports are made available on-line at www.hud.gov/offices/ cpd/affordablehousing/programs/ home/snapshot/index.cfm and show PJs how their production numbers compare to other PJs.

  The SNAPSHOT is based on a variety of regulatory and policy factors that HUD considers important measures of a PJ's productivity, detailed in Figure 2.1. PJs will benefit from collecting additional data to glean more detailed information on some of the measures identified by HUD. Alternately, PJs may identify entirely new data to collect in order to measure production in additional areas that are important at the local or state level. The HUD SNAPSHOT and any additional local report with similar production data is the most logical starting point for a big picture assessment of program productivity.

  The SNAPSHOT identifies:

  — Data that, when taken together, give a picture of the jurisdiction's overall productivity/performance.

  — For local jurisdictions, performance data from all PJs within the state, all PJs within a similar funding level, and all PJs nationally. This data can be used as a benchmark for a PJ to assess relative performance in a number of areas.

  — For states, performance data from all other states. This data can be used as a benchmark for states to assess performance in a number of areas relative to other state PJs.

- **Web-based HOME Production Reports.** Each month, HUD posts Commitment, CHDO Reservation, and Disbursement Status Reports on its website to help PJs monitor their compliance with HOME statutory and regulatory requirements for committing funds within two years of receipt and expending them within five years. To view these reports, visit HUD's website at http://www.hud.gov/offices/cpd/affordablehousing/reports/index.cfm.

- **PR27 (Status of HOME Grants Report).** This report is generated by the PJ and contains basic financial information on HOME grants, subgrants, and subfunds, including commitments, disbursements, administrative funds, and CHDO reservations. This report answers the following questions:

  — Are all HOME funds two years or older committed?

  — Are all HOME funds five years or older disbursed?

  — In more recent years, are appropriate levels of funds committed and expended?

  — Are administrative funds within the cap?

  — Does the CHDO reservation meet minimum requirements?

- **PR22 (Status of HOME Activities Report).** The PR22, generated by the PJ, provides the status of HOME activities on a project-by-project basis. This report answers the following questions:

  — Are any projects stalled? If so, which ones?

  — Are stalled projects associated with certain developers, CHDOs, or state recipients?

  — Are there projects that are complete but remain "open"? If so, the project may be unnecessarily tying up funds that could be used for other projects.

  — Does there appear to be a problem with untimely entry of commitments into IDIS? This could signal a backlog of work among specific CHDOs, state recipients, or employees.

  — Does there appear to be a problem with untimely entry of completion reports? This could signal a backlog of work or a problem with the project.

  — What do commitment dates indicate about program operations? Large lapses in time between the initial commitment of funds to project completion could signal a problem within the agency.

HOME Program Performance SNAPSHOT--As of 6/30/03
Local Participating Jurisdictions with Rental Production Activities



PJ's Total HOME Allocation Received: $7,348,000 **PJ's Size Grouping*:** C **PJ Since (FY):** 1992

Category	PJ	State Average	State Rank	Nat'l Average	Nat'l Ranking (Percentile):** Group	C	Overall
Program Progress:			PJs in State: 27				
(6) % of Funds Committed	100 %	92.31 %	1	93.46 %	100		100
(6) % of Funds Disbursed	96.66 %	82.97 %	3	82.42 %	85		86
Leveraging Ratio for Rental Activities	4.21	3.4	1	3.2	100		100
% of Completed Rental Disbursements to All Rental Commitments***	96.53 %	52.74 %	3	44.32 %	81		90
(6) % of Completed CHDO Disbursements to All CHDO Reservations***	87.14 %	37.37 %	1	42.91 %	92		95
Low-Income Benefit:							
(2) % of 0-50% AMI Renters to All Renters	66.04 %	77.12 %	16	73.34 %	26		26
% of 0-30% AMI Renters to All Renters***	39.62 %	35.39 %	7	40.6 %	48		48
Lease-Up:							
(3) % of Occupied Rental Units to All Completed Rental Units***	77.36 %	94.75 %	23	87.69 %	17		18
Overall Ranking:			In State: 1 / 27	Nationally:	90		92
HOME Cost Per Unit and Number of Completed Units:							
(4) Rental Unit	$9,690	$19,067		$19,911	53 Units		6.9 % (1)
Homebuyer Unit	$6,935	$7,553		$10,816	625 Units		82 %
(5) Homeowner-Rehab Unit	$19,564	$13,067		$17,702	86 Units		11 %
TBRA Unit	$0	$6,314		$3,357	0 Units		0 %

* - A = PJ's Annual Allocation is greater than or equal to $3.5 million (53 PJs)
B = PJ's Annual Allocation is less than $3.5 million and greater than or equal to $1 million (208 PJs)
C = PJ's Annual Allocation is less than $1 million (244 PJs)

** - E.g., a percentile rank of 70 means that the performance exceeds that of 70% of PJs.

***- This category is double-weighted in compiling both the State Overall Ranking and the National Overall Ranking of each PJ.

Analyzing a HUD SNAPSHOT

In general, the PJ described by this HUD SNAPSHOT appears to have a very strong program. It is ranked first in its state, and is in the 85 percentile or higher for five of the eight performance indicators established by HUD.

An analysis of the data provided by this SNAPSHOT, however, identifies some possible issues that an effective program manager would explore further:

1 **Relatively little of the PJ's HOME funds are directed at rental activities.** This issue should be evaluated to determine if the community's need for affordable rental housing is being met by some other program offered by the PJ. If not, program investment decisions may need to be re-evaluated by this PJ.

2 **Low-income benefit is limited.** The PJ's rental housing program is serving a relatively low number of very low-income households (whose incomes are at or below 50 percent of area median income). Of those low-income households, however, households with extremely low incomes (at or below 30 percent of area median) are being reached somewhat more effectively. This limited low-income benefit may indicate a potential compliance problem with the HOME requirement that 90 percent of funds used for rental housing be invested in households at or below 60 percent of area median income.

3 **Lease-up of rental units is lagging far behind completion of units.** The data indicate that nearly 25 percent of the completed rental units are not yet occupied. This problem might be related to a number of things, and the following questions must be answered to understand the issue:

   a. Is occupancy data input into IDIS in a timely manner? If not, is this a personnel or procedural problem?

   b. If units are not occupied upon completion, is there a market for affordable rental units in the neighborhoods where investments are being made? Is this a policy/procedural problem (was a market study ever conducted?) or a program design problem (investment was made even though market study suggested there was no demand for housing in that location)?

   c. Is there a program administration problem that might be causing delays in rent-up? If so, is the problem related to personnel, procedures, or both?

4 **Rental development costs are notably below average for the state and the nation.** To determine the actual rental cost per unit, the HOME rental cost per unit (in the cost section of the SNAPSHOT) must be multiplied by the leveraging ratio provided in the SNAPSHOT (Program Progress section). The data raise the following questions:

   a. Is the cost data accurate? If not, is this a personnel or procedures problem?

   b. If the data are accurate, it might suggest that the rental units selected for investment are in relatively good condition and therefore require less investment. If so, the PJ should consider whether these are the most appropriate units to select for development assistance. How are more deteriorated units treated? Alternately, is there a problem with insufficient investment? (In other words, is the investment enough to bring the property up to code?)

5 **Homeowner rehabilitation costs are much greater than the state, and exceed the national average costs.** Note, for cost data, the state data would typically be more meaningful. For this PJ, these questions should be answered:

   a. Is the cost data accurate? If not, is this problem related to personnel or procedures?

   b. If the cost data are accurate, are the high costs due to:

      - Contractor pool? For instance, if there are too few contractors participating in the program, there may not be sufficient competition to keep costs reasonable;
      - Is staff comparing actual bids to staff bid estimates prior to contractor selection?
      - Is PJ too generous in its rehabilitation standard or policy on eligible costs (in other words, does the PJ pay for materials, appliances, or construction elements that are more than modest?)
      - Is there problem with fraud or abuse?

6 **CHDO disbursement rate lags behind the overall program disbursement rate.** This PJ is doing an outstanding job with committing and disbursing HOME funds in a timely manner. It is expected that the commitment and disbursement rates for the program overall would be comparable to the completion and disbursement rates for the rental program and the CHDO activities. For this PJ, the rental disbursements and commitments are nearly the same as the overall rates. However, the CHDO disbursements, while very good and above average for the state, are still somewhat behind the PJ's overall program. This might be an issue worth exploring.

As this example clearly illustrates, data that provide a "big picture" can assist program managers in identifying possible performance-related issues that require further exploration. The SNAPSHOT alone is not sufficient to determine if the PJ is in compliance with program rules, is producing as efficiently as possible, or is having the intended program impact to meet the community's needs. However, the SNAPSHOT data certainly can guide a program manager to ask necessary questions, gather additional information, and make his or her own judgments about the PJ's needs to ensure continuous improvement in the program.

HOME program managers should review IDIS reports at least quarterly, if not more often. Again, any apparent problems identified by IDIS data should not be considered definitive, but rather flagged for follow-up and further examination. Taken together, a manager's experience and instincts, combined with careful observations and periodic review of the basic IDIS program production data, should help focus tracking and measurement efforts.

With one or two programs identified for measurement, it is time to create a map of the production process. The best way to do this is to look closely at, and document, the production process (also called "workflow") for the program(s) under consideration.

Identify Key Program Milestones of the Production Process

The production process is the set of activities that comprises the program. Mapping the production process and documenting it in writing ensures common understanding of how the system works (or should work).

Every production process can be mapped in terms of key stages, or "milestones." Typically, there are products generated at each stage in the process, referred to as "interim outputs". The map of milestones, with identified interim outputs, forms the foundation for all measurement activities. This foundation facilitates communication about expectations related to performance, in terms of time, quality, and roles. In addition, it makes it easier to track the performance of staff, contractors, service providers, and developers.

Identifying Milestones

A production process is generally composed of seven to twelve clearly delineated steps that represent the culmination of major groups of activities necessary to conduct the program and achieve stated and desired results. (Refer to Figure 2.2 for sample milestones by HOME activity type.) How the stages of a process are defined depends on the level of detail one wishes to consider when gathering or analyzing data. Any stage or activity can always be broken down into smaller, more discrete steps. However, care should be taken not to create an unmanageable process. In other words, it is important to understand the full complexity of a task, but to be selective in choosing what to monitor and measure.

"Natural" milestones occur at steps that mark the completion of critical stages in the process and at points of transition in the program. Transitions might occur in:

- Key staff responsibility (such as from project manager to inspector when a project is under construction),
- Status of client/participant (such as from applicant to approved client), or
- Type of work to be performed (such as from a loan closing—the completion of the underwriting stage—to a project under construction).

Initially, the milestones might seem over-simplified, but they form the basis for establishing goals and tracking progress. Some questions to consider when selecting milestones include:

- Does each milestone mark the end of a definable stage and the beginning of another?
- Are milestones associated with measurable outputs?
- Is the list of milestones adequate?
- Do staff members agree that these milestones are good measuring points for the program?

Figure 2.2
Sample Production Process Milestones by Activity

Activity	Sample Milestones	
Owner-occupied housing rehabilitation Any of the major stages indicated here could be broken down into smaller sets of activities.	▪ First contact with client ▪ Application submitted ▪ Applicant approved and specifications requested ▪ Specifications complete	▪ Contractor selected ▪ Order to proceed issued to contractor ▪ Construction complete and final payment issued
Homebuyer assistance programs Homebuyer programs follow many paths depending on the level of assistance and when in the home-buying process clients engage the program.	▪ Outreach and homebuyer fairs complete ▪ First contact with client and preliminary credit review ▪ Application submitted	▪ Purchase contract executed ▪ Inspections completed ▪ Lead paint issues resolved ▪ Loan approved ▪ Purchase completed
Rental development The milestones in this row represent the program's perspective.	▪ Community need analyzed and RFP issued ▪ Proposals reviewed and selected ▪ Design approved ▪ Feasibility approved	▪ Plans approved ▪ Contract executed and order to proceed issued ▪ Construction complete ▪ Rent-up complete
Rental development The milestones in this row are designed to measure the performance of a developer.	▪ Development team identified and resumes submitted ▪ Market analysis complete ▪ Conceptual design complete and potential sites identified ▪ Site selected and site control obtained	▪ Engineering studies complete ▪ Plans complete ▪ Plans approved ▪ Construction complete ▪ Rent-up complete ▪ Asset management and monitoring

Figure 2.2
Sample Production Process Milestones by Activity

Activity	Sample Milestones	
Tenant-based rental assistance (TBRA) The analysis of a TBRA program may start by looking at time issues, but is most likely to focus on data from outside the program, such as the number of affordable, suitable units available for rent.	▪ Client accepted on waiting list ▪ Application submitted ▪ Application approved and voucher issued	▪ Property identified ▪ Inspections completed ▪ Lease signed ▪ Annual re-certification
Maintaining the asset and monitoring compliance These are examples of milestones pertaining to assuring the quality of program assets and monitoring compliance with ongoing requirements.	▪ Initial rent and occupancy review of rental projects ▪ Review of project compliance reports for rental projects and on-site monitoring reviews (if applicable)	▪ Physical inspections of rental projects ▪ Regular monitoring of resale/recapture provisions for homebuyer projects ▪ Regular monitoring reviews of TBRA program activities

Interim Outputs

Once the milestones are identified, a list of the interim outputs associated with each step in the process can be generated. Interim outputs refer to the products that are produced throughout the production process that are necessary for completion of the final product. Examples of interim outputs include an executed loan agreement and approved construction plans or specifications. By identifying and measuring key interim outputs, a manager can determine where in the production process things are not working at optimum efficiency.

Dimensions of Production: Structure, Time, Accuracy, and Quantity

Once the program milestones are identified, the production process can be reviewed and analyzed. There are four dimensions involved in managing, and therefore analyzing, a production process: structure, time, accuracy/quality, and quantity. Studying each dimension is necessary to gain a full understanding of an agency's productivity. Each dimension is defined as follows:

- **Structure.** This involves mapping out the sequence of events that a program entails in order to gain an understanding of the relationships among those events.
- **Time.** This dimension refers to the length of time it takes to get through each stage of the process and, subsequently, the overall process itself.
- **Accuracy and quality** of both interim and final outputs. By inspecting and comparing outputs, one can evaluate whether they are accurate or of adequate quality.
- **Quantity.** Quantity refers to the number of interim and final outputs produced, perhaps by individual employees or by the overall program itself.

A thorough analysis of the program's productivity would include establishing performance measurements and analyzing performance for each of these dimensions. At this stage, however, it may be clear that one or two of these dimensions are more problematic than others. Having completed the process of reviewing programs from a big picture perspective, and having mapped out the production process, a housing program manager should be able to make a determination about which of the four dimensions should be analyzed first.

Step 2. Identify Needed Data and Determine Potential Data Sources

At this point, the manager should have a good understanding of his or her programs, and should have identified one program, or perhaps one specific dimension of a program, that needs to be examined and improved. Next, it is time to determine what data will be needed to better understand what is occurring within that program.

Depending on the type of problem that has been identified, the cause(s) of the problem may or may not be apparent at this stage. For instance, it may be that the problem is initially defined only in general terms—such as, the expenditure rate for the homebuyer assistance program is not sufficient and the PJ is at risk of losing HOME funds for not meeting the five-year regulatory requirement. Alternatively, it may be very apparent that the homebuyer assistance program attracts a limited number of qualified applicants, and therefore is unable to meet its goals. The more a manager knows about the causes of any problem in the program under review, the more he or she will be able to target data needs.

It is not necessary that the causes of the problem be well understood at this phase of the process. In fact, it is sometimes useful to "test" assumptions about the causes of the problem(s) by generating a number of possible causes and collecting data to determine which of the hypotheses are valid. In reality, a program manager may find that there are a number of issues contributing to the problem-not just one thing. Further, as data is collected, it is common to re-evaluate and redefine the nature of the problem.

To determine what data must be collected, and to identify potential sources of that data, a number of related tasks must be undertaken:

- **Hypothesize about the possible causes** of the problem(s) identified in order to be sure that all possible causes are at least considered. As data is collected, it is common to re-evaluate hypotheses and subsequently redefine the nature of the problem. Accurate diagnosis of the problem is critical to effective problem solving!
- **Develop performance targets** for the program in order to have a benchmark against which to measure actual performance.
- **Identify what data is needed** to determine if the hypothesized cause has validity and if the targets are being met.
- **Identify potential data *sources.***
- **Evaluate the proposed data sources**, selecting those that will provide the most reliable data at the least expense.

Hypothesizing about causes

Hypothesizing about the possible causes or source of the problem(s) facilitates the decisions concerning what data should be collected and analyzed. The list of possible causes should be as exhaustive as possible, and every possible explanation for the problem should be generated. Staff, clients, contractors, and subrecipients can provide valuable input in this process. Complaints from (or about) any of these parties are also important sources of information.

Generally speaking, program performance problems can be traced back to one, or some combination of, the following categories:

- **Program design** issues, such as who is being served, type and level of assistance, and length of assistance. Note that problems with program design often lead to an inability to meet program outcome goals, as discussed in Chapter 3.
- **Personnel/staffing** issues that relate primarily to staff performance, training, motivation, and staff workloads.

- **Processes, procedures, and/or documents,** related to the number and order of steps involved in completing a task, including the amount and timing of staff oversight. Inadequate documents and written agreements can also cause problems.

Figure 2.3 provides an analysis of some common productivity problems and how they might be interpreted relative to these three programmatic aspects.

Figure 2.3

Sample Productivity Problems and Hypothesized Causes

Problem	Program design	Personnel and staffing	Process, procedures
Failure to spend funds for homebuyer assistance program in timely manner.	Program carries a cap on assistance that is insufficient. Income-eligible buyers are not able to complete a purchase without more financial help.	Program marketing efforts have been inadequate due to understaffing.	Application process is cumbersome for the buyer. Steps are duplicative and time-consuming.
PJ staff spends a considerable amount of time resolving homeowner complaints about contractors in homeowner rehabilitation program.	Homeowner is not involved in key decisions concerning what can be renovated in the home and what cannot.	Contractor does substandard work.	PJ and contractor assume the other party is coordinating with the owner and providing notice of work dates, etc.
Development projects are not committed in a timely manner; loan approval process is extremely long.	Program does not have established program priorities, nor clear guidelines for staff and developers.	Staff responsible for underwriting and loan approval is not adequately trained, and is not clear on responsibilities.	Underwriting process is cumbersome and does not include a screening mechanism through which poor project proposals can be identified and rejected early in the process.
Inspections reveal a significant number of jobs that are not satisfactory.	Rehabilitation standard needs to be revisited, updated, or revised.	Contractors need additional trainings in some areas of federal program construction.	In-progress inspections are either not timed appropriately, or are not being conducted at all.

Develop Program Targets

Based on informed hypotheses about the nature of the problem and the factors that may be contributing to the problem, program targets should be identified for milestones and variables that have the greatest impact on production. Establishing targets in and of itself can improve productivity because it provides a marker for which staff, contractors, and other program partners can strive.

Targets might relate to any of the four dimensions (structure, time, quality or accuracy, and/or quantity), but they should always be specific. Consider the following examples:

- The cost of change orders on the homeowner rehabilitation program should be 10 percent of total construction costs;
- The total number of rehabilitated rental units should be 75;
- Punch list items on all rehabilitation jobs should be completed within 30 days of the issuance of the certificate of occupancy; or
- Staff should complete a review of a development proposal within 30 days of receipt.

Targets will be hard to establish and project without some data to define where the agency is at the outset of the process. In the early stage of productivity measurement, the most important step may be simply collecting that baseline data.

Data related to the timeliness of performance is especially useful for planning and for evaluating program progress. With it, one can answer the following types of questions:

- How long does it take to complete market studies? How long should it take?
- How long does it take for rehabilitation inspectors to produce a good set of specifications?
- How many cases can one loan underwriter work on at the same time?
- How long does the permitting process take? How long should it take?

Using the milestones that were identified in the documentation of the production process, managers can work with staff, contractors, and subrecipients to identify "time goals" for each stage. Time projections must be realistic and based both on past experience and negotiations. Involving staff and program partners to establish practical time targets can be a powerful tool in ensuring good performance and identifying any problems early on. Time goals provide a clear understanding of expectations and also provide an objective basis by which to measure performance.

With time goals in hand, particularly when established in conjunction with program partners, parallel reporting systems and time-based performance measures should be established. These can form the basis of a "price of entry" system for continued funding for subrecipients and contractors. For instance, one of the largest productivity problems facing programs today is the failure of developers who have been awarded funds to move forward and complete projects. One way to address this problem is through a time-based performance management system. A chart similar to Figure 2.4 below, accompanied by noncompliance or enforcement procedures, could be included as part of any award of funds for development.

Figure 2.4

Rental Development Milestones

Rental Development Milestone	Allowed Elapsed Time From Contract Execution
Development team identified and resumes submitted	45 days
Market analysis complete	60 days
Conceptual design complete and potential sites identified	120 days
Site selected and site control obtained	180 days
Engineering studies complete	210 days
Plans complete	240 days
Plans approved	270 days
Construction complete	450 days
Occupancy complete	750 days
Asset management and monitoring	Ongoing

In a time-based performance management system for this rental development, developers would be required to submit monthly reports that specifically address their progress in meeting each of the identified milestones. Developers would be asked to explain in detail the reason for not meeting any milestone, and program staff would monitor the developer and provide technical assistance and/or enforce penalties if the progress was not timely.

A similar system could be developed for a state recipient or subrecipient administering a HOME-funded activity. The PJ could work with its housing partners to develop milestones that the partner is responsible for meeting. The housing partners would report on progress towards the specific milestones on a regular basis, and would be required to provide an explanation whenever progress is stalled. With such a system, the PJ is well-informed concerning what types of technical assistance might be needed. For partners who consistently have difficulty meeting milestones, other interventions might be necessary. Chapter 4 presents a case study illustrating these principles.

Identifying Data to Collect

With several assumptions about the nature of the issue to be addressed, the next step is to determine what data will be needed to determine if the assumptions are correct. It is important to carefully think through what information is needed and how it will be used after it is collected. Making these determinations should be a joint decision among management and staff, and may involve other program partners as well.

Data collection takes time and costs money. Plan carefully so that you collect only that information you need and can use to understand or solve your problem(s)!

For each possible problem that is identified in step one, a companion list should be generated that describes what type of data might help determine the cause of this problem. This list should be as specific as possible, although its specificity will be driven, in large part, by the nature of the problem under review. Figure 2.5 provides an example of how the list might look.

Before beginning data collection, data must be clearly defined, and staff must be trained to ensure data is collected in a consistent manner. If more than one person is collecting data, it must be collected consistently and all staff must define things the same manner. For example, if an agency is measuring "completed" units, it is critical that all involved staff have a common definition of "completed." Is a unit complete when construction is complete, or must the unit be occupied?

Figure 2.5
Identifying Data Needs

Problem: IDIS data shows that the PJ has failed to spend funds for its homebuyer assistance program in timely manner.

Possible causes of problem	Data Needs
Program design The program carries a cap on assistance that is insufficient. Income-eligible buyers are not able to complete a purchase without additional financial aid.	Determine why applicants drop-out of the process. Evaluate applicant financial information to determine whether sufficient assistance is offered. Compare financial information of approved, rejected, and drop-out applicants.
Personnel and staffing Program marketing efforts have been inadequate.	Identify use of staff time and workload. Determine if marketing efforts reached potential pool of clients.
Process, procedures Process is too cumbersome and time consuming.	Track each milestone of the process by time. Determine how many applicants drop out and at what stages. Determine level of customer satisfaction with application process (of approved, rejected and dropped out).

Identifying Data Sources

Agency files provide a readily available source of data. Managers may be surprised at the amount of information available at their fingertips—a significant amount of information can be collected simply by extracting the data from individual files and compiling it into a format that allows for easy analysis (such as a spreadsheet or database). Following are some examples of the types of data that can be extracted from agency files:

- Project files that have a chronology sheet attached to the cover (as they should), provides time data for the program stages.
- Construction files provide information about the bidding process, including cost estimates and actual bids (for purpose of comparison), and number and dollar amount of change orders.

- Dates on application forms and approval documents provide data about elapsed time (such as, average length of time applicants sit on waiting lists). It also provides information about the demographics of populations served and not served.

While agency files provide important information on program activities and applicants, they likely will not provide all of the information needed. Agency forms, applications, and program procedures can sometimes be modified to collect additional information. Other times, it is necessary to turn to external data sources. Appendix I lists common national housing and community development data sources.

PJs may also determine that they need new methods to collect data directly from program staff, partners, clients, and applicants. Chapter 3 provides guidance on other methods for data collection, including surveys, focus groups, and interviews. Regardless of the method, however, it is important that staff be trained on how data elements will be defined and collected to ensure that the data collected among various staff is comparable.

Evaluate the Sources of Data and Determine Availability of Data

Once the universe of possible data sources has been identified, each source must be evaluated in terms of its usefulness in the performance measurement process. For some types of information, there may be more than one data source available.

For each possible data source, the following questions should be addressed:

- Will the data measure what it is intended to measure (especially if outcome indicators are used)?
- How reliable will the data be (in other words, is very specific information available, or only general proxies)?
- Is the data already collected or can it be easily collected? If not, what will data collection entail? (That is, how much time and staff effort would it involve, and how much would it cost?)

The most important question is whether or not the data adequately measures what it is intended to measure. Data collection efforts are meaningless when the source is not adequate or appropriate. Figure 2.6 identifies some common questions a PJ might want to evaluate, and where the data might be found to undertake that analysis.

Figure 2.6

Where to Locate Data to Answer Common Questions

If a PJ wants to know…	Data Source	Data Needed
If staff cost estimates are in an acceptable range	Construction files	Cost estimate vs. bids vs. bid award
If applicants drop out of the process because the subsidy is insufficient	Application	Compare income of approved, rejected, and dropped out applicants
Number of units produced per FTE staff	PR-22 (Status of HOME Activities report) and Time sheets	Ratio of units completed per FTE
Average length of time to complete a unit	Application form and Construction files	Average time lapse from initial contact to construction completion (might use date of certificate of occupancy, or date of actual occupancy (lease, deed)
If change orders are excessive	Construction files	Average percentages of cost of change orders / total cost of construction

Step 3: Apply Measurement Tools

Once it is clear what data is required, the third step in the process is to begin collecting data. As mentioned above, data collection tools should be created so that staff can be compiling data during the course of their day-to-day work, rather than opening all program files on a periodic basis to collect this information at a later date.

Three powerful tools can accomplish most managers' needs:

- Flowcharts;
- Spreadsheets; and
- Individual Performance Reports.

The use of each of these tools requires varying levels of sophistication, and each has appropriate uses. Plan in advance to determine the best tool for the job by asking:

- Will this tool enable the agency (or its subrecipients) to improve productivity or help solve a problem?
- Can this tool be designed so that it fits the program being measured?
- Does this tool allow data to be collected and compiled in a way that does not create an undue burden on program partners or staff?

> ***Remember...***
>
> *It is critical that data collection efforts be integrated into normal, everyday operations of the staff.*

Figure 2.7 provides some examples of the types of tools that work best for a sample of common productivity problems.

Figure 2.7

Addressing Productivity Problems

Problem or Question	Process and Tools
❑ Are we committing and spending funds according to HUD timeliness requirements? ❑ How many final outputs are we producing per year or month?	❑ IDIS reports and simple mathematical projection
❑ Are we experiencing undue delays in projects, imbalances in workload, or a large number of complaints?	❑ Observation and interviews with staff. ❑ Establish milestones and monitor performance against them.
❑ Are we producing enough at each stage of the production process to assure that we reach our goals and balance our workload over the year?	❑ Set milestones and monitor performance. ❑ Use spreadsheet tracking tool.
❑ Is there a rational organization of steps and responsibilities in our production process?	❑ Simple flowchart
❑ Are CHDOs, other subrecipients, and employees achieving a reasonable number of outputs. ❑ Are outputs of acceptable quality?	❑ Spreadsheet tracking and spreadsheet analysis of outputs
❑ How is each employee spending his or her time? Is each employee carrying out the right tasks, structuring his or her time effectively, and producing the optimum level of outputs?	❑ Spreadsheet analysis, coupled with individual employee performance reports and interviews

Using the Flowchart to Address Structural Issues

Flowcharts are commonly used to examine all of the individual activities within a distinct stage of a production process. A flowchart elaborates considerably on the production process milestones by diagramming the process in far greater detail. Typically, it also identifies the individual responsible for each step. Charting this information simplifies the evaluation of the relationship between tasks and the relationships between staff members. It can be helpful for:

- Eliminating duplicative efforts;
- Identifying sequential tasks that can be performed simultaneously;
- Ensuring that the right person is doing each job;
- Determining whether or not workloads are balanced; and
- Assessing whether or not some work might best be subcontracted.

Unlike other tools that need to be used consistently in order to be useful, flowcharts are used only when designing or redesigning a production process or investigating a structural production problem.

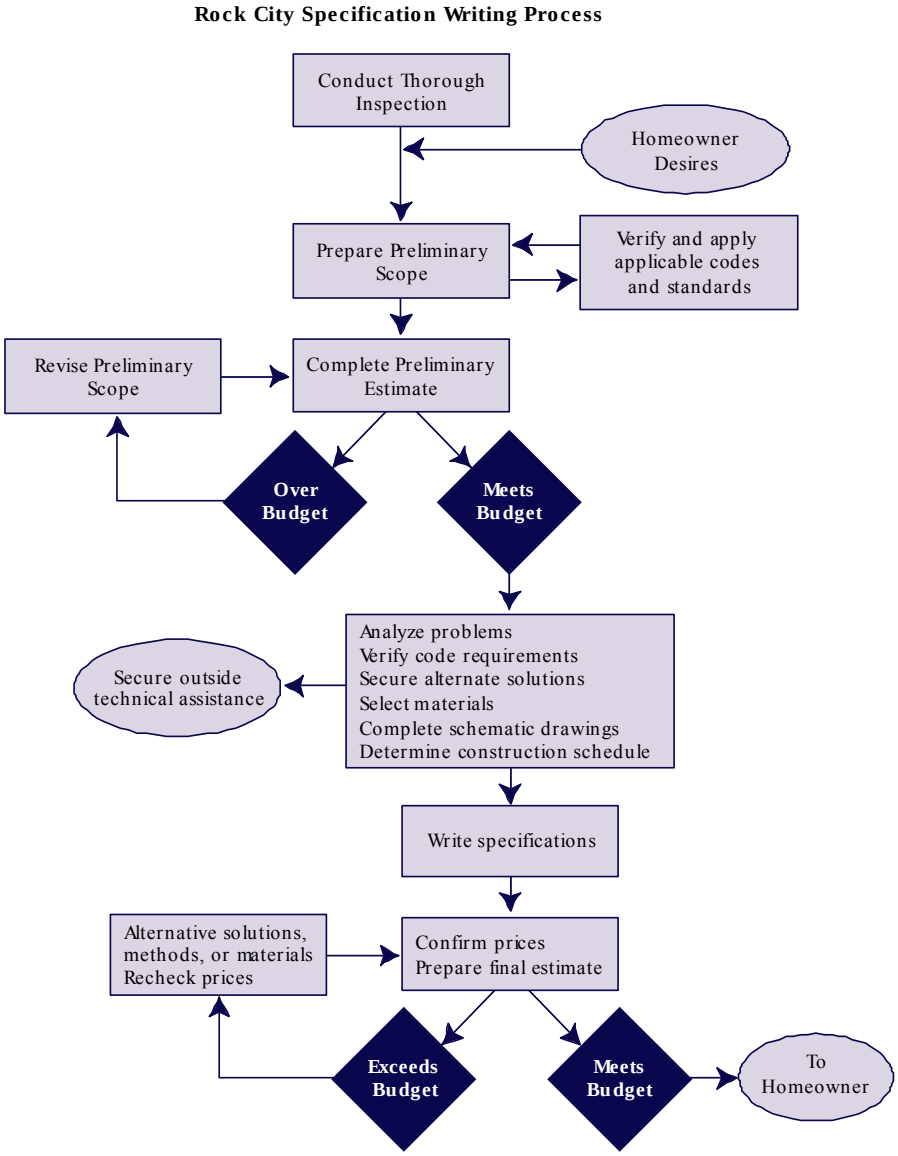


Figure 2.8

Flowchart for Activities Within Single Stage of Production Process

Using Spreadsheets to Measure Time, Quantity, and Accuracy

Spreadsheets are used for daily or weekly recording and processing of numeric data, allowing one to track the quantity, timeliness, and accuracy of outputs. Figure 2.9 is a sample productivity report that can be maintained on a spreadsheet. Spreadsheets can be used to track and tabulate a large quantity of information and can help managers to:

- Understand how long it takes to produce a product from start to finish. This information will help determine whether there are enough jobs in each stage of the pipeline to keep all job functions busy.
- Keep track of a large number of projects simultaneously.
- Identify the stage(s) in which projects are delayed.

- Measure the quantity and accuracy of outputs produced by individual employees and evaluate whether workloads are distributed appropriately across job functions.
- Tabulate data to find averages, ranges, and variations between data variables, such as costs and change orders.
- Measure the accuracy and quality of work, such as:
  - Construction specifications (by tracking the range of bids received and the number of change orders);
  - Cost estimates (by comparing estimates with bid prices and final prices); or
  - Construction work (by tracking complaints or warranty call-backs).

Spreadsheets are one of the most practical tools available for tracking data over time. Staff and partner organizations can collect data during the course of their normal activities and enter it directly into a spreadsheet. This data can be aggregated and manipulated in many useful ways for analysis. Note that some database programs perform similar functions, but typically, data manipulation needs can be served sufficiently by a spreadsheet.

As with most data tools, spreadsheets are a tool for collecting and tabulating data to help analyze problems (or potential problems). However, spreadsheets do not diagnose the cause of problems. For instance, the data might identify a "log jam" in program operations, but managers and staff must identify the cause(s) of the log jam. The cause(s) could be related to a number of things: staff member(s) may have more work than can be done by one person; an uncontrollable external factor is impeding the work; or more training is needed. Prudent managers look for the story behind the data, and use the data to target questions, inform discussions, guide investigations, and make decisions.

Figure 2.9

Project Tracking Spreadsheet – Rock City Owner Occupied Rehabilitation Program

Project #	First Contact	*Days Elapsed*	Application Submitted	Staff	*Days Elapsed*	Approved, Specs Requested	Staff	*Days Elapsed*	Specs complete	*Days Elapsed*	Contractor selected	*Days Elapsed*	Contract executed	*Days Elapsed*	Construction complete	***TOTAL Days Elapsed***
Avg. Days Elapsed		**29.2**			**39.6**			**9.1**		**39.4**		**17.2**		**59.4**		**206**
Min. Days Elapsed		**4**			**12**			**3**		**23**		**9**		**38**		**159**
Max. Days Elapsed		**63**			**67**			**19**		**45**		**31**		**95**		**235**
# Dropouts		**2**			**0**			**0**		**3**		**1**		**0**		**6**
Dropout Rate		**13%**			**0%**			**0%**		**30%**		**14%**		**0%**		**40%**
1	5/4/2000	61	7/4/2000	CJ	39	8/12/2000	AK	4	8/16/2000	37	9/22/2000	24	10/16/2000	45	11/30/2000	***210***
2	5/7/2000	63	7/9/2000	CJ	34	8/12/2000	MO	4	8/16/2000	Dropped	d	N/A		N/A		***N/A***
3	5/10/2000	58	7/7/2000	DP	37	8/13/2000	MO	3	8/16/2000	44	9/29/2000	14	10/13/2000	60	12/12/2000	***216***
4	5/11/2000	Dropped	d	CJ	N/A			N/A		N/A		N/A		N/A		***N/A***
5	5/30/2000	12	6/11/2000	CJ	67	8/17/2000	AK	19	9/5/2000	23	9/28/2000	31	10/29/2000	59	12/27/2000	***211***
6	5/30/2000	Dropped	d	EM	N/A			N/A		N/A		N/A		N/A		***N/A***
7	6/16/2000	31	7/17/2000	EM	39	8/25/2000	AK	11	9/5/2000	44	10/19/2000	15	11/3/2000	95	2/6/2001	***235***
8	6/16/2000	52	8/7/2000	DP	36	9/12/2000	MO	3	9/15/2000	Dropped	d	N/A		N/A		***N/A***
9	6/22/2000	29	7/21/2000	CJ	46	9/5/2000	AK									
10	7/23/2000	0	7/23/2000	DP	40	9/1/2000	MO	13	9/14/2000	Dropped	d	N/A		N/A		***N/A***
11	7/25/2000	4	7/29/2000	CJ	48	9/15/2000	AK	14	9/29/2000	45	11/13/2000	10	11/23/2000	38	12/31/2000	***159***
12	8/1/2000	6	8/7/2000	EM	38	9/14/2000	MO	5	9/19/2000	39	10/28/2000	Dropped	d	N/A		***N/A***
13	9/8/2000	20	9/28/2000	CJ												
14	9/14/2000	14	9/28/2000	DP	12	10/10/2000	MO	15	10/25/2000	44	12/8/2000	9	12/17/2000			
15	9/15/2000			CJ												

Individual Performance Reports

An individual performance report can help managers better understand the work of each staff person, and thereby make more informed decisions about work assignments, performance assessments, and needed training.

With regular reports on individual performance, managers are better able to recognize individual success and identify capacity problems in terms of an individual's skills. The latter can help a manager see the need for technical assistance and training for staff, or a shift in job functions to others. Alternately, celebrating individual success can motivate staff to produce good results. Individual measurement provides opportunities for each staff person to understand how his or her own work has a positive impact on the mission of the organization, and ultimately in the community. Effective managers should use this information to recognize good work, reward it when possible, and collectively celebrate successes.

To design an individual performance report, the manager should establish a format for each individual staff member to keep a log of critical work activities. The report should be completed each month. The scope of the report is limited to key elements of each staff person's job, which may change over time as certain issues become more or less critical in the performance of that job.

For example, an individual performance report for a homebuyer assistance program specialist might include the following data for the month:

- Number of outreach events, such as homebuyer fairs, planned and completed;
- Number of applications processed;
- Number of rejections/referrals for bad credit;
- Number of inspections completed for HOME and lead compliance;
- Number of loans approved;
- Number of properties in progress waiting for repairs;
- Number loan applications in progress waiting for bank approval to close (and/or other reasons);
- Training attended; and
- Other job duties or special projects carried out.

Conduct a Trial Run

A simple pilot effort to test data collection tools and procedures can save enormous time and energy by flagging a number of common problems early in the process, including:

- Cumbersome data collection procedures;
- Data quality control issues;
- Overlooked outcomes;
- Inadequately defined indicators;
- Data entry procedures; and
- Data analysis/interpretation problems.

Tracking staff activities that are not tracked for the program can uncover activities or external forces that dramatically impact staff's time. This can lead to discussions on how to change the way the agency does business and to increased productivity.

Step 4. Analyze the Data

Analyzing the data is the most critical step in the productivity measurement process—figuring out exactly what the data means.

The data analysis process can be broken down into several components:

- Process data and check for errors
- Tabulate the data
- Analyze the data and interpret the results

Data Entry

Once data is collected, it may need to be transferred to a format to facilitate data manipulation and review. This function is referred to as "data entry." Data entry is required when the raw data is collected in a format that is not conducive to analysis, such as on individual forms, in files, or on questionnaires. The data is typically transferred into some type of computer software system or on a new form that makes tabulation easier. A number of easy-to-use software packages (for spreadsheets or databases) are available.

Data entry is simplified when it is done on a regular basis, rather than all at once just prior to analysis. Regardless of when it is done, it is important that staff understands how to enter various types of data, particularly if data is qualitative in nature and must be coded, or when the data is left blank (e.g., if a respondent did not answer a question on a survey). Prior to analysis, it is also important to check for errors in the data entry process.

Tabulate the Data

Data tabulation involves generating basic statistics related to the findings. Depending on the type of program, this might include:

- Total number of units;
- Averages or median income, purchase price, or rents;
- Cost per unit, per Full Time Equivalent (FTE);
- Average change in property values; and
- Average number of days required to process an application, complete construction.

Analyze the Data

Correctly identifying the factors affecting a program's performance is imperative to identifying meaningful solutions. The data is the starting point.

Benchmarks are commonly used to facilitate data analysis. A benchmark is a standard by which one measures progress. Some commonly used benchmarks include:

- The PJ's own projected targets (See Step 2 above);
- Industry standards,
- Performance of a similar jurisdiction, if available; and
- The PJ's own performance, as measured over time on a periodic basis (such as quarterly).

When reviewing program data, managers should look for:

- Any unexplained or dramatic changes in the data over time;
- Differences between benchmarks and actual data; and
- Patterns in the data that seem to be related to particular staff, neighborhoods, contractors/developers, landlords or property owners, or other key players (for instance, data might show certain developers are consistently behind schedule, while others are not).

After examining the data as a whole, it is often useful to break down the data and compare the results by category, such as race, age, household size, income level, educational level, neighborhood or census tract, etc. Demographic breakdowns are particularly valuable when trying to evaluate who or what neighborhoods are being served (and who is not). For example, comparing jurisdiction-wide homeownership rates by race or census tract with program participation rates may provide valuable insights about the effectiveness of program outreach efforts.

Encouraging staff and program partners to help analyze the data is a way to cultivate "buy-in" and encourage problem-solving from those most directly in control of the work. In fact, data analysis may raise more questions than it answers. Involving others in the analysis and eliciting additional qualitative information from these sources may become important. Qualitative information helps explain the story behind the numbers so that problems and issues can be solved. Discussions with staff or program partners are an absolute must in the process of diagnosing the "why" behind the data and understanding the true barriers to productivity in programs.

Chapter 3:

Measuring Program Outcomes

Chapter 2 explains how measuring productivity helps a program manager determine how much an agency or program has produced. Chapter 3 explores how measuring outcomes can help a manager monitor the impact the agency's program is having on the individuals or community it is designed to serve. Monitoring program outcomes can guide agency improvement efforts and ensure that changes are made to programs that are not achieving the intended outcomes.

What is a Program Outcome?

Program outcome measurement is focused on measuring whether or not a program is meeting its intended *purpose*. The *program outcome* differs from a program goal in that a goal is a statement of the accomplishment the agency plans to achieve—it is frequently articulated as some unit of production, such as a housing unit or a household assisted. The *outcome* is the change one wants to make. For instance, the goal of a homeownership rehabilitation program may be the rehabilitation of fifteen units of substandard housing. The intended outcomes may be to revitalize a neighborhood or to make it safer. As this example suggests, program outcomes can be long-term goals, and in some instances, may take many years to realize.

What are the Benefits of Measuring Program Outcome?

The purpose of housing programs is often tied to other community development objectives as well. There is a growing recognition of the need to integrate HOME funds into comprehensive approaches to solve community problems. These include neighborhood revitalization programs, community-wide workforce development/economic development strategies, and homeless strategies. Because of their multi-faceted nature, however, it is essential that comprehensive strategies include an assessment of each component in order to determine where strategies have been effective and where adjustments are needed.

For many organizations, monitoring results rather than processes is a new way of thinking about success. However, there are three basic reasons why outcome measurement is essential to success:

- **Outcome measurement supports long-term planning.** Significant changes in a community are not likely to happen overnight. As a result, it is important to review, adjust, and improve programs and projects along the way. By defining key milestones used to judge progress, outcome measurement helps to keep long-term plans on track and ensure that resources are targeted for the greatest impact.
- **Outcome measurement facilitates mid-course corrections.** Changes in the regional and national economy, migration into and out of the community, election of a new mayor—these are only a few of the factors that can affect how well programs and projects perform. Outcome measurement creates an early warning system that shows where shifts in the larger political, social, and economic environment are impacting a community's progress and helps the community make mid-course corrections to solve problems and capitalize on new opportunities.
- **Outcome measurement allows effective use of scarce resources.** While HOME funds are significant, they are not infinite. Through evaluation of the results created by programs and projects, performance measurement can help channel resources where they make the most difference. With the right type of information, changes can be made to keep housing strategies responsive to changing community needs.

The Process of Measuring Program Outcomes

The process used to measure program outcomes is comparable to the process used to measure productivity, described in Chapter 2. This process can be broken down into the same six steps:

1. Identify/confirm program goals and intended outcomes;
2. Identify the data needed and determine data sources;
3. Select and apply measurement tools;
4. Analyze the data;
5. Implement changes and improvements; and
6. Continue measuring program performance.

While this publication describes the measurement process for productivity and program outcomes separately (in Chapters 2 and 3, respectively), measuring productivity and measuring outcomes are not two separate processes and typically are not addressed individually. An effective performance measurement system will address components of both, particularly since productivity can have a significant effect on program outcomes. These relationships will be explored further in Chapter 4.

Evaluating program outcomes involves the following steps and issues:

Step 1. Identify/Confirm Program Goals and Intended Outcomes

For agencies undertaking an outcome measurement process for the first time, it is advisable to start with one particular program with defined program outcomes. Before any assessment of current status can begin, the intended program outcomes must be defined. However, this is not always as easy as it sounds! As a result, it should be the subject of wide ranging discussions, both with staff and other stakeholders of the program. There must be some level of agreement on intended outcome(s) prior to any effort to measure whether those outcomes are being achieved. Staff and other stakeholders often have varying views of what a program is trying to achieve. The process of asking all stakeholders to focus on and come to agreement about program purpose can increase service effectiveness before data collection even begins.

During the course of these discussions, it will likely become apparent that in addition to the specific program activities under review, there are many other factors that affect a particular outcome, particularly when the desired benefits are to an entire neighborhood or community. Many of these factors will be outside the agency's control, and housing resources alone are typically not enough to effect dramatic change. When the desired outcomes are comprehensive in nature, PJs should consider involving other agencies (such as the police department or human services department) in their discussions about outcomes in order to collaborate, share information, and better target services to maximize program impact.

Identifying Outcome Indicators

Defining a program's intended outcomes can be difficult, but the bigger challenge can be determining how to measure those outcomes. Some outcomes are fairly easy to observe and measure, such as an increase in the homeownership rate for a specific population or in a certain neighborhood. Many outcomes, however, are not able to be measured directly, and perceptions are more difficult to measure than hard facts. For example, there is no universally accepted threshold that defines when a neighborhood has been revitalized or when it can be considered safe.

To measure such outcomes, one must identify indicators to represent the desired impact. An outcome indicator requires two things:

1. A specific observable, measurable characteristic or change that will represent achievement of the outcome, and
2. A specific statistic used to summarize the level of achievement, also known as a performance target.

At the beginning of the measurement process there will be little basis for choosing performance targets. (Is the goal to increase property values by 10 percent or 40 percent?) Initially, it might suffice to aim simply for improvement in the selected indicators. The program can then establish numerical performance targets later, after a round or two of outcome measurement reveals what numbers are reasonable.

Outcomes can be multi-dimensional, and one indicator may not capture all aspects of an outcome. As a result, some outcomes may require more than one indicator. For example, to measure a neighborhood revitalization effort, several indicators may be used:

- The vacancy rate in the neighborhood;
- Increases or decreases in property taxes;
- Increases or decreases in average home sale prices;
- Increases or decreases in neighborhood safety;
- The homeownership rate; and
- The level of private investment in the neighborhood.

Step 2. Identify Data and Data Sources Needed to Measure Chosen Outcome(s)

Unlike productivity, which is typically related to an agency's internal operations, outcomes are generally related to the community-at- large (or the well-being of assisted households). Therefore, it is logical that at least some of the outcome data that an agency needs will be generated outside the agency. Depending on the specific outcome, however, data sources will vary. There are many data sources to consider:

- **Primary sources.** Primary source data includes data that is generated by program activities. It can be extracted from agency records, and/or collected directly from applicants, program participants, and other program stakeholders (through surveys, focus groups, windshield surveys, etc.).

Before undertaking new data collection activities, it is prudent to identify the types of data already collected by examining the forms and records used at each stage within the program's process. Most agencies have a significant amount of information available in participant files, applications, and other records.

- **Secondary sources.** Secondary source data includes data that is collected and compiled either nationally or locally. It is important to consider the use of secondary sources in outcome measurement because they are independent, typically reliable, and often standardized. Some of the most common secondary sources for housing and community development data include:
  - Data compiled by the local planning department;
  - *Census data*, including the American Community Survey Data, American Housing Survey Metropolitan Samples, and the Census 2000 Supplementary Survey; and
  - *U.S. Department of Housing and Urban Development data*, including A Picture of Subsidized Households, HUD Income Limits data, Fair Market Rents data, and the State of the Cities Database.

Appendix I includes a list of secondary housing and community development data sources to consider.

Keep in mind that there are some disadvantages to using in-house data exclusively. The validity of the data depends on how carefully it was collected and recorded. Furthermore, existing records seldom contain all the data needed, and caution has to be taken to ensure the data is current. And, unless the agency's procedures already include customer service and satisfaction follow-up information, the data may need to be augmented using one or more of the tools discussed later in this chapter.

Data Found in Program Records

PJs may be able to obtain program outcome data from the following types of records. If the necessary data is not already collected, relevant data elements can be incorporated into the agency's existing forms.

- **Approved and rejected applications and waiting lists.** These records identify who is currently being served, who is about to be served, and who is not being served. Analyzing this type of data may lead to changes in the focus of marketing efforts or to the design of programs.
- **Siting decisions.** Data related to siting decisions might assist in evaluations of whether the neighborhood or property targeting goals of the program are being met.
- **Unit designs.** Analysis of data related to unit designs can help answer questions such as whether or not the agency is successfully developing units that are compatible with the neighborhood. In addition to in-house information about unit design, holding neighborhood meetings can help staff assess whether units are well-liked by community residents and are meeting community needs.
- **Plans and specifications.** Evaluating plans and specification will determine if standards and specifications are established with quality, durability, and energy efficiency in mind. Post-construction inspections will ensure that the work is completed according to the plans.

Primary source data may also include impressions and perceptions from those involved in the program, such as participants, developers, and other stakeholders. This data is particularly important when the measured outcomes relate to changes in attitudes, opinions, or beliefs (for instance, whether or not residents of a particular neighborhood feel safer). In order to collect or capture this data, an agency may need to conduct surveys, focus groups, or interviews, which are discussed later in this chapter.

To be valid measures of program effectiveness, outcome indicators must have measurability, accessibility, and consistency:

- **Measurability.** The indicator should be objectively measurable, meaning not only should one be able to track change precisely, but different people doing the same measurement should end up with the same result.
- **Accessibility.** The data selected should be generally accessible to the public and/or the agency. If securing the data is too difficult or cumbersome, data collection efforts will not last.
- **Consistency.** For data comparisons to be useful, the data must represent the same thing from one year to the next, to ensure a comparison of "apples to apples". For example, if tax assessments are used as an indicator of property values, it is important to verify that the tax code has not changed, thereby raising or lowering the base rate.

Data accessibility is key to successful performance measurement. In many agencies, staff is fully utilized in program implementation. If data collection and compilation is too time-consuming, staff enthusiasm will dwindle and data collection efforts will not last.

Collecting data to determine program impact is typically done on a periodic, rather than ongoing basis. Since most outcomes involve long-term change (such as changing lives and changing communities), it takes time for incremental changes to be measured. Determining the intervals at which to take these measurements should be a joint decision with program staff and other stakeholders. For many communities, it makes sense to tie this data

collection and analysis effort to the annual planning process. After all, the analysis of whether a program is effective typically drives program planning efforts.

Measuring Increased Housing Affordability

For many housing programs, the most significant intended outcome is to increase the affordability of housing for low-income households. The most common indicator of affordability is the percentage of income being spent on housing. When calculating housing costs, it is important to include utilities and/or other housing related expenses-such as condominium fees, property taxes, maintenance, and insurance-to reflect the full cost of housing.

Determining affordability can be tricky because of its definition: housing is generally considered affordable if a household's monthly cost does not exceed 30 percent of household income. However, there are some circumstances when this definition is neither relevant nor feasible, such as when household income is very low or fluctuates significantly from year to year or month to month, or when the cost of housing is extremely high and decent housing is scarce. Because of these issues, each locality must consider the issue of affordability carefully and develop a standard definition that make sense in its own community.

Why Use This Indicator?

The affordability ratio reflects two things: (1) How well a family fares in juggling housing costs versus other expenses; and (2) The success of an organization in securing affordable housing for rent or homeownership in relation to the local housing market and general economy.

How Do I Get the Information I Need?

First, primary stakeholders should discuss (and come to agreement on) what should be considered "affordable" in the context of the local market. Then, a formula can be developed to calculate affordability based on the determination of the maximum percent of household income that should be spent on housing costs in the local housing market.

Next, the PJ should review its application form to ensure that it gathers needed baseline data, such as household income and current housing costs. The PJ can use an annual survey of assisted households to collect data on changes in income and housing costs.

To arrive at the affordability ratio, the PJ should divide the household housing cost by household gross annual income. For example:

$700 monthly housing costs divided by $1,500 household monthly income = 47% of household income is for housing costs.

Finally, the PJ can compare the percentage of income spent on housing in the new or rehabilitated home to the percentage of income spent on housing in the household's prior situation.

Special Considerations

If applicable, include the cost of utilities from the household's previous housing in any comparisons made in order to measure the benefits from more energy-efficient construction in making a participant's new housing situation more affordable.

If the agency develops different types of housing (for example, detached single family homes, multi-family attached townhouses), this indicator can show what type of housing is most affordable and cost-effective. It also may help identify which design features are the most efficient and desirable.

As stated before, affordability must be examined in the context of local housing costs, since in many localities, the affordability standard of 30 percent of income does not reflect the reality of the housing market. Use of this indicator can spur discussion in the community on determining a meaningful measure of affordability.

Lower housing costs can contribute to other improvements in quality of life by increasing cash available for other purposes, such as education, health care, transportation, and savings or investments.

Finally, comparing the affordability ratio among families of different incomes and varying housing costs will generate the affordability range for housing in the community.

Measuring Change in Property Values

Frequently, the intended outcome for housing programs that are designed to revitalize neighborhoods is to provide economic stability to the neighborhood. The value of a house, apartment building, or commercial property is determined by the price a buyer is willing to pay for it. When property values increase, the wealth or asset base of the community also increases.

Why Use It?

Strengthening the sense of community and improving safety and visual attractiveness will make a neighborhood a more attractive place to live, thus raising property values. An increase in property values that results from the activities of the agency is strong evidence of success.

Conversely, in communities experiencing skyrocketing property values or gentrification, documentation of the increases in property values may be needed to build the case for development of more affordable housing.

How Do I Get the Information I Need?

Since interpreting changing property values can be complex, it helps to evaluate whether different information sources show different trends. By considering different methods of data collection, one can gain a better understanding of the actual situation.

Sources for information on property values include the census data (every 10 years), county records (generally every three years), and real estate agents.

Once a year, a PJ can extract or calculate property values for the neighborhood from available sources. It is a good idea to track both median and mean (average) property values in the neighborhood if data sources allow both calculations. This permits control for extremes in the neighborhood so as not to distort data.

Special Considerations

To better understand the impact of external factors, PJs should compare property value changes in the target neighborhood to changes in property values for the city overall (or any other large area of which the neighborhood is part).

It is also important to evaluate who is gaining the benefit from an increase in property values. If low-income residents' homes are foreclosed or rents become unaffordable so that they have to leave the neighborhood, the target community does not benefit.

When presenting data, PJs should discuss the causes of trends and note any inconsistencies between data from different sources. For example, if a major neighborhood employer or school in the community opens or closes, property values are likely to be impacted. Such events, and their effect on the data, should be reported and interpreted.

When possible, it can be very useful to get separate medians and averages for different parts of the neighborhood. For example, if housing prices are going up in one part of the neighborhood while they are stable or declining in another part, people who know the neighborhood might be able to explain the reasons for the difference.

Step 3. Select and Apply Measurement Tools

A variety of tools can be used in the data tracking and analysis process. Spreadsheets are useful for tracking and managing program outcomes data that is numeric, particularly when the data is extracted from program records. Several new tools designed to capture information about people's experiences and perceptions are also discussed in this section. These tools include observation, surveys, focus groups, and interviews. Naturally, some combination of these tools might be appropriate. Selecting the appropriate tool(s) depends on the agency's measurement goals, the type of data it has decided to collect, and the amount of resources available to undertake data collection.

Spreadsheets

As discussed in Chapter 2, spreadsheets are an ideal tool for tracking and manipulating numeric data. Outcome data from primary and secondary sources can be recorded in spreadsheets and tracked overtime. Similarly, survey responses can be coded into numeric form and entered into a spreadsheet for easier manipulation and analysis.

Observation

Direct observation is an underused and valuable tool for collecting data. Observation provides the opportunity to document observable data without relying on the willingness of others to respond to questions. A significant benefit of observation is that it can be conducted during the course of routine activities such as inspections, monitoring visits, and community meetings. It is low in cost and can be done relatively quickly.

Some examples of staff observations include windshield surveys of housing types and condition, the presence of vacant or abandoned units, and the number of "for sale" and "for rent" signs. It might also include information collected at community meetings, such as documenting how resident concerns change over time.

To be useful and credible for performance measurement purposes, however, observations must be recorded as soon after the observation is made as possible. The use of standardized forms, checklists, field notes, and pictures for the collection and recording of observable data helps standardize this type of data. This is especially important when multiple staff members are involved in the procedure. It is always important to record the date and location of the observation and include a short description of the context in which the observation was made.

In contrast, using observation as a tool to measure program outcomes has some disadvantages as well. Without ongoing coordination efforts, information can be biased by staff interpretation. It can also be difficult and time consuming to analyze qualitative data.

Surveys

A survey is a highly structured series of written questions that is administered to a large number of persons. Surveys provide information in a systematic and quantitative manner, which facilitates statistical analysis. One major advantage of surveys is that they collect otherwise unavailable data directly from users and potential users of programs and services. The only way to obtain information about a person's needs, opinions, plans, expectations, and behaviors that are not directly observable is to ask the person about these issues.

For example, a PJ might want to evaluate the effectiveness of its rental rehabilitation development program. The PJ wishes to know if the neighborhood residents believe that the quality of neighborhood life has improved because of the development activity in the area. While there may be outcome indicators to help assess whether there have been positive changes in the neighborhood (such as the crime rate or the vacancy rate of residential and retail properties), the only way to determine how the residents feel is to ask them. A survey is an ideal tool for this purpose.

Collect what you need

The number one rule of conducting surveys is "do not collect what cannot be used." Short, well-focused surveys are the most effective because they limit the time burden on respondents, which can help improve the response rate. For this reason, surveys should be designed only after it is determined what information cannot be obtained from other sources, and how the results will be analyzed and disseminated.

While surveys are the most common tool for outcome measurement, they are also expensive and time-intensive. They are also practically useless if not done correctly. Agencies that do not have in-house data analysis expertise are advised to consult with or hire an outside analyst to help with both design of the survey instrument and the interpretation of results. Universities are an ideal resource from which to seek assistance. PJs who seek the assistance of outside experts should be sure to include them in the design of the survey instrument—not just the analysis of the results. It is also important to test the survey instrument prior to beginning data collection. No matter how well designed a survey instrument appears to be, it is only through testing the instrument that one uncovers problems such as ambiguous questions, inappropriate wording, and the need for questions to be added or eliminated.

Finally, identifying and targeting the survey to the correct audience is critical and should be well planned. For some types of evaluations, it is equally important to talk to both participants and non-participants, such as contractors who do not participate in contracting opportunities, or families and households who either do not participate or drop out of programs.

Focus groups

Focus groups are in-depth guided discussions among several individuals led by a trained and unbiased moderator. They are a powerful means to evaluate services, identify needs, and test new ideas. Participants can be clients, prospective clients, partners, or members of the general public.

Convening focus groups sends a powerful message to clients or prospective clients about agency commitment to excellence in service delivery. When it will not interfere with the participants' comfort in speaking candidly, staff should be included to sit in on the meeting. Exposure to customers is especially useful for frontline staff.

Whereas a survey can reach a large number of people to elicit a limited amount of specific information, focus groups reach only a handful of people (typically six to eight) to explore a topic in great detail. Ideally, participants should not know each other, as this provides an atmosphere in which participants are more comfortable to speak freely. Like surveys, however, focus groups need to be well planned, have a clearly defined purpose, and be targeted to a specific audience in order to generate useful data.

The most important part of planning focus groups is to identify the purpose of the meeting and determine what information is being sought. In program outcome evaluations, a focus group might be helpful when seeking perceptions of residents (and other community members) about the impact of the program. Given the wide variation in the types of responses this line of questioning elicits, the in-depth nature of a focus group can generate information that is not attainable through other means. A focus group can also be used to help inform staff about issues so that a survey of a larger group can be more effectively designed.

A focus group session typically lasts between one to one and a half hours, during which time no more than six questions are explored. Participants are informed in advance of the purpose of the discussion. Since these groups are small, it is important that participants show up. Offering a small stipend to cover any out-of-pocket expenses by participants, and/or making childcare available for those who need it, can improve the attendance.

A discussion guide should be designed prior to the session. Questions must be designed and crafted carefully, and be focused on the purpose of the session. Questions must also be worded in a way that considers the needs and capabilities of the participants. For example, it may be necessary to use simple phrasing and avoid complex words. If non-native English speakers are participating, it is important to avoid catch phrases and slang. Questions must be worded in an objective way to ensure that the questions themselves do not "lead" a participant to provide a specific answer.

Finally, effective focus group moderators steer the discussion to keep the group focused on the purpose of the meeting and ensure that no one or two people dominate the discussion. The facilitator should know enough about the work of the agency and the purpose of the evaluation to provide participants with enough background information to ensure they fully understand what is asked. Finally, participants should be provided a copy of any written summaries or reports that are generated as a result of the discussion.

Interviews

The final tool PJs may want to occasionally use is the interview. An interview is an in-depth conversation with an individual to collect specific information about his or her thoughts, perceptions, and experiences. With this tool, there is a small sample of interviewees who are typically not randomly selected. Therefore, it is not possible to extrapolate findings to people who were not interviewed.

Interviews are helpful, however, in obtaining depth and clarification. One common use of this tool in service delivery programs is an exit interview with program participants to discuss what worked, what did not work, and how the program could be improved. Interviews can also help highlight individual versus group concerns, develop other research tools, and gather stories for marketing or public relations purposes.

In-depth interviews generally begin with a written set of questions, although a good interviewer does not limit an interview to those questions or a limited set of possible answers. A good interviewer will, however, be sure to get answers to the initial and most critical questions. The interviewer must motivate participants to share their thoughts and feelings on the interview topic.

Using interviews for collecting data to measure program outcomes is time consuming and expensive. In addition, analysis of qualitative data can be difficult. However, this method allows for depth in data collection—that is, the why's and how's behind the initial responses—and response rates are generally very good.

Figure 3.1 summarizes the advantages and disadvantages of each data collection tool.

Figure 3.4

Advantages and Disadvantages of Data Collection Tools

Advantages	Disadvantages
Data Extraction from Program Records	
❑ Data collection is ongoing, allowing for analysis of productivity and performance ❑ Relatively inexpensive (data collection can be incorporated into existing staff responsibilities) ❑ You can amend procedures to collect needed information on future participants	❑ Value of data depends on how carefully it was recorded ❑ Existing records seldom contain all data needed ❑ Data from existing records may not be current ❑ Generally do not provide post-service information on participants' experience or conditions
Observation	
❑ Can be conducted in the course of regular duties/activities ❑ Low cost ❑ Can be done quickly ❑ Works well for observable indicators	❑ Information can be biased by staff person's interpretation ❑ Not appropriate for indicators where visual observation is not feasible ❑ It is not always possible to have the same person making the observations ❑ Analysis of qualitative data can be difficult and time consuming
Surveys	
❑ Can collect otherwise unavailable data (e.g., data about a person's opinions, needs, future plans, expectations, and unobservable behaviors) ❑ Provides information that is current ❑ Provides information in a systematic and quantitative manner (which facilitates statistical analysis)	❑ Information can be biased by memory, interception, perceived pressure, and fears ❑ If questions are not well designed, data may be useless (i.e., experience is necessary) ❑ Response rate is generally lowest of all data collection methods
Focus Groups	
❑ Relatively inexpensive way to explore topics such as how to improve service delivery, how to reach out to underserved populations, perceived needs, or customer satisfaction.	❑ D o not generally allow for large data collection efforts (i.e., sample likely not representative) ❑ Can deter discussion of sensitive topics ❑ Do not allow for "outlier" concerns to be raised
Interviews	
❑ Allows for "depth" in data collection (i.e., can explore the "why's" and "how's" behind answers) ❑ Response rate is generally good.	❑ Data collection is time consuming and expensive ❑ Analysis of qualitative data can be difficult.

Step 4. Analyze the Data

Program outcome data can be extremely difficult to analyze, particularly when using outcome indicators or using data that is derived from interviews, surveys, focus groups, or observation.

Since the data collection process is so time consuming when using these tools, it is important to point out that data must be analyzed as soon after collection as possible. Data that gets "cold" is not reliable. Time for analysis must be built into the data collection schedule as soon as possible after the data has been collected.

Analyzing survey data

Typically, after a survey is completed, the raw data is entered into a spreadsheet or database (data entry) to assist in data manipulation and analysis. The data is then "cleaned." In other words, the results are checked to ensure they make sense and are reliable. Data irregularities, which typically result from respondent or data entry errors, must be addressed to prevent skewed findings. This is especially important when the survey is self-administered by youth or persons with limited literacy skills.

Statistical software packages are extremely helpful in analyzing survey data, but they can be complicated for new users. Deciding how to "cut" the data, searching for correlations, and identifying other relationships can be very complex. PJs should seek assistance from individuals with data analysis experience.

Analyzing data from focus groups

Focus group data is slightly easier to interpret because it is not quantitative, and there is ample opportunity for participants to explain their answers. Audio or video taping (with participants' permission) can facilitate the analysis and augment session notes. Notes from focus group sessions should include an extremely detailed discussion of the information that was elicited, the nature of the participation in the group, and the perceived comfort level of the participants. One of the more useful pieces of information from a focus group is whether there were surprises in participants' responses. When results are used in a formal report, it is prudent to share findings with participants before publication to ensure accuracy.

Analyzing results from interviews

The results of interviews, like focus groups, are somewhat easier to analyze because interviewees have expounded on the information they have provided. Upon completion of the interview, the results should be transcribed and discussed by a team of staff or other program partners. While some of the specific questions to be addressed by the group will be dictated by the purpose of the interview, in general, the discussion should focus on the following components:

- Key findings—what did the interviewees say? Were there any surprises?
- Were the interviewees in agreement?
- Were there issues that the interviewees did not agree on? If so, are there patterns or explanations to those issues?
- What questions are answered by the findings?
- What questions are raised by the findings that might need to be explored at a future time?
- What should the agency do with the findings (such as, change programs, conduct additional evaluations, etc.)?

Some additional points in analyzing outcomes data

When intended program outcomes are not achieved, it is sometimes difficult to determine why. As with productivity measures, issues associated with achieving effective outcomes can generally be grouped into one of three categories: (1) program design; (2) personnel/staffing; and (3) program processes and procedures. Examining the findings from each of these perspectives helps in thoroughly analyzing the situation and identifying all of the factors that might be at play.

Often, there are many factors that impact program effectiveness that are not in the housing agency's direct control. Achieving positive change for individuals, and improving distressed communities is challenging work, but investments of affordable housing dollars can make a difference. It is critical that those investments are made as effectively as possible within the limitations presented. Continually monitoring program effectiveness in terms of the agency's ultimate goals, and not only in terms of the number of housing units produced, will improve housing agency performance.

Chapter 4:

Bringing It All Together

In prior chapters, productivity and program outcome measurement have been examined as two separate and distinct components of an overall system of performance measurement. Chapter 4 explores how these two components can be used together and summarizes the key lessons of the prior chapters.

Performance Measurement for Continuous Improvement

The performance measurement process, when used for problem-solving and continuous improvement, is rarely as organized and straightforward as the previous chapters might suggest. Nonetheless, it is important for PJs to try and organize a system of measurement to keep the agency focused on both efficient and effective operations. Using the program outcome model, this effort can be realized.

Performance measurement has been described as an important tool for diagnosing problems that are not otherwise easily understood. Chapter 2 describes how to identify productivity problems, collect data to measure production, analyze the data, and implement improvements. The goal of measuring productivity is to improve an organization's efficiency in terms of the quantity and quality of "outputs" it produces. Chapter 3 describes the importance of measuring program outcomes to ensure that the intended program benefits are actually realized.

Yet, performance-based measurement is not a one-time event; nor is it intended to be used exclusively to solve a particular problem at a particular time. Once a performance measurement system is in place, its purpose is to monitor progress on an ongoing basis so that changes and adaptations can be made to program operations to prevent future problems.

Understanding the Relationship Between Program Outcome and Productivity

It is not always easy to untangle productivity problems from issues impacting program outcomes. Consider the following relationships between program outcomes and productivity:

- **A program can achieve its intended outcomes but be grossly inefficient.** Program outcome measures might indicate that a program is effective and is meeting the intended needs of the community. However, these measures will not reveal whether these outcomes are too costly, too time-consuming to complete, or inefficient.
- **Outcome measurement might reveal that a program is not effectively meeting the needs of the community, but without additional measurement, it may be impossible to determine why.** Program outcome measures must be paired with productivity measures in order to understand where a program is falling short and why it is not achieving intended goals. This is particularly true when the intended outcome will be impacted by the quantity of the product generated. For example, consider a homeowner-occupied housing rehabilitation program for which the intended program outcome is to revitalize a particular neighborhood. The PJ measures a variety of outcome indicators on an annual basis and determines that the program is not having an impact on the neighborhood. This lack of impact may be the result of the program not generating a sufficient number of rehabilitation jobs to impact the community. Alternately, the lack of impact may be the result of a program design that is inadequate for the target neighborhood because there are many other types of blighted property (e.g., large rental properties or commercial properties) that remain untreated. Further analysis will be required to make the determination of cause.
- **A program may be meeting its production objectives, but may not be achieving the desired program impact.** It is certainly possible that an efficient, well-administered program may not be effective in meeting a PJ's desired outcome, nor be the most suitable program for meeting a PJ's goals.

PJs need not abandon programs whose outcomes are not achieved, or are achieved in only a limited way. However, PJs should remain open to creating new partnerships, making program modifications, or undertaking additional

initiatives to more effectively reach their goals. For multi-faceted problems, PJs should forge partnerships with staff of other local and state government agencies (such as economic development agencies, law enforcement, and social services providers) to determine what other issues might be preventing the program from meeting its intended goals. While PJs may not have complete control over all variables impacting the neighborhood, it may be able to improve its impact by coordinating efforts with others that share similar goals.

The in-depth case studies that follow demonstrate three different ways PJs can use performance measurement. The first case study illustrates how a state initiates a performance measurement system to measure the performance of its recipients and subrecipients. The PJ's first attempt at using performance measurement is focused on determining whether the state's housing partners are meeting production goals. The state will use the data it collects to strengthen program decisions and evaluate its partners.

The second case study describes a city in crisis—the city's CHDO partners are not developing the rental units they have been approved to develop in a timely manner, and the city is at risk of losing its funding. In this case, the city uses performance measurement methods to identify information that it needs to be collected on an ongoing basis to avoid similar problems in the future.

The last case study illustrates how performance measurement can be used to keep a PJ's program on track. In this case, the PJ has been using performance measurement to evaluate its progress in revitalizing three city neighborhoods. The performance data suggest that the city is not achieving its desired impact. The PJ uses this information as the basis for additional evaluation and problem-solving that leads to improvements in its operations.

Together, these case studies illustrate the diversity and flexibility of performance measurement and the benefits that can be achieved when measurement activities are incorporated into program operations.

Case Study 1

Initiating a Performance Measurement System at the State Level

This case study demonstrates how one state agency implements a performance measurement system in its special needs housing program. The state requires that recipients and subrecipients use the state's program objectives and milestones as the basis of regular reporting so that it can track the progress of its partners. As this basic performance is measured, the state decides to collect additional data to help it assess its efficiency and effectiveness in program delivery.

Background

Marshall Goodman, Executive Director of the State Department of Housing, decides to implement performance measurement as a tool for managing the state's limited housing resources. He chooses to focus on state recipients and subrecipients who participate in the state's special needs housing programs before instituting these changes agency-wide. He targets the special needs housing division because this division has been very successful at building coalitions and collaborating with its housing partners, and it has done an exemplary job with strategic planning. Mr. Goodman believes these attributes are good indicators that this division might be successful in implementing performance measurement.

Building Staff Support

Mr. Goodman convenes a working group of staff in the special needs housing division and its partners to plan for these changes. To initiate the performance measurement program, Mr. Goodman asks the team to identify the program's quantifiable objectives, and then to outline the milestones that must be accomplished in order for each objective to be met.

He knows that the state's new system of measuring performance will require a different mindset among his own staff and community development partners. To begin the process, he disseminates information that describes how other states have used and benefited from performance measurement. He also shares information on how using performance measurement might affect local housing programs. In his educational efforts, Mr. Goodman stresses

that the ultimate goal of performance measurement is to improve the efficiency and effectiveness of local programs for the benefit of the client—not to punish recipients. To allay any concerns stakeholders may have, he promises that in the first three years, results will not be used to penalize any partner, but rather to better target technical assistance and improve capacity-building efforts. Finally, Mr. Goodman assures the state's housing partners that the state will establish a feedback system so the partners can provide feedback on how the system is working. The state is committed to being flexible and open to modifications as the program is carried out.

The staff voices many concerns about the difficulties involved in measuring performance in an area as complex as special needs housing. They balk at establishing timelines for the objectives, arguing that barriers related to NIMBYism, layering multiple sources of financing, and coordinating with social service providers can all impact timeliness. Many staff members express fear that if recipients are not able to meet the state's objectives in a timely manner, it might be interpreted as a reflection on their ability to monitor and manage the projects.

In spite of the resistance, Mr. Goodman is steadfast in pursuit of developing a more standard process for measuring the progress of the agency, and in particular, its recipients and subrecipients. Nonetheless, he listens to and acknowledges staff concerns and reassures them that the state will continue to collaborate with its partners in order to improve performance. He is particularly aware of the difficulties involved in measuring certain types of qualitative information, so he solicits staff input to identify ways to capture the qualitative information that might affect performance.

Identifying Objectives and Milestones for Measurement

The state's special needs housing program has a relatively simple design. The state uses its HOME funds to develop housing that will be used to serve persons with special needs. The state makes funds available through a Request for Proposals that is issued twice per year. Recipients can use funds for acquisition or development of a variety of types of housing, including single-family homes, apartments for independent living, single room occupancy (SRO) housing, or group homes. To be eligible for HOME funds, applicants must have a viable business plan that demonstrates how they will cover operating costs for the units (since most residents will be able to pay little or no rent). Applicants must also demonstrate that they have a supportive services plan in place that is appropriate to the target population.

The performance measurement team decides that, for expediency, it will establish initial program objectives by evaluating the state's Consolidated Plan as well as the gaps analysis from the state Continuum of Care application. Based on its analysis, the team establishes the following state objectives:

- Create 200 units of permanent supportive housing for persons with special needs;
- Maintain ongoing housing stability by providing/coordinating case management and supportive services for all clients that require them.

In order for the state to meet its objectives, there are a number of milestones that the recipients must meet. The state decides that it must establish some general milestones for data collection and analysis purposes, even though not all local program designs will fit within the milestones perfectly. It outlines the following milestones:

- *Objective 1: Create 200 units of permanent supportive housing for persons with special needs.*
  - — Milestone #1: Conduct site-related pre-development activities.
    - Conduct environmental review.
    - Identify site(s) and secure site control.
    - Approve architectural plans, if needed.
  - — Milestone #2: Conduct project-related pre-development activities.
    - Secure social services funding.
    - Secure development funding.
    - Secure operating funds.

Defining Milestones

Recognizing that each local program is designed differently, the state staff decides to identify and track a core set of milestones that is common to all programs (e.g., pre-development, construction, occupancy). It identifies the activities under each milestone that must be complete before the stage is considered complete. Although different program designs might allow for some steps to be carried out concurrently, this type of reporting system allows for some flexibility in how each recipient defines each stage. By aggregating the level at which its partners are to report, the state also minimizes the reporting

What will performance data tell the state?
The state expects that the data it collects about the status of its projects in the pipeline will:

- Help it understand the housing needs of its special needs residents and the development needs of its special needs housing providers. This information will be used to improve planning and program implementation in the future;
- Compare the performance of its various providers; and
- Highlight areas where providers are having difficulties, and thereby identify issues that might require technical assistance.

- Finalize and approve underwriting.
- Conduct program compliance review.
- Conduct loan closing.
- Select property management firm, if needed.
- Select supportive services provider, if needed.

— Milestone #3: Complete construction.

- Issue order to proceed and start construction.
- Develop and adopt operating policies and procedures.
- Complete 50 percent of the construction.
- Complete 100 percent of the construction.

— Milestone #4: Establish occupancy.

- Identify and recruit applicants from existing waiting list(s) and through referrals from human services organizations, shelters, the criminal justice system, hospitals, and street outreach programs.
- Review applicant file or letter of referral and determine applicant status.
- Screen and interview applicant.
- Determine eligibility of applicant.
- Eligible special needs occupant moves into unit(s).

• *Objective 2: Maintain ongoing housing stability by providing and/or coordinating case management and supportive services for all clients that require them.*

— Milestone #1: Conduct client needs assessment and develop supportive services plan.

— Milestone #2: Secure necessary services (through direct provision or by referral).

— Milestone #3: On quarterly basis, confirm continued occupancy, evaluate delivery of services, reassess client needs, and update supportive services plan.

Involving Partners

With the performance objectives in hand, the Executive Director and state staff meet with the state's housing partners (that is, its recipients and subrecipients). At these meetings, the state staff explains the importance of performance measurement and describes the process the state is using to implement the change. The state solicits feedback from its partners, listens carefully to their concerns, and tries to respond openly to allay any fears that arise. The state's partners express fear that there is considerable time and effort involved in reaching each of the milestones, and that measuring only the achievement of the milestone is not reflective of the amount of effort exerted. The state encourages its partners to create "sub-milestones" for their own internal use as a way to track progress toward the state-established milestones. The state staff makes clear, however, that the state's objective is not to impose additional administrative burden on them, but rather to develop units and serve clients more effectively.

Once several group meetings have been held, state staff members convene meetings with each recipient or subrecipient individually, to discuss the specific expectations of each housing partner. In these one-on-one meetings, the PJ and the housing partner discuss the partner's program design and negotiate the specific activities that will be undertaken by the housing partner that are included under each milestone. The meetings are also used to establish quantitative goals to be met by the partner, timelines for completing each milestone, reporting requirements, and language for the written agreement or contract between the two parties.

Following the series of meetings, the state staff finalizes a standard reporting form for recipients and subrecipients to facilitate data collection on each of the identified milestones and objectives. It anticipates requesting quarterly reports from its recipients and subrecipients to assess progress towards the objectives. Information Systems staff is engaged to expand the division's existing database to capture this new information.

Implementing the Process

The state's final reporting form captures data from each recipient and subrecipient about when each milestone is reached. Measuring progress regarding the development objective is relatively straightforward, and the state is able to aggregate the data for all reporting recipients and subrecipients. It plans to generate the following information each year:

- **The number and percentage of all developments that have reached each milestone.** This core information will indicate the state's progress toward its overall goal of creating 200 units of housing.
- **The average time between each of the following stages:**

  — Project selection;

  — Loan closing;

  — Construction start;

  — Construction completion; and

  — Move-in.

  The timeliness data is important because it helps the recipient, subrecipient, and the state identify possible problems in the project pipeline. With this information, the state can assess if a particular partner might need additional technical assistance or support. Chronic difficulties by many housing partners might suggest systemic problems that the state can address on a wide-scale basis.
- **Actual annual operating expenses versus amount leveraged for operating expenses.** Tracking annual operating expenses versus leveraged funds helps the state identify long-term sustainability problems early on. Over the long term, it will also help the state identify which types of projects are the most sustainable, and which recipients and subrecipients are most successful at leveraging funds.

The data that is needed to assess the state's progress towards its goal of providing social services to its residents is more qualitative in nature and, therefore, more difficult to standardize and capture. Nonetheless, the state will collect information in the following areas:

- **Number and percentage of applicants referred, approved, and rejected, and the reasons for rejections.** This will reveal the extent of the state's progress toward its goal, and will identify whether any particular special needs groups are left unserved.
- **The type of special needs addressed, tallied for each disability code, as a percentage of the total.** This information will allow the state to continue its ongoing assessment of the needs in the state, including the populations who are served and the remaining gaps in the system.
- **The type and intensity of social services being provided to clients, tallied by service type and the average number of hours per client.** This information, particularly when evaluated in relation to data on the average length of residency and reasons for leaving will help the state assess what types of housing are most cost effective, as well as what level of service(s) may be needed to help clients attain self-sufficiency.
- **Average length of residency and reason(s) for leaving.** This data will help the state determine whether it is meeting its goal of providing long-term, viable housing solutions to persons with special needs. Tracking reasons for leaving the program is particularly important as it helps the state understand what is happening to participants when they exit the program (such as, are clients cycling back into homelessness or are they become self-sufficient?).

To facilitate data collection, the state's reporting form provides a list of common reasons for rejection, disability types, types of services, sources of income, and reasons for leaving. Each list is coded to facilitate the data collection process. In addition, the state has clearly defined each term, to ensure that all recipients are using the same definitions. The state is careful to coordinate with Homeless Management Information System (HMIS) efforts in the state to prevent any duplication of effort and to ensure terms are defined consistently across programs.

Benchmarks

In the first year, the state plans to focus on working with its partners to gain acceptance of the new system and measure progress toward the goals. Mr. Goodman expects that after the first year, the state will have a fairly accurate baseline of its performance and the performance of its partners. He plans to seek additional data from neighboring jurisdictions and national housing advocacy groups to learn about typical performance in the special needs housing field in order to compare the state's performance to others in the field. This information will help the state formulate benchmarks against which it can evaluate its progress in coming years.

Case Study 2

Applying Performance Measurement to City's Rental Housing Program

In this case study, performance measurement is used to identify and solve a rental housing production crisis. The performance measurement team is able to identify improvements that can be made immediately to address the crisis. It also develops strategies for data collection and analysis that can be used in the future to identify potential problems before they occur.

Background

Grayson City is a large urban city. Under its rental housing production program, $1 million dollars is set aside each year for use by Community Housing Development Organizations (CHDOs). The program caps its subsidy at $10,000 per unit; development costs in the program average $40,000 per unit. Several organizations have been certified as CHDOs, but only one, the Bellefield CHDO, has actually been able to produce units. Other CHDOs have been approved for proposed projects, but the projects have not moved forward for a variety of reasons. The City is facing the possible recapture of CHDO set-aside funds in the coming year due to a failure to formally reserve and commit funds within two years and expend the funds within five years.

Analyzing the Problem

Based on information provided from his staff, Grayson City Housing Director Tom Osbourne has a general sense that only one local CHDO is having success producing rental housing units. Although he has not been very diligent about reviewing IDIS reports on a regular basis, he knows they provide a high level understanding of what is going on within the jurisdiction. As he suspects, a quick review of the IDIS reports PR27 and PR22 reveals that only one CHDO has produced units. His analysis of the reports confirms that the City is at risk of losing its CHDO funds.

Tom had observed that his staff spends considerable time meeting with and conducting technical assistance visits to local CHDOs. The CHDO production levels were frustrating given the investment of staff time in assisting them. Tom writes two problem statements to get him started on defining the problem:

- The City's CHDOs, except for Bellefield, are not moving forward with projects in a timely way to use funds within HUD deadlines.
- The City risks losing funds.

It is clear by the nature of the problem that something is going wrong between the time the CHDO applies for funds and prior to construction start. To help him think about issues more systematically, Tom convenes a meeting of program staff to identify the key program milestones of that stage of the production process. After much discussion, the team develops the following list:

1. So licit applications
2. R eview applications
3. Select projects to fund
4. Not ify developer

5. Work with developer to meet "construction start" criteria:
   — Site control
   — Development team identified
   — Environmental review
   — Market study
   — Non-discrimination and affirmative marketing plan
   — Financial underwriting
   — Program compliance review
   — Approval of preliminary plans
6. Solicit approval of Loan Committee
7. Go to loan closing

In the process of articulating the milestones, Tom finds that staff is somewhat confused by the City's own process and requirements. He also learns that some steps in the review process are conducted sequentially rather than simultaneously. In addition, Tom becomes aware of some tension between project management staff and other staff who are responsible for reviewing certain aspects of the project (such as the environmental review and preliminary plans).

Identifying Possible Causes of Problems

After outlining the production process, Tom asks his staff to help him brainstorm a list of possible causes. They organize their list into the following three categories:

Effective Brainstorming

Remember, when brainstorming possible causes of problems, *all* ideas should be included—even those that seem somewhat off-base or repetitive. When team members are not censored, they are more likely to open up and share their ideas and opinions. After all, accurate diagnosis of the problem is essential to effective problem solving!

Program Design

- CHDOs need working capital to get through the pre-development stage.
- The City's subsidy is not sufficient.
- CHDOs need operating funds.
- CHDOs need more or different technical assistance.
- There are insufficient incentives or penalties provided for performance (or lack thereof).
- The City has not done an analysis of need for affordable housing in the neighborhoods served by the CHDOs.
- Program standards for projects need to be revised, and additional guidance about acceptable projects must be provided.
- CHDO capacity for rental production must be developed. At the same time, the City must identify projects that are ready-to-go to prevent loss of funds.

Personnel

- CHDO personnel are not sufficiently experienced in housing development.
- City program staff is not sufficiently trained to provide technical assistance to CHDOs.
- City staff does not fully grasp the CHDO's stumbling blocks and, therefore, are not able to using training time effectively.
- CHDO staff is not motivated and are not capable of carrying out development activities.

Process

- Review process for selection of CHDO projects and/or CHDO partners is not adequate.
- City requirements for funding are too stringent.
- City staff does not attend CHDO Board meetings and are not aware of the CHDO's obstacles.

- The City review process is cumbersome, and deals die while waiting for City commitment.
- The City's application requirements and process are poorly defined, and CHDOs submit insufficient documentation with funding applications. As a result, City and CHDO staff spend too much time trying to develop a complete application package.
- The City does not establish deadlines for CHDOs, nor does it emphasize the importance of timeliness and outcomes. As a result, CHDOs are focused on, and getting bogged down in, process issues rather than production.

The team discovers that many of the potential causes they identified are highly interrelated. After further discussion, the team identifies the following two issues as the most significant and most likely to impact CHDO progress:

- **Insufficient funds.** Some CHDOs had complained of insufficient funds to work through the predevelopment phase. The staff thinks that these concerns might be valid—that is, lack of funds might be preventing some groups from moving forward.
- **Ill-defined application process and submission of incomplete applications.** Tom recognizes that the City staff had difficulty articulating the application requirements and process when mapping out the workflow. He shares his observations with his staff, and they agree that the City could improve not only its procedures, but also the way it informs its CHDO partners about the procedures.

Collecting Data and Further Analyzing the Problem

City staff examine each of the potential problems more closely:

Potential Cause #1: Insufficient Cash Flow/Funds

Exploring the cash flow issue is a high priority for Tom because he believes that if the projects are insufficiently funded, the City can address the current crisis by providing additional funds to the projects. As a matter of policy, however, he does not want to create the impression that the City will "bail out" groups that are not able to leverage private assistance for their projects. Further, there is strong political pressure to leverage private funds for HOME projects—a policy he himself has encouraged. Therefore, if changes are needed, even temporarily, the changes need to be based on a sound rationale and accurate data.

Given the City's $10,000 per unit cap on assistance, a CHDO needs to leverage, on average, $30,000 per unit for its projects, for a leverage of 3:1. The City staff recalls that the cap had originally been instituted in the program to ensure that there was private backing of the City's projects. However, the $10,000 limit was established somewhat arbitrarily. As a result, the City staff felt that it needed to assess whether the leverage requirement is reasonable. Further, the City wants to determine whether CHDOs have sufficient working capital to cover pre-development costs, such as site acquisition, environmental review, preliminary plans, and underwriting. To help with its assessment of these issues, City staff identifies the following information and sources of information to review:

- A current statement of project commitments from all funding sources to assess the financial status of the approved projects (from CHDO operational and project records);
- The identified funding sources for predevelopment activities (from the CHDOs' project development budgets);
- Recent monthly financial statements (from each CHDO);
- Amount and type of non-HOME funding sources for the Bellefield CHDO project (from its project records); and
- Average percentage of private funds leveraged for projects in neighboring jurisdictions (from a telephone survey of those jurisdictions).

The City develops a form on which to capture the data it collects. For each of the CHDO projects, it wants to compare:

- Total project funding sources to secured project funding sources;
- Desired leverage ratio (3:1) to actual leverage ratio;

- Anticipated predevelopment costs to total funds available for predevelopment activities (either project commitments or other unrestricted organizational funds).

The City runs into many problems when it tries to conduct its analysis. First, the CHDOs do not use a standard development budget format, so it is extremely difficult for City staff to compare costs and projected funding sources with any accuracy. For some projects, the City does not even have a complete development budget! The City staff realizes that it has been making project commitments to CHDOs far too early in the process—well before the CHDOs are financially ready to work on the projects. Working through this issue brings to light the significance of the second issue the team has identified—an ill-defined application process and project selection criteria.

The staff evaluates the information it collects to the extent possible. It finds that the projects, on average, have secured only 75 percent of the necessary development funds needed to carry out the development projects. This is consistent with its finding that neighboring jurisdictions require a more modest 2:1 leveraging commitment than the City of Grayson's 3:1. Further, the staff finds that the City's one successful CHDO, Bellefield, secured its development funding by capitalizing on an unusually good relationship with a small, private foundation.

Staff also learns that most CHDOs have sufficient predevelopment financing. However, some of the newer organizations were struggling financially.

As a result of the information it has collected and analyzed, the staff recommends several policy changes:

1. Increase the cap on assistance from $10,000 to $20,000. This recommendation will enable most of the CHDOs to move forward immediately with their projects.
2. Begin tracking the leverage ratio for projects that go to loan closing. This information will help the City monitor its success at leveraging private funds for its projects.
3. Make HOME funds available to newer CHDOs in the form of predevelopment loans and operating funds to help them finance the predevelopment phase.
4. Develop a standard and consistent project application package with standard forms and underwriting criteria for CHDOs.
5. Develop and implement standard project selection criteria.
6. Develop a performance-based project monitoring system for CHDO projects to prevent the crisis from recurring in the future.

Potential Cause #2: Ill-defined Application Process and Submission of Incomplete Applications

After working through the first issue, it is clear that the City's production problem could have been minimized or avoided if it had standard application forms and a standard application process, and if it conducted a more stringent review of CHDOs prior to selecting and approving projects. Tom asks his staff to undertake a structured review of the CHDOs' applications from the last funding cycle. Specifically, staff looks at:

- The CHDO application package and required elements of funding;
- The submitted proposals; and
- The CHDO selection criteria the City used to select CHDO projects.

Upon review, the staff finds that the City's CHDO application process focused on determining CHDO eligibility instead of project feasibility. As a result, the submitted proposals provide only cursory information about the proposed project(s). Interestingly, the City has a far more stringent selection process for its private developers. Early on in the HOME Program, however, the City had so few qualified CHDOs it relaxed its standards to encourage participation. As CHDOs organized and developed capacity, the City had not modified its selection process accordingly.

Not everything needs to be measured!
While working through its CHDO production problem, the City staff are identifying a combination of (1) information they can analyze in the short term to have a better sense of the problems and possible solutions; and (2) information they should track over time to monitor progress and avoid the problem in the future.
At this stage, it will be tempting to want to track many things over time, but it is important to be judicious in deciding what really needs to be monitored, and what simply needs to be measured once and analyzed while solving a particular problem.

The staff also identified a number of specific problems:

- Critical HOME program requirements that impact project costs, such as HOME rent structures, long-term affordability requirements, Davis-Bacon requirements, and accessibility requirements, are not articulated in the application package and, therefore, not properly accounted for in the proposed budgets. Without identifying these items, the proposed development budgets were inaccurate.
- The City did not require CHDOs to provide evidence of development capacity nor rental management capacity in their applications for funding. Therefore, neither factor had ever been evaluated by the City.
- The City stated no preference for, nor did it ask for information about, projects that had secured other funding. As a result, City funds were often the first to be committed to projects.

It is clear that the City needs to re-define its application process. As a first step, the team compiles a list of required items for future applications:

- Evidence of site control;
- Sources of other funds, level of commitment from other funders, and amounts committed or projected;
- Capacity and experience of development team;
- Capacity and experience of rental management entity;
- Community support and/or involvement;
- Development budget (in standard format), based on HOME rents and City cost control guidelines, and in compliance with per unit subsidy limits;
- Fifteen-year operating pro forma (in standard format);
- Plan to meet economic opportunity requirements;
- Description of project significance and of market analysis;
- Preliminary plans, if available; and
- Project timetable.

Managing Change

When implementing change that is not universally popular, it is especially important to involve key stakeholders, including community and elected leadership. Using the data collected during the measurement process can help educate and persuade stakeholders of the need for improvements. In the City of Grayson, Tom Osbourne suspected that several CHDOs would have a difficult time meeting the new standards, and as a result, they might pressure the City to abandon its efforts. Tom Osbourne prepared special reports highlighting the loss of time, and potential loss of funds, that resulted from the lack of monitoring in the prior year and shared this information with key stakeholders. This information was critical in persuading and securing

In addition to evaluating each CHDO's capacity at the *outset* of a project, the City also recognizes the need for a system to monitor each CHDO's progress *throughout* the development process, particularly during the pre-development phase. Under its existing process, the City lacks a mechanism for identifying when and where in the process CHDOs encounter problems, and what type of technical assistance might be needed.

With its workflow analysis, the staff re-defines the milestones for each phase of the production process. At this stage, staff also establishes a set of preliminary benchmarks for how long it *thinks* each stage of the process should take. It will use these estimates to measure CHDO progress in the first year. The City plans to measure the average completion time for each step in the process, and in the future, it will use those actual averages as benchmarks against which to measure CHDO performance. The City recognizes that countless factors can impact timeliness, such as seasonal variations, subcontractor availability, and availability of supplies. However, it also has learned the hard way that without a mutually-agreed upon schedule, no progress will be made.

Prior to implementing these changes, the City convenes a number of meetings with its CHDOs to explain its plans, discuss the specific benchmarks it will use, and solicit feedback and concerns. Initially, these meetings are convened with open attendance for all CHDOs in order to get the broadest perspective on its performance measurement system. It refines its performance criteria as a result of this process, and incorporates the criteria in its next Request for Proposals. As part of the criteria, the City establishes a six-month deadline for all projects selected under the solicitation to be approved for loan closing.

Once the City selects proposals, it meets with funded CHDOs individually to negotiate specific performance measures and deadlines based on the current status of each project and the CHDO's own proposed timelines. The agreed-upon benchmarks provide staff and CHDOs with a clear understanding of expectations. Moving forward, the benchmarks provide an objective basis on which to monitor CHDO progress.

Conclusion

Most performance problems are the result of many, often interrelated causes and solving these problems and working to improve performance is an ongoing process. One of the most difficult steps is identifying the cause(s) of a problem when there is no or little information about it. By beginning with whatever reasonable data is available to solve the problem, a data collection strategy can be developed. As additional information is collected and analyzed, the hypotheses about the cause of the problem can be re-evaluated and revised. This process typically leads to the identification and resolution of the related problems, as it did in Grayson City.

Case Study 3

Applying Performance Measurement to City Neighborhood Revitalization Program

In this case study, the City of Honeyvale has been using performance measurement to track and measure the program impact, or outcomes, of the city's neighborhood revitalization program. The outcome indicators being used by the City of Honeyvale indicate that the City is not meeting its overall program objectives. It uses this information to energize a team of community members and staff to analyze the problem, uncover why there has been little impact, and make changes to improve the program's impact in the future. The City draws on a combination of the performance measurement tools and techniques discussed in Chapters 2 and 3.

Background

The City of Honeyvale is spending its HOME funds in a timely manner, completing many projects across a range of homeownership and rental activities. The current goal of its program is the stabilization and revitalization of three target neighborhoods. Each year, as the City prepares its Consolidated Plan, it evaluates the impact of its neighborhood revitalization program by measuring three outcome indicators:

1. Change in property values in terms of average market rents and average property sales prices, as measured by the City's assessment division;
2. Rate of abandoned properties, as measured by City staff windshield surveys; and
3. Level of private development activity, as measured by the number of building permits issued for non-public development.

The City of Honeyvale has been conducting performance measurement for the past four years. For the fourth consecutive year, it has found no significant change in any of the indicators. In addition, neither the staff nor key community leaders perceive the expenditures to be making an impact in terms of neighborhood stability or appearance in the City's target neighborhoods.

Staff and residents have expressed concern that City-funded rehabilitation jobs have deteriorated quickly, and that city-assisted new housing has not changed the nature or overall appearance of the neighborhoods in which it is located. In some cases, the new housing has also deteriorated quickly.

Since the City of Honeyvale has been conducting performance measurement for four years, it knows the following facts:

- It has invested $18 million in the last four years in three different neighborhoods.
- Approximately 25 percent of its funds were invested in vacant property rehabilitation for new homebuyers, 50 percent in a homeowner rehabilitation program, and the remaining 25 percent in small rental property rehabilitation.
- There is no observable or measurable impact in the neighborhood.

The Executive Director of the Honeyvale Housing Development Agency, Daisy Settles, recognizes that change can be slow. Nonetheless, by the fourth year of the program, she had expected to see some indication that the City's

efforts were having an impact on the community. She meets with the mayor to discuss the agency's findings, and the mayor reconfirms her commitment to "do what it takes" to turn the target neighborhoods around.

Discouraged, but not defeated, Daisy convenes several meetings with a team of staff and community representatives to discuss the agency's findings and explore what to do about them. After considerable discussion, the team concludes that the lack of changes in the outcome indicators is discouraging. However, the team recognizes that these indicators are influenced by many factors over which they have little or no control. The team is very concerned, however, about two factors that the housing agency does have control over and it believes that if it addresses these issues it might improve their effectiveness in revitalizing the neighborhood:

1. There is the perception that City-funded jobs often result in quickly deteriorating repairs; and
2. City investments, including new housing, do not seem to make an observable impact in the community.

In response to these issues, City staff generates a list of possible reasons for the lack of sustained, visible impacts resulting from the City investments:

Interagency Collaboration

The team is convinced that the property values, vacancy rates, and level of private investment are all impacted heavily by the perceived crime problems, high unemployment, and insufficient supportive services in the neighborhoods. As the team proceeds with improving its own program, Daisy Settles meets with the mayor to recommend an interagency team to coordinate City services and improve comprehensive revitalization efforts in these neighborhoods.

Program Design

- The City's rehabilitation standard may not emphasize exterior repairs, which could minimize the impact of rehabilitation work on the appearance, or curb appeal, of assisted properties.
- The property exteriors may require additional work to ensure the durability of other repairs.
- A higher level of subsidy might be needed for projects to promote durability and visual impact.
- The City's current strategy for targeting rehabilitation activities may not be effective—the neighborhoods may be too dispersed, or there may be too many target neighborhoods.
- The target neighborhoods may be too deteriorated for the City's rehabilitation program to impact.
- The areas' homeowners may not invest in their own properties and may not maintain them well.
- The housing market may have changed since the program was initially conceived, and there may be a need for a different "mix" of investments in terms of homeowner, vacant property, and rental property rehabilitation.

Personnel

- Contractors may be performing substandard work or using cheap materials, and inspectors may not be performing adequate and frequent enough inspections to monitor and identify problems.
- Staff may not be generating adequate work write-ups and plans (upon which contractor work is based).
- Housing counselors that support the program may not be educating new homeowners about ways to maintain improvements to their homes effectively.

Process

- Project selection may not be strategic (in other words, properties that would have the most visual impact may not be identified and selected).
- Projects may be selected for rehabilitation without adequate review and underwriting to promote long-term viability. (Note: This might also be a personnel problem.)
- The City has not implemented a system for final quality control inspections and related follow up.
- The City's community and economic development programs may not be coordinated and may not target the same neighborhoods. This lack of coordination might reduce impact.
- The City's code enforcement efforts may not be carried out in a way that supports the investments in the target neighborhoods.

In generating the list of possible causes, the staff realizes that a number of the issues are inextricably inter-related. It decides to evaluate two priority questions:

1. Whether the work to the exterior of the properties is having an improved visual impact on the neighborhood; and
2. Whether the HOME-funded development work is durable, and therefore able to have a lasting impact in the neighborhood.

Measuring Visual Impact

City staff decides that the first thing to look at is the visual impact of its development jobs because it has the biggest impact on the appearance of the neighborhood. It plans to determine the extent of exterior repairs that were completed, as well as those that are still needed, in order to evaluate whether its development had a positive visual impact in the neighborhood. It wants to evaluate this data systematically to determine whether, moving forward, there are items that it should incorporate into its rehabilitation standard to ensure that rehabilitation jobs are done on a more consistent basis. It also wants to generate a new cost estimate for the completion of those repairs that are still needed so that it can improve the visual impact of the previously funded properties.

Staff knows that other cities sometimes hire consultants to help them conduct a formal study of past and planned rehabilitation jobs to determine the nature, extent, and cost of exterior repairs. It decides, however, to take a less expensive approach. Since survey work is time-consuming and staff resources are limited, the team develops three categories for the properties, based on strategic significance:

1. The most visible, thorough-fare blocks of its three target neighborhoods;
2. Secondary streets; and
3. Dead end roads and infrequently traveled streets.

The staff establishes survey teams to assess the visual attractiveness of each property in the first two tiers of the neighborhoods; it determines it is not practical to include the third tier. A staff member develops a simple checklist to facilitate the survey work, in order to make sure survey teams are collecting consistent and comparable information, and to ease the subsequent data entry process.

The survey team conducts a visual assessment of every property on the targeted blocks. For properties that the City had developed, it also asks owners to assess the property. The surveyor lists all recommended improvements, regardless of his or her own opinion about feasibility or cost implications of the suggestions. For instance, the list includes inexpensive items such as cleanup, lawn reseeding, and fencing or enclosures (for example, to hide storage and trash), as well as more expensive items such as exterior siding, sidewalk repair, tree removal, or extensive landscaping. The surveyor also takes note of all existing vacant properties on each block.

Once the surveys are complete, the city recruits two local real estate agents and an appraiser who frequently works on City projects to team up with the inspection staff to analyze the results. After looking at the survey results, the team is able to make several recommendations:

1. Modify the city's rehabilitation standard to ensure that cost-effective exterior improvements are performed and addressed for all properties in the future. The modifications include specific improvements that are most likely to improve curb appeal and market value. The team further recommends differential treatments to properties, depending on property location. Implementing this recommendation will require an increase in the program subsidy to allow for this work.
2. Change the program design so that the City targets properties on the main thoroughfare for development as high priority, particularly the vacant properties. The survey team notes some City investments on properties where substantial vacancies remain. With a high level of vacancies on the block, the City's investment has nearly no visual impact. The team recommends that on secondary streets and infrequently traveled roads where more than 10 percent of the properties are vacant, the City should not fund any development unless several properties are treated, leaving no more than 10 percent of the properties vacant.
3. Use City funds to undertake specific exterior improvements for previously funded properties where such investments will provide substantial visual impact. If City funds are not available, the team recommends

that the City request a waiver from the HUD Field Office of the HOME Program requirement that HOME funds cannot be reinvested after one year from project completion. This would enable the City to use HOME funds.

4. Use CDBG funds to undertake a list of inexpensive treatments for non-funded properties that might have significant impact on the curb appeal of the block. The survey results revealed that a number of simple items, such as general clean-up and lawn re-seeding, could significantly improve the appearance of many blocks. This use of CDBG funds will support its HOME investments.

The City also decides that in its annual block surveys, it will begin tracking the number of vacant properties in the target neighborhoods. In addition, it will begin to conduct curb appeal inspections. It will maintain the resulting data in order to conduct an ongoing assessment of the improvements to visual impact of the neighborhoods.

Measuring Durability and Lasting Impact

The staff determines that it needs to have factual information about the lasting nature of its repairs. As a result, it decides to review agency files for all of the investments of the past three years to determine whether the repairs made in the program quickly deteriorated after the initial rehabilitation or development.

As a first step, the staff has to determine which units that received City development funding (rehabilitation or new construction) needed additional repairs within three years of completion of the initial development, including the type of repairs needed. It wants to evaluate several factors that might have had an impact on the repair records of those properties in order to analyze possible causes. Staff decides to collect data on the repair record of its properties and compare the data to other information it already tracks by project, including:

- Location of units, by block;
- Tenure type;
- For homeowner-occupied units, whether the owner had participated in the property maintenance course of the housing counseling program offered (but not required) by the PJ;
- Developer and general contractor; and
- Inspector who signed off on construction progress and final completion.

Without this information, City staff knows it would be difficult to gauge whether the City's work itself is deteriorating, or if this is a misperception because of other deterioration in the neighborhood. For the rental properties, program staff decides to use the agency's monitoring division files for data on maintenance of rental properties. This division has responsibility for carrying out the site visits that are required for HOME rental properties throughout the period of affordability. At the site visits, the city staff reviews repair information maintained by the rental management office. For homeownership housing, the agency decides to survey beneficiaries to determine what work the owners either have performed since the initial rehabilitation or currently need to perform.

Community members express concern that by only using its own agency files to survey the rental properties, the housing department might not have full information about the scope of the problem. They feel that some occupants might have made repairs without notifying the management, that management might not have made repairs that were requested, or that some tenants might not have complained in the first place. As a result, the City agrees to conduct a tenant survey to determine the extent to which other needed repairs are not noted in its site visits.

Involving Diverse Constituencies
Involving a variety of stakeholders in the data collection and analysis process is always a good idea because each group of stakeholders brings a different perspective to the process. Sometimes the diverse interests will require a skilled meeting facilitator, but when all stakeholders are included in the process in a meaningful way, the process will yield stronger, more reliable results.

A staff member develops a simple form to use for compiling repair information out of the agency files. In addition, he designs a short, easy-to-read survey for the beneficiaries to complete about the nature of repairs completed or needed in their homes. At the same time, the staff computer

programmer creates several new data fields for the development database so that the collected information could be entered into the system.

When the survey results were returned, the staff are surprised to note that there are many reports of problems from the tenants that were not uncovered in the agency's monitoring files. Many of these were problems that tenants had not reported.

Once the survey results are tallied and agency files reviewed, the new data is entered into the computer. The director generates a number of reports that reveal:

- Approximately 36 percent of all rental units that received development funding required major repairs within the first three years following funding.
- All but five percent of those units had been developed by the same contractor.
- Nearly all the problems were related to poorly installed windows or siding.
- There did not appear to be a correlation between the inspectors and the problem units, as all staff inspectors had inspected some of the units in question.
- Occupants of deteriorating units that were owner-occupied had typically not received homebuyer counseling. In contrast, few owners that had received homebuyer counseling had problems with deteriorating units.
- There did not appear to be any pattern related to the location of the units.

It appears that there is a problem with units deteriorating shortly after completion, and it appears that much of the problem can be attributed to the quality of work being performed by one contractor, and perhaps one subcontractor. Staff meets with the contractor and shares its findings. Armed with accurate information and reliable data, staff is in a good position to address the problem head-on. The contractor confirms that one subcontractor performs the window and siding work for him, and this subcontractor had performed the work on the deteriorating units. At the City's insistence, the contractor agrees not to use this subcontractor for any additional City work.

At the end of this process, staff is convinced that tracking this information over time would help the City monitor its progress to ensure that these types of problems did not recur. It makes several recommendations to the Director:

- Rental managers should be directed to complete undone repairs that were reported by the tenants, using reserves;
- Since there were many repairs needed that had simply gone unreported, tenants should receive information periodically reminding them that all repairs should be reported to rental managers; and
- Information about the agency's repair record should be added to the agency's development database and analyzed annually.

Lessons Learned

At this point in the process, the staff has a much better understanding of how reliable data and information can lead to improvements in its process. Several specific problems were identified:

- Inadequate work by a contractor;
- Insufficient investments in exterior work due to a minimalist rehabilitation standard; and
- Inadequate targeting of properties for development.

Although staff might have suspected any one, or all, of these problems, taking the time to collect data and measure the extent of the problems provides them with the information they need to make changes to program design and operations and track improvement efforts. As these improvements take hold, staff can re-direct resources to other types of improvement efforts.

Conclusion

An effective performance measurement system is comprised of two intertwined components: productivity and program outcomes. Performance measurement is important because it provides a structure for tracking key program data that can help determine (1) whether a housing program is successful; and (2) if a housing program is operating efficiently. This information can help managers make changes to improve program operations, thereby stretching HOME dollars further. In addition, measurement efforts provide a foundation on which to communicate program accomplishments, build support for programs, and build a motivated and effective team. Performance measurement is a cyclical process, not a one-time event. Most PJs track certain kinds of information, but systematic data collection and analysis can help a PJ prevent problems in the future by monitoring changes in production or program outcomes.

When there are any issues or concerns with production or effectiveness, PJs can undertake a process to identify the sources of that problem. This process includes the following steps:

- Identifying and defining the problem;
- Identifying needed data and data sources;
- Measuring and tracking data;
- Analyzing data and identifying areas for improvement;
- Implementing improvements; and
- Continuing measurement of progress.

The measurement process is similar for both productivity and program outcome measures, although the types of data, data sources, and data measurement tools typically vary for the two types of analysis. Productivity measurement is typically built into program operations so that data is collected as it is generated. In contrast, program outcome measurement is more likely to be conducted on a periodic basis, often annually, to inform the strategic planning process.

Appendix I:

National Housing and Community Development Data Sources

1. Census Data

The 2000 Census provides detailed information collected nationwide and can be manipulated to produce housing statistics. See the U.S. Census at www.census.gov.

2. Decennial Data

The U.S. Department of Housing and Urban Development (HUD) has requested that the U.S. Census Bureau tabulate Census 2000 data to create variables that are not available through standard Census products. These "special tabulation" data are needed to assist local government with housing planning as part of their Consolidated Planning process. The data may also be used in allocation formulas for distributing funds to local jurisdictions. See HUD User "Data Sets" at http://www.huduser.org/datasets/cp.html.

3. Census 2000 Supplementary Survey (C2SS)

The Census 2000 Supplementary Survey was a Decennial Census program designed to demonstrate the feasibility of collecting long form type information at the same time as, but separate from, the Decennial Census. It used the questionnaire and methods developed for the American Community Survey to collect demographic, social, economic, and housing data from a national sample of 700,000 households in 1,203 counties. Click on "Census 2000 Supplementary Survey" in the title bar on the right-hand side of the U.S. Census, American Community Survey site at http://www.census.gov/acs/www/index.html.

4. American Community Survey (ACS)

The American Community Survey, when fully implemented, will survey 3 million households a year, located in every county, American Indian and Native Alaskan area, and Hawaiian Homeland, as well as in Puerto Rico. These data will provide detailed characteristics about our nation updated every year, rather than only once every ten years. The American Community Survey will provide estimates of demographic, housing, social, and economic characteristics every year for all states, as well as for all cities, counties, metropolitan areas, and population groups of 65,000 people or more. See U.S. Census, American Community Survey at http://www.census.gov/acs/www/index.html.

5. American Housing Survey (AHS)

The American Housing Survey Metropolitan Samples gives data on apartments, single family homes, manufactured homes, vacancy rates, family composition, income, housing and neighborhood quality, housing costs, equipment, fuels, size of housing unit, and recent movers. National data are collected every other year, from a fixed sample of about 50,000 homes, plus new construction each year. Select metropolitan areas are surveyed every 4-6 years, to measure local conditions. See HUD User "Data Sets" at http://www.huduser.org/datasets/ahs.html.

6. A Picture of Subsidized Households

This report and the accompanying data file sketch a picture of nearly five million subsidized housing units across the United States. It includes: (1) Totals; (2) Indian Housing; (3) Public Housing; (4) Section 8 Certificates and Vouchers; (5) Section 8 Moderate Rehabilitation; (6) Section 8 New and Substantial Rehabilitation; (7) Section 236; (8) Other HUD subsidies; and (9) Low Income Housing Tax Credits (LIHTC). Data are available for the 50 states, the District of Columbia, Guam, Puerto Rico, the Virgin Islands, and the Northern Mariana Islands. New versions of the report are released periodically. See HUD User "Data Sets" at http://www.huduser.org/datasets/assthsg.html.

7. Fair Market Rents

HUD releases Fair Market Rents (FMRs) annually. FMRs are used to determine payment standard amounts for the several housing programs. FMRs are gross rent estimates that include both shelter rent paid by the tenant to the landlord and the cost of tenant-paid utilities, except telephone. They are used to determine the amount of federal subsidy for recipients of housing aid. FMRs are set for all areas and provide estimated 40th and 50th percentile rent levels. See HUD User "Data Sets" at http://www.huduser.org/datasets/fmr.html.

8. Income Limits

Income limits determine the eligibility of applicants for HUD's assisted housing programs. Income limits are calculated for metropolitan areas and non-metropolitan counties in the United States and its territories using the Fair Market Rent (FMR) area definitions used in the Section 8 program. They are based on HUD estimates of median family income, with adjustments for family size. Adjustments are also made for areas that have unusually high or low income to housing cost relationships. See HUD User "Data Sets" at http://www.huduser.org/datasets/il.html.

9. U.S. Housing Market Conditions

U.S. Housing Market Conditions, published quarterly, is a compilation of statistical data and written reports. Market conditions on the national level are presented for each quarter. Historical data are also presented in summary tables. Overviews of economic and housing market trends are presented for ten geographical regions, including a profile on a selected housing market. Each issue includes a summary of the overall trends in national housing and a topical piece that describes a particular, noteworthy aspect of housing activity. See HUD User "Periodicals" at http://www.huduser.org/periodicals/ushmc.html.

10. State of the Cities Database

The State of the Cities Database (SOCDS) provides data for individual Metropolitan Areas, Central Cities, and Suburbs. Detailed demographic, economic and housing data are available. Census data since 1970 is available, as well as a building permit database, employment statistics, and information on city and suburban government finances. See HUD User "State of the Cities Data Systems" at http://socds.huduser.org/index.html.

11. Geographic Information System (GIS)

The geographically coded data enables users to apply spatial analysis to a wide variety of housing and urban issues throughout the United States. There are geographic files with program data on American Housing Survey, Government Sponsored Enterprises and Home Mortgage Disclosure Act, Low-Income Housing Tax Credit, Picture of Subsidized Households, and State of the Cities. Additionally, there are boundary files for the Metropolitan Statistical Areas, central cities, and suburbs for the State of the Cities database. See HUD User "Data Sets" at http://www.huduser.org/datasets/gis.html.

12. Multifamily Tenant Characteristics System (MTCS)

Currently the public only has access to the Resident Characteristics Report of the MTCS. The Resident Characteristics Report summarizes general information about households who reside in Public Housing, Indian Housing, or who receive Section 8 assistance. The report provides aggregate demographic and income information that allows for an analysis of HA operations. See HUD's Office of Public and Indian Housing's "Resident's Characteristics Report" at http://www.hud.gov/offices/pih/systems/pic/50058/rcr/.

13. National Survey of America's Families

The National Survey of America's Families provides a comprehensive look at the well-being of children and non-elderly adults, and reveals sometimes striking differences among the 13 states studied in depth. The survey provides quantitative measures of child, adult and family well-being in America, with an emphasis on persons in low-income families. See The Urban Institute, "Assessing the New Federalism, National Survey of American Families" at http://www.urban.org/Content/Research/NewFederalism/NSAF/Overview/NSAFOverview.htm.

14. Home Mortgage Disclose Act (HMDA) Statistics

The Home Mortgage Disclosure Act (HMDA), enacted by Congress in 1975 and implemented by the Federal Reserve Board's Regulation C, requires lending institutions to report public loan data. The data include loan approval and denial rates by race, gender, income, and geographic location. See Federal Financial Institutions Examination Council "Home Mortgage Disclosure Act" at http://www.ffiec.gov/hmda/.

15. National Association of Home Builders, Economic and Housing Data

The NAHB collects data on construction starts, homes sales and prices, state and local data, forecasts and economic impacts, multifamily housing index, and other resources. See National Association of Home Builders "Economic and Housing Data" at http://www.nahb.org/category.aspx?sectionID=113.

16. National Association of Realtors Economic Research

The NAR offers national data on existing home sales, economic trends, state data on housing markets, and metropolitan statistical area research on housing starts, vacancy rates, home prices, and other useful statistics. See National Association of Realtors "Research" at http://www.realtor.org/Research.nsf/pages/EconHousingData?OpenDocument.

17. The Consolidated Plan

The Web site contains archived consolidated plan executive summaries from jurisdictions in all 50 states and the District of Columbia. Consolidated plans are issued by state and large cities every five years, with updates issued annually. The plans include data on housing needs as well as other economic information. See HUD's online library at http://www.hud.gov/library/bookshelf18/archivedsum.cfm.

18. HUD Multifamily Insured Mortgages

This database includes all HUD Multifamily insured mortgages except those from the Hospital Mortgage Insurance Program. The data includes the HUD project number, the project name and location, the number of units, information on endorsement, mortgage amount, payment, length and terms, mortgage holder, and mortgage servicer. The database is updated quarterly. See HUD's Office of Housing, "Insured Multifamily Mortgages Database" at http://www.hud.gov/offices/hsg/comp/rpts/mfh/mf_f47. cfm.

19. Low Income Housing Tax Credit Program

The LIHTC program has been recently amended to give States the equivalent of nearly $5 billion in annual budget authority to issue tax credits for the acquisition, rehabilitation, or new construction of rental housing targeted to lower-income households. The database, created by HUD and now available to the public, contains information on nearly 19,700 projects and more than 935,000 housing units placed in service between 1987 and 2000. See HUD User "Data Sets" at http://www.huduser.org/datasets/lihtc.html.

20. Section 8 Expiring Contracts Database

This database provides a method to measure the potential impact of expiring project-based subsidy contracts in communities. It represents the most comprehensive picture of project-based subsidies. See HUD's Office of Housing "Section 8 Contracts" at http://www.hud.gov/offices/hsg/mfh/mfhsec8.cfm.

21. GovStats

GovStats (formerly the Government Information Sharing Project) is an interactive website providing access to statistical data from the U.S. government. Its mission is to provide easy access to useful government data not available elsewhere on the Internet. It provides information on US Counties, Import/Export, the 1997 Census of Agriculture, the 1992 Economic Census, and other databases. See Oregon State University Libraries "GovStats" at http://govinfo.kerr.orst.edu/.

22. Bureau of Labor Statistics

The BLS is part of the U.S. Department of Labor and provides data on economic, labor and employment statistics. See U.S. Department of Labor, Bureau of Labor Statistics at www.bls.gov.

23. State Data Centers

Each state has Data Centers that are a source for census information and socioeconomic projections. This site is from the Maryland State Data Center. Data Centers from other states can be found by performing an internet search. See Maryland Department of Planning, Maryland State Data Center at http://www.op.state.md.us/MSDC/.

24. Enterprise Foundation Resource Center

This Enterprise Foundation site offers a database on model documents, how-to guides, program descriptions and templates for implementing community development programs. Also available is the Housing Developer Support System, Enterprise MoneyNet, Community Safety Virtual Campus, Community Forum and Job Board, Policy Information and Guides, software, publications and products, and several other resources. See Enterprise Foundation "Resources" at http://enterprisefoundation.org/resources/index.asp.

25. National Neighborhood Indicators Partnership

The National Neighborhood Indicators Partnership (NNIP) is a collaborative effort by the Urban Institute and local partners to further the development and use of neighborhood information systems in local policymaking and community building. NNIP partners have built advanced information systems with integrated and recurrently updated information on neighborhood conditions in their cities. The goal of NNIP is to democratize information, and participants concentrate on facilitating the direct practical use of data by city and community leaders. See The Urban Institute, National Neighborhood Indicators Partnership at http://www.urban.org/nnip/.