Current State, Promising Practices, Needs
Assessment, Next Steps

Code Enforcement
Data Report
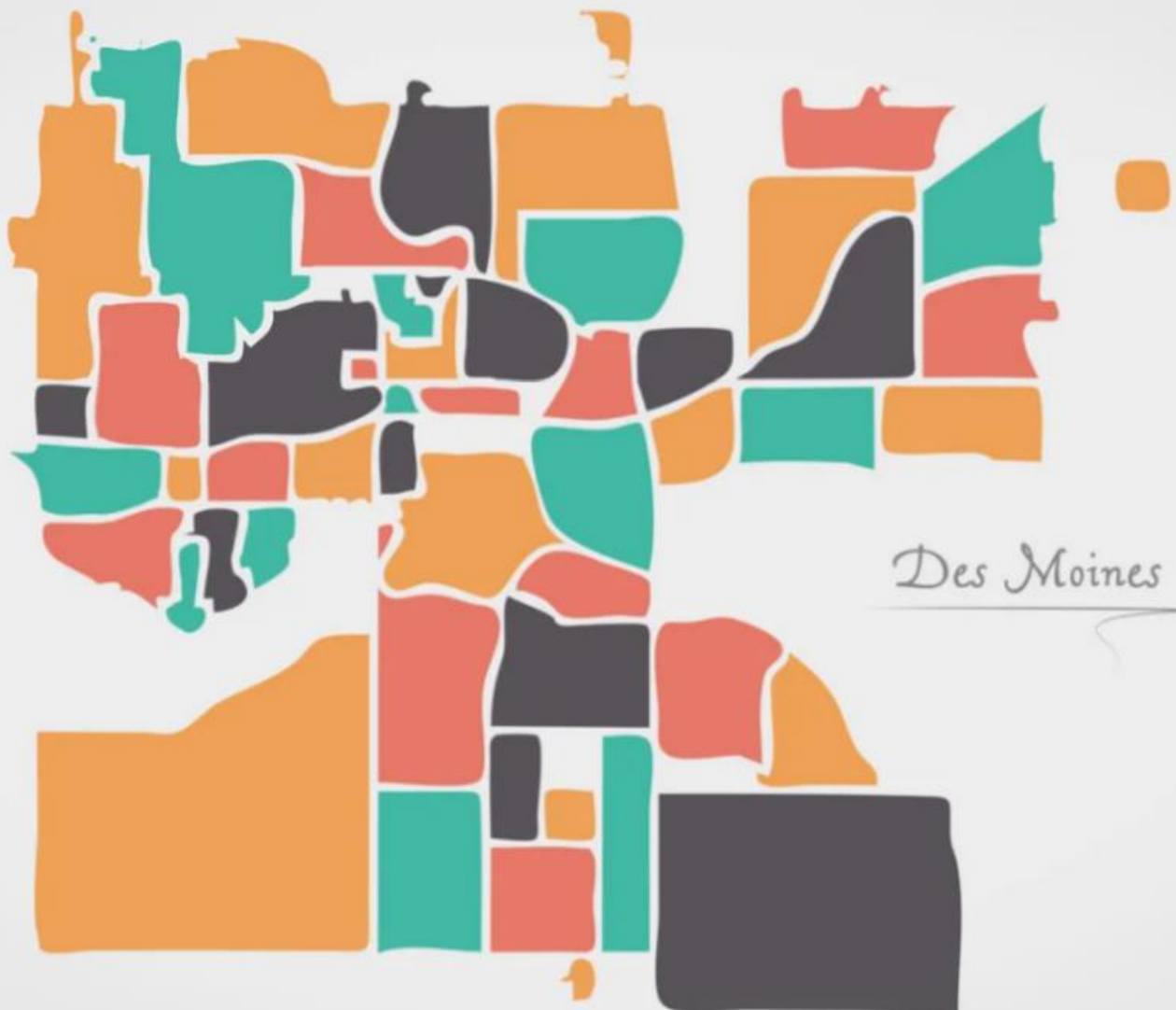

Des Moines

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Introduction

"In God we trust. All others must bring data."[1]

A major goal of collecting, analyzing and sharing data is to *act* upon what is learned from it. Reliable, timely, accurate and valid data can answer probing and hypothetical questions, enlighten dialogue, guide decision-making, inform problem-solving, correct misconceptions, and provide the foundation for advancing towards and measuring progress. This is the power and promise of trustworthy data.

In its quest to better understand how code enforcement data is being collected, analyzed, shared and acted upon, the City of Des Moines commissioned the consulting firm of Public Works LLC to perform five basic functions:

1. Identify the current state as to how and what data is being collected by and within Des Moines code-enforcing agencies with a focus on Neighborhood Services and how that data is applied to inform the practice and policies of code enforcement.
2. Identify promising (best) practices in the field of code enforcement data and show the ways that Neighborhood Services is applying these practices to enhance how they collect, analyze, share, and act upon what they learn from data.
3. Conduct a needs assessment to identify gaps that the City faces between the current state and what could ideally be achieved by implementing promising practices in the field.
4. Identify opportunities to address those gaps and enhance what and how data is collected, analyzed, shared with the community, and acted upon.
5. Engage and learn from the community as to their perspectives and insights as to how and what code enforcement data is being collected, analyzed and shared.

This report fulfills each of these functions by describing (1) a *Current State*, (2) an Ideal State, and (3) a Needs Assessment that identifies the gap between the current and ideal state, and (4) provides Recommendations and Implementation Strategies to address the needs identified in reaching an ideal state in the field of code enforcement data. Finally, (5) community perspectives and insights are presented throughout the report describing how community members perceive the current state and the desired path going forward.

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[1] This quote is credited to the late William Edwards Deming, an American statistician, professor, author, lecturer, and consultant to governments across the globe. He is perhaps best known for the "Plan-Do-Check-Act" cycle. Overview and Status of The W. Edwards Deming Institute - The W. Edwards Deming Institute.

A Conceptual Framework

Public Works created a conceptual framework to research, examine, assess and organize the code enforcement data initiative we were tasked to develop. It centers upon the basic principle that data systems should achieve four core attributes – they should be accountable, analytic, transparent, and actionable – as illustrated and described in the graphic below.

Why this framing of our report? Quite simply, our goal was to ensure that everything we learned about data related to code enforcement *makes sense* to all those who read this report and are tasked to act upon it. This "concept map" allowed us to organize the massive amount of information on data collection processes into attributes that would enable both policymakers and community members to take what is learned about data through this report – and act upon it.
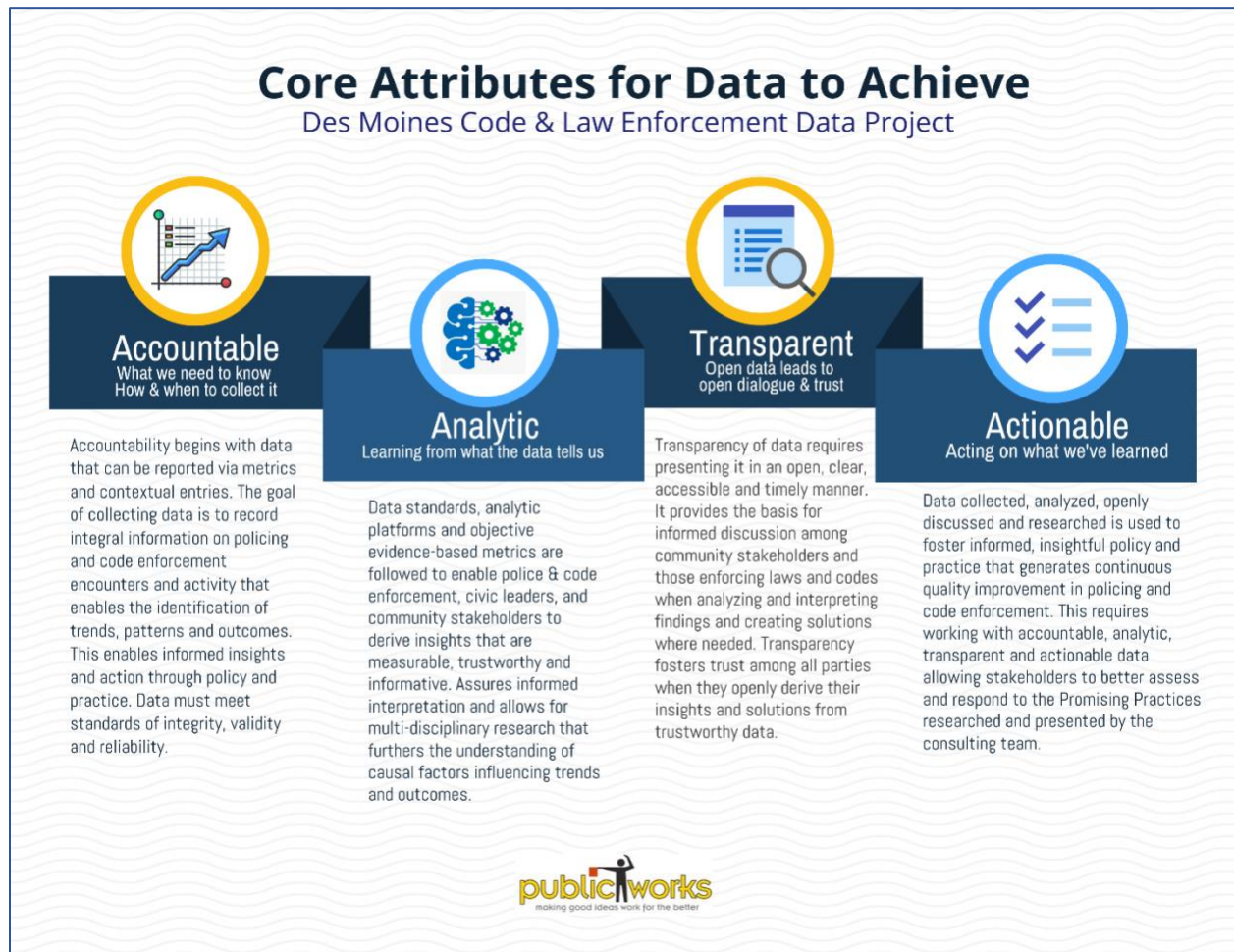
Note: A Word document of the content of this graphic is presented in the Appendix.

These four core data attributes serve as the architecture for the entire project, the framework for our research determining and describing the Department of Neighborhood Services' current state of data

policy and practice, and our research in scoping out promising practices in the field of code enforcement data. This structure also guided how we determined needs, how we framed questions and gathered insights from the community and, finally, how we came to recommend action steps for the City of Des Moines to pursue in order to realize the ideal state in the field of code enforcement data policy and practice.

Engaging the Community

Community input and engagement was a primary aim of this project. This was achieved through Key Informant Interviews, an online survey – sent to leaders of nearly 50 organizations who forwarded it to their members, and presidents of each of the 52 Neighborhood Associations. Fifty-one persons responded to the survey. In addition, we held two virtual focus groups with neighborhood association members.

The survey presented a variety of strategies that code enforcing departments may employ to achieve each of the four Core Data Attributes (accountable, analytic, transparent, and actionable). Quantifiable questions asked respondents to rate these strategies in terms of how valuable or how much of a priority they felt each should receive. Respondents were given opportunities to share their rationale for their ratings and to present their own ideas as to how address the issues raised. Their insights and quantitative ratings are presented in each of the four Core Data Attribute sections of this report. A copy of the full survey is provided in the Appendix

Focus group participants also were presented with the same set of topics and questions as in the survey and discussed them through interactive polls, virtual white boards, word clouds and dialogue via Zoom sessions.

All told, the voices of nearly 75 community members in the City of Des Moines influenced this initiative and report.

How This Report Is Organized

This report is organized into four sections, each focused on one of the four core attributes of data: Accountable, Analytic, Transparent and Actionable. Within each section, we present the results of our research and analysis in the order of the five deliverables required by the project's Scope of Work: the Current State, an Ideal State gleaned from promising practices research, a Needs Assessment, and finally our Recommendations and Implementation Strategies for that attribute. (The fifth required deliverable, Community Engagement, is described throughout each chapter.) This results in 12 specific recommendations distributed across the four Core Data Attribute sections; these are also consolidated in a "Recommendation Inventory" at the conclusion of the report.

A Few More Notes on Methods and What This Report Is Not

We summarized above how we conducted our community engagement process, and how we developed a conceptual framework to fulfill our scope of work. We finish here with a quick summary of our research methodology. When it came to researching the *Current State* we conducted in-depth interviews with key staff in Neighborhood Services and other city departments responsible for data collection and analysis, along with those who rely on data to inform programmatic decisions. We are very grateful for the time they invested in enlightening us so as to be able to share back with you "what and how" data currently is collected throughout the Information Technology and code enforcing departments. We also reviewed procedural documents and reports regarding data collection methods presented to us.

As for promising practices, we have found that the essence of promising practices research is to examine the experience of others. Any issues – no matter how unique or intractable they may seem – are likely to have occurred, been addressed, and solved somewhere. Promising practices research yields examples of successful processes or activities that apply principles and theoretical constructs that have been studied and adopted by leaders in the field – and produced meaningful results. We researched the literature on code enforcement data initiatives, national reports and studies on code enforcement data collection, and analyses of transparency initiatives that involved collaborative stakeholder involvement. Throughout this report, we cite the reference materials we utilized and provide links to the many reports and studies we reviewed.

Finally, it is essential to note that this report focuses solely on the issue of *data*. It is not a general performance review of the Neighborhood Service Department or others within city government performing code enforcement.

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1.0 Accountability

1.1 Current State of Data Collected

The City of Des Moines Department of Neighborhood Services (DNS) collects data on code enforcement activities with which it is charged. Overall, there are nine areas on which the Neighborhood Services Department collects data. These are:

1. Code enforcement inspections for health and sanitation.
2. Rental license inspections.
3. Complaints re: rental license, health and sanitation, and zoning.
4. Violations.
5. Rental license status.
6. Housing Appeals Board cases and decisions.
7. Public nuisance declarations and "Blitz on Blight" status.
8. Inspector data.
9. Department performance data.

Until recently, segments of data among areas 1-9 were collected and stored via the software platform, Tidemark. Inspectors printed out reports and brought them into the field, then filled out paper forms manually with the results of their inspections and entered the data into a DNS database.

In June of 2021, the Department transitioned to using a new software platform intended to automate and centrally locate the kinds of code enforcing, land use planning, inspection, complaints and permit tracking data that DNS oversees, collects and reports on. Known as EnerGov, it has several advantages over Tidemark, such as the ability to centralize data from all City departments, the ability for inspectors to upload and download information while out in the field via tablets, the elimination of paper forms, and the ability to produce reports based on selected metrics.

The EnerGov product offered by Tyler New World Technologies can be purchased in modules. The City of Des Moines has purchased and is using the following modules:[2]

- **Community Development**: Includes Permitting, Plan Management, and Code Enforcement.
- **License Management**: Includes Business, Business License, and Professional License management
- **iG Workforce**: Include iG Inspect for inspections management and iG Enforce for Code Enforcement.
- **Citizen Self Service**: An online public portal for customers to submit applications for permits, plans, and licenses and pay invoices. Also has search functionality that can be used to search for permits, plans, and licenses.

EnerGov collects multiple data points to serve various functions of code enforcement. On the management side it collects contact data, workflow progress, and detailed information on tasks and activities related to cases. Custom information fields can be configured for each case upon which reports can be generated. Documents such as printable permits, licenses, and notices of violation can be

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[2] Description provided in email from Des Moines IT Department, March 11, 2022, Re: EnerGov Section for Code Enforcement Data Report.

produced. More tabular data such as status of cases by type or other kinds of filters can be exported for reports and analyses.

Data from Other Entities. DNS staff have the capacity to access relevant data from other government entities using several websites and data portals. For example, property information can be accessed through the **Polk County Appraiser's** website and building permits data from the **City's Development Services Department** can be accessed through an online portal.

DNS staff have reported that the transition to EnerGov has been challenging. The full functionality of the EnerGov data platform is not being completely realized at this time, and the Department requires the technical knowledge to program the platform to produce reports that it is intended to generate.

As a result, the City has engaged three external entities for additional training and configuration:

- Tyler Technologies' Custom Care Days to identify improvements and make configuration changes. (Note: this is the company that owns the EnerGov software suite).
- Tyler Technologies Virtual Learning Labs, which offer staff opportunities to take classes related to the EnerGov modules they use as part of their work.
- An external consulting group that will provide a similar service to Custom Care Days by identifying improvements and assisting with configuration changes.

The listings on the following pages identify areas of responsibility of the Department of Neighborhood Services and the data elements collected under each.

1.1.1   Health and Sanitation inspections.

Chapter 54 of the Des Moines municipal code details regulations regarding the upkeep of private property "to keep [the premises] clean and free from all offensive material which is likely to engender offensive odors and sights," including standing water which may harbor mosquitoes, as well as regulations related to vermin.[3]

Chapter 42, Article VI, outlines regulations related to public nuisances, many of which pertain to the maintenance of private property, including yard debris, junk, graffiti, the displaying of signs, and abandoned property, among others.[4]

DNS is the agency responsible for enforcing these codes. Enforcement actions may be triggered by the receipt of a complaint, the observations of an inspector, or a report by the police or fire department. Enforcement of these regulations is known as "health and sanitation" enforcement. DNS inspectors have "full authority to declare a condition to be a nuisance and issue appropriate notices," according to the code, and "have all powers and authority necessary to cause the abatement of the nuisance."[5]

Inspectors are to give notice to the property owner and provide a timeframe in which the owner is to abate the nuisance. Notices are given only in English. In emergency situations, the Department has the

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[3] https://library.municode.com/ia/des_moines
[4] https://library.municode.com/ia/des_moines
[5] https://library.municode.com/ia/des_moines

authority to take direct action to abate the condition and charge the property owner with the cost of the abatement. If the abatement is not paid by the property owner, the expense becomes an assessment against the property, similar to an assessment for property tax. Nonpayment of the assessment may result, over time, in the sale of a tax lien and, ultimately, issuance of a tax deed. The owner under a notice may seek an administrative hearing related to the validity of the notice or the costs due.

Health and Sanitation data elements

• Case number and type	• Complaint type
• Property address	• Priority level
• Parcel number	• Observations
• Complaint number and date	• Violation type
• Owner or registered agent name and address	• Violations found
• Case open/closed	• Renovation agreement
• Emergency repair/action required	• Inspector ID, assigned inspector

1.1.2   Inspections for rental certificates

Chapter 60, Article II, details the regulations related to the rental property maintenance code and the issuing of rental certificates.[6] In order for a residential unit to be rented legally in Des Moines, the owner of the unit must have the unit inspected and must obtain a rental license. The license must be renewed on a schedule that is dependent upon the number of violations that were found by an inspector during the prior inspection. For example, the rental certificate for a building with three or more units in which no violations were found during the most recent inspection expires after two and a half years; in contrast, a certificate for a similar building that had up to 1.5 violations per unit during the most recent inspection must renewed after only one and a half years.

If a violation is found during an initial inspection, the property owner has an opportunity to address the issue and schedule a re-inspection in order to obtain or renew a license. If violations are not corrected within the time period allotted, the owner is referred to the Housing Appeals Board.

Violations do not have fines associated with them, but owners do have to pay fees for each inspection, including the initial inspection and the follow-up inspection. If a property owner is referred to the Housing Appeals Board then there is an additional fee. The Board may also impose fines upon its discretion.

Upon finding one or more violations, an inspector may elect to provide a renovation agreement with a temporary certificate on account of weather constraints or extraordinary circumstances. The renovation agreement gives the property owner more time to make repairs. All life safety violations must be corrected before a renovation agreement will be offered.

Tenants are to be given at least 24-hours notice by their landlord that an inspection will take place. If the tenant is not going to be at home during the inspection, then the landlord is authorized by state code to enter the apartment for the inspection. If the landlord has not given the proper 24-hour notice the inspection will not be conducted.

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[6] https://library.municode.com/ia/des_moines

Rental license inspections data elements

• Property address	• Owner or registered agent name and address
• Complaint number and date (if applicable)	• Observations
• Initial inspection or reinspection	• Violations found
• Date of prior inspection	• Number of units

1.1.3 Complaints

DNS responds to complaints made by the public against a property owner, in relation to either the rental maintenance code, the health and sanitation code, the zoning code or the public nuisance law. For rental code complaints, a complainant may fill out a Notice of Compliant form and send the form to DNS via email, fax, or mail. The property owner then has seven days to complete repairs. If not, DNS schedules an inspection with the property owner. For other types of complaints, DNS instructs complainants to contact the Department either by email, phone, or mail.

Complaint data elements

• Complaint number and date	• Complaint type
• Priority level	• Inspection scheduled, inspection date
• Complainant name and address	• Case open/closed
• Property address/parcel number	

1.1.4 Violations

DNS collects data on current and past violations of the rental maintenance code, the health and sanitation code, the zoning code or the public nuisance structure code.

Violations data elements

• Violation number	• Violation type
• Property address/parcel number	• Renovation agreement, expiration date
• Property owner/registered agent	• Date of roll call date, court order sent, engineering, demo date & cost.

1.1.5 Rental license status

DNS retains data on the current status of a rental license.

Rental license status data elements

• Property address/parcel number	• Number of units
• Property owner/registered agent	• Rental inspection schedule (one-year, two-year, or three-year)
• Rental license status	• Prior inspection, next scheduled inspection
• Business license number, expiration date	
• Pass/fail	• Violation history

1.1.6   Housing Appeals Board cases and decisions

The Housing Appeals Board (HAB) is a seven-member volunteer board appointed by the City Council. HAB holds hearings, grants variances, mediates appeals, and recommends enforcement action in the administration of housing code enforcement. DNS refers cases to HAB if violations are not cured within the specified time frame. DNS prepares reports that provide detail and context about cases before the board, including photographs of property conditions. HAB may choose to grant an extension or to recommend legal action. In the latter case, a fine may be issued, and the DSM legal division brings an action in civil court against the property owner, and the court may enter judgement against the property owner.

Housing Appeals Board data elements

• Case number	• Property attributes: year built, liens/judgements,
• Property owner/registered agent	• Violation history
• Property address	• Case report (a narrative of the case and photographs of conditions at the property)
• Enforcement action: fine amount	• HAB decision(s)
• Judgement entered	• Extension granted

1.1.7   Public nuisance declarations and "Blitz on Blight" status

Chapter 60, Article III, codifies the City of Des Moines Public Nuisance Code.[7] In the context of code enforcement and real property, a nuisance is a structure that is found to be unsafe or unfit for occupancy. DNS makes the initial determination of public nuisance and whether the property must be vacated and placarded. If the property owner does not bring the property into compliance within the designated time period, the case is referred to the City Council, which may vote either to direct the legal division to file an action for nuisance abatement in civil court, to revoke the declaration of public nuisance and to direct abatement costs incurred by the City to be collected as a personal judgement against the owner of the property., DNS is authorized by code to enter into a renovation agreement in leu of proceeding with legal action.

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[7] https://library.municode.com/ia/des_moines e.

- Blitz on Blight is a City program in which vacant and abandoned homes are targeted for public nuisance declarations and, ultimately, for demolition or renovation.

Public nuisance declarations data elements

• Property address/parcel number	• Inspection case number
• Case status and date	• Date of court order, date of renovation, date sent to engineering and date of demo
• Public nuisance description (reason for declaration of public nuisance)	

1.1.8 Inspector data

DNS collects data at the level of the individual inspector. This data can help managers determine caseloads and measure performance.

Inspector data elements

• Inspector ID	• Current cases pending inspection
• Assigned territory	

1.1.9 Polk County Data

DNS has access to data from the Polk County Appraiser, County Recorder, and County Treasurer. The Polk County Appraiser and County Recorder hold data on property attributes and ownership. DNS staff retrieve this data by accessing an online portal that is also available to the public at-large. The Appraiser assigns each taxable parcel in the county a Geo Parcel Number. The Geo Parcel number is a unique identifier that is more reliable than street addresses. The Appraiser holds data on the taxable assessed value of a property, and therefore collects data about the underlying land as well as any structures on the land, including:

Polk County data elements

• Assessed values	• Building materials & systems e.g. heating systems, roof, wall materials, foundation
• Underlying zoning	• Number of rooms
• Lot size and square footage of structures	• Condition of structures e.g. "Below Normal"

The Recorder documents all property records and holds data on past and current property ownership, purchase history and sales price, and liens and judgements. The Treasurer has data about property tax payments and outstanding balances.

1.1.10 Permits

Data on current and past permits is held by the Des Moines Department of Development and can be accessed by DNS staff via an online portal maintained by the City.

Community Engagement on Current State

The eight-question online survey queried respondents as to what data should be collected in order better to inform the code enforcement process; how this data should be analyzed and shared with the community; and how data could be most helpful in crafting strategies responsive to community needs.

The following tables, and synopses of open-ended comments and focus group discussion presented in this section of the report, cover those questions that addressed the Accountable core data attribute. The three tables explore how much the fifty-one respondents valued fifteen different data points related to code enforcement. As Table 1 shows, two of the fifteen topics dominated the "Extremely Valuable" rating: Nearly 70 percent of respondents felt that action taken by Housing Inspectors in response to complaints filed, was "extremely valuable" to collect, while 65 percent felt the same as to collecting the "number of health and safety complaints made by renters per property and owner." The majority of respondents felt that all of the data topics cited are valuable.

Table 1
Value of Data Ratings on Health & Safety Violations, Demographics, Complaint Outcomes and Data Indicating Racial disparities.

How valuable do citizens consider collecting data related to the following:	Extremely Valuable	Valuable	Neither Valuable/Not	Somewhat Valuable	Not Valuable
Percent of health & safety violations per property/owner	48.00%	36.00%	6.00%	8.00%	2.00%
Data that describes outcomes resulting from violations	42.86%	38.78%	8.16%	8.16%	2.04%
Percent of homeowners and renters by race, gender and age	30.61%	22.45%	18.37%	10.20%	18.37%
Data that tracks racial, age and gender disparities in housing	46.00%	28.00%	6.00%	2.00%	18.00%
Number of health & safety complaints made by renters per property/owner	64.71%	23.53%	3.92%	3.92%	3.92%
Action taken by Housing Inspectors in response to complaints filed.	68.63%	23.53%	3.92%	1.96%	1.96%

In Table 2, the dominant data point of which nearly nine out of ten people see as "Extremely Valuable or Valuable" is knowing the "breakdown of health & sanitation violations by rental and private property owners." Nearly eight out of ten respondents want to know data on property clean-up citations issued by zip codes and neighborhoods and the percent of housing appeals that go to assessment, tax sale and/or result in loss of property. The majority feel that all data topics are valuable.

Table 2

Value of Data Ratings on Property Clean-up Citations, Percent of Property Owners Signing-up for Payment Plans for Fines, Rental licenses by Neighborhood and Percent of Liens Waived and to Whom

How valuable do citizens consider collecting data related to the following:	Extremely Valuable	Valuable	Neither Valuable or Not	Somewhat Valuable	Not Valuable
Percent of housing appeals that go to assessment, tax sale and/or result in loss of property.	25.49%	49.02%	15.69%	3.92%	5.88%
Demographic data on housing appeal cases resulting in loss of property (e.g. age, gender, race, income).	35.29%	33.33%	17.65%	5.88%	7.84%
Breakdown of Health & Sanitation violations by rental and private property owners.	58.82%	27.45%	3.92%	7.84%	1.96%
Property Clean-Up citations issued by zip codes, neighborhoods.	47.06%	31.37%	7.84%	7.84%	5.88%
Demographics of property owners cited for Property Clean-up (e.g. age, race, gender, income).	29.41%	21.57%	25.49%	15.69%	7.84%

In Table 3, three out of four respondents believe that information on the outcomes of property clean up citations, number of rental properties issued by neighborhoods and percent of liens waived and to whom is all valuable data to procure and share with the public.

Table 3

Value of Data Ratings on Outcomes of Property Clean-up citations, payment plans on assessment and fines, rental licensees by neighborhoods, liens waived and to whom.

How valuable do citizens consider collecting data related to the following:	Extremely Valuable	Valuable	Neither Valuable or Not Valuable	Somewhat Valuable	Not Valuable
Outcomes of Property Clean-up citations (resolved, Public Works Clean-up, assessment bill, liens, loss of property).	41.18%	37.25%	9.80%	7.84%	3.92%
Percent of property owners who sign-up for payment plans on assessments and fines.	13.73%	27.45%	31.37%	15.69%	11.76%
Number of rental licensees issued by neighborhoods.	45.10%	33.33%	11.76%	5.88%	3.92%
Percent of liens waived and to whom (e.g. property owner, developer).	32.00%	44.00%	18.00%	2.00%	4.00%

Survey Open Comments and Focus Group Discussion on Accountable Data

As was indicated in the survey responses illustrated in the tables above, participants felt that the fifteen data points are all valuable and need to be collected. Respondents were especially interested, however, in knowing more about landlords. As one person asserted, *"Absentee landlords are a huge issue. It would be good to know more information about who and where these landlords are."*

Respondents also indicated that they would like a better understanding as to how many inspectors are dedicated to an area *"and how much coverage they are responsible for."* As one respondent commented, *"[we] live in a high rental area and it doesn't feel like we have adequate coverage to adequately address our housing concerns."*

Focus group participants and survey responders felt the need to be informed by the Department of Neighborhood Services as to the data DNS is collecting and the complaints it is working on: *"Inspectors or neighborhood services should keep the neighborhood informed on actions being taken to correct violations"* and keep them up-to-date on the status of solving those complaints.

Focus group participants also raised the need for collecting *"predictive"* information about properties so that DNS and neighborhood associations can be more proactive in intervening when properties are beginning to deteriorate – and preventing deterioration in the first place. They believe that there should be more attention given to collecting data that can show where in the *"cycle"* of property upkeep and processing of complaints a property cited for action stands, and what are the eventual outcomes in monitoring and correcting it. Some also raised concern that there is a lack of clarity as to where data exists on rental properties, and confusion as to the inspectors assigned to their neighborhoods and how to communicate with them.

The stakeholders consulted also suggested that it would be helpful to track data showing the number of warnings issued on a property and the amount of time that transpired between their issuance and whatever action ultimately was taken. Some also felt that data on the effectiveness of the fining process should be collected and analyzed, to assess whether violators treat fines as simply the "cost of doing business" rather than responding by reducing their violations.

A concern raised in Key Informant Interviews centered on whether "renters who are low-income are hesitant to complain about health and safety concerns because they have nowhere else to go and fear retaliation." Thus, we constructed a survey question to explore this supposition. Respondents were presented this concern in the language quoted above and asked, "How much do you think this to be true?" An overwhelming majority (71%) believed this to be "Very True" or "True," while another 20 percent said it was "Somewhat True." The implication for analysts and policymakers is to recognize that data on number and type of complaints may very well be skewed on the low-end because of the fear of retaliation and thus requires creating strategies to ameliorate this factor.

1.2 Ideal State / Promising Practices

A code enforcement department may collect, aggregate, and analyze data relating to the department's work: the number and type of complaints, the number of violations at a property, the status of a property's rental license, and data about compliance, among other things. However, a *strategic* code

enforcement approach requires that a department consider more than its own inputs and outputs to guide policy and allocate resources. Integrating data from other departments – and even other jurisdictions or entities – is critical to gaining additional insight about a property, its residents, and the surrounding neighborhood.

A review of the literature suggests that the following types of data *could* be collected by a code enforcement agency or integrated into its data systems, depending on the policy objectives of the agency:[8]

1.2.1 Building data. Types: year built, square feet, number of units, permits, stop work orders.
Recent permit activity may indicate rehabilitation. The lack of permit activity may indicate disinvestment.

1.2.2 Property ownership data. Types: deeds, mortgages, court orders, liens.
This information allows code enforcement officers to identify the property owner and their business address, any recent changes in ownership, outstanding debt and any liens placed on the property, and ownership disputes. This information may be different than what has been provided to the department if a rental property is licensed with the city.

1.2.3 Market data. Types: recent sales prices and trends, median rent, foreclosures, evictions.
A market value analysis allows cities to understand trends in market value that may impact the ability for property owners to properly maintain their buildings. An understanding of these conditions may allow a city to target enforcement efforts and tailor policy responses.

1.2.4 Police, fire and 311 data. Types: calls for service, location of fires, crime hotspots.
This information can help determine if certain indicators are related, such as housing conditions and fires, and form aspects of a neighborhood profile.

> **Promising Practice Integrating Data**
>
> **Mt. Vernon, New York**: using integrated data from the City's fire department, code enforcement officials were able to set up an alert to flag homes with a structure fire that had not pulled a permit for rehab work within a year.[9]

1.2.5 Health data. Types: asthma hospitalizations, elevated blood lead levels in children
This information may alert a code enforcement department of code issues in a neighborhood or building, such as the presence of vermin or lead paint. And because health and safety are among the most important outcomes for code enforcement, tracking certain health indicators may be an important metric.

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[8] https://hesterstreet.org/wp-content/uploads/2019/07/CR_-Phase-I-_Equitable-Code-Enforcement-report_FINAL-JUNE-2019.pdf; https://vacantpropertyresearch.com/wp-content/uploads/2016/09/20160609_Data-Systems_FINAL-1.pdf; https://vacantpropertyresearch.com/wp-content/uploads/2018/09/20180910_CEBrief-FINAL.pdf.
[9] https://www.reinvestment.com/wp-content/uploads/2020/10/Reinvestment-Fund-MountVernon.pdf

Promising Practices on Health Data

Rochester, New York: The city designates certain areas of the city as "high-risk" for elevated blood lead levels, based on historic blood lead level data. Properties in high-risk areas must undergo additional inspection procedures. While all rental buildings constructed prior to 1978 must undergo visual inspections for peeling paint, those in high-risk areas must also undergo a dust wipe test. And small buildings in high-risk areas must renew their certificate of occupancy every three years, as opposed to every six years.[10,11]

The Philadelphia, Pennsylvania: Department of Public Health (PDPH) maintains data on blood lead levels among children. When children with elevated blood lead levels are identified by a health care provider, their homes are scheduled for inspection. If inspectors discover lead hazards in the home, the landlord is legally required to remediate these hazards.[12]

Boston, Massachusetts: The city's Breathe Easy at Home program is a web-based referral system that is used by healthcare professionals to refer asthma patients for a home inspection. The program requires cooperation between the city's health department, inspections services, and healthcare providers.[13]

1.2.6   Eviction and housing court data. Types: eviction notices served, housing action cases, evictions ordered. This information may indicate disputes between a landlord and tenants, housing insecurity for tenants, or a distressed property.

1.2.7   Tax data. Types: owner information, arrears, tax sale. This information may help to identify a property's true owner and whether a building is showing signs of financial distress.

1.2.8   Utilities data. Types: number of accounts at a property, recent shutoffs. This information may be used to help an inspector determine if there are more units in a building than reported by a landlord, by comparing the number of accounts with the number of registered units. This information may also indicate whether a property is or may become vacant.

1.2.9   Geographic data. In addition, a code enforcement agency can integrate all the above with geographic data in the form of a Geographic Information System (GIS) that will allow the agency to create maps, allowing for easy analysis. This integration would give the agency the capability to analyze the current status and trends in a number of different geographies: city-wide, at the neighborhood level, at the city council district level, the police precinct level, or even a school district.

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[10] https://www.nlc.org/wp-content/uploads/2020/02/YEF_Healthy_Housing20WEB.pdf
[11] https://localhousingsolutions.org/housing-policy-case-studies/rochesters-lead-based-paint-prevention-ordinance/
[12] https://www.nlc.org/wp-content/uploads/2020/02/YEF_Healthy_Housing20WEB.pdf
[13] https://www.boston.gov/departments/public-health-commission/breathe-easy-home

A code enforcement agency may also integrate **social and demographic** data from the U.S. Census Bureau to better understand the socio-economic conditions in a neighborhood, as well as the racial or ethnic makeup of a neighborhood. It is this data that will allow city officials to measure inequitable outcomes along racial or ethnic lines.

<div style="border:1px solid">

Promising Practice Using Centralized Neighborhood Socio-Demographic Data

Niagara Falls, New York – The city of Niagara Falls worked to centralize data from different agencies, including code enforcement data, 911 calls, property assessments, public investment dollars, tax delinquent properties, water shut-offs, and other data. According to Housing Matters, an online listing of policy innovations from the Urban Institute, "This centralization of data improved the City's analysis of its resources and operations. For example, the City can see whether and how public investments in a neighborhood may shift the number, type, or location of code enforcement citations."[14]

</div>

1.3 Needs Assessment

DNS collects data related to the Department's enforcement activities and has access to other data sets that are integral to its inspection and enforcement efforts. However, the transition to the data platform EnerGov is presenting some challenges as to the Department's capacity and ability to access, analyze and report data.

There are some categories of data that DNS does not collect or access that may allow the Department better to track certain outcomes, to tailor policy responses and target resources, and proactively to identify properties that are vacant and abandoned or at risk of becoming so. DNS does not collect or access data about certain health indicators, such as asthma-related emergency department visits and hospitalizations or diagnoses and elevated levels of lead in the blood that may be related to building conditions, such as the presence of vermin, mold or lead found in paint or pipes.

Nor does DNS collect market data or eviction and housing court data that could allow the Department to better understand whether certain properties and neighborhoods are experiencing financial distress and to tailor enforcement actions based on these conditions. This data may also allow DNS to discern the consequential impact of its enforcement efforts.

Finally, DNS is not able to collect data on utility shut-offs, as the local electric utility is unwilling to share this data with the City. As for the water utility, Des Moines Water Works, it should be possible for the utility to share data on water shut offs within the City.

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[14] https://housingmatters.urban.org/articles/how-strategic-code-enforcement-improving-quality-life-niagara-falls-residents

2.0 Analytics

2.1 Current State

The Des Moines Department of Neighborhood Services collects data or has access to data across a wide range of categories. The greatest obstacle to DNS's ability to analyze and assess data is its inability fully to realize the reporting and analytical functions of its new EnerGov software platform. Before the transition, DNS inspectors, supervisors, and managers had access to data reports such as the total number of violations citywide, inspector caseloads, and time between complaint and inspection, among others. DNS no longer has this capability.

In 2021, the Des Moines City Manager directed all agencies to develop performance measurements, commonly referred to as Key Performance Indicators, or KPIs, and these measurements were first reported in May of 2021. DNS reported on six indicators related to code enforcement.

DNS Key Performance Indicators	Completion Rate
Inspect all Priority One complaints within 48 hours	100%
Inspect all Priority Two complaints once all Priority One complaints have been inspected	100%
Inspect all Priority One inspections prior to certificate expiring	100%
Inspect all Priority Two complaints within five days	100%
Zoning: Inspect all Zoning Priority One complaints within 48 hours	TBD
Zoning: inspect all Zoning Priority Two complaints within five days	TBD

In 2017, the City commissioned an independent consulting firm to analyze and report on the physical condition of residential real estate in Des Moines neighborhoods, as well as a housing market analysis.[15] However, these conditions are not analyzed on a regular basis.

When a code enforcement case is scheduled to go before the Housing Appeals Board, the assigned inspector prepares a report for the Board that includes the property's violation history, ownership, and property conditions observed at the time of the violation.

Community Engagement on Current State

The Community Stakeholder survey asked respondents to consider five kinds of data that inform analyses. The table below presents the responses as to how the fifty-one individuals completing the survey rated the value of each. In Table Four, we find that the majority believe that "Market Data of City

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[15] https://councildocs.dsm.city/Resolutions/20180625/czbllc%20report.pdf

Neighborhoods" and "Property Owner Rental History" are "Extremely Valuable" information to collect and analyze. Collecting and sharing data on housing sales, prices, trends, median rent rates and foreclosures are considered valuable markers to know how their neighborhoods are performing (88%). Rental Property Owners considerably affect a neighborhood's quality of life. Thus, knowing their history as landlords – indicated by rate of utility shut-offs, citations, inspection reports, arrears on bills and taxes, and eviction rates across all their properties – are all data markers that respondents felt would be valuable (86%).

Table 4
Value Ratings on Impact of Fees Fines, Neighborhood Market Data,
Property Ownership and Rental History

How valuable do citizens consider collecting data related to the following:	Extremely Valuable	Valuable	Neither Valuable or Not Valuable	Somewhat Valuable	Not Valuable
The impact that fees and fines have on the working poor.	42.00%	34.00%	12.00%	8.00%	4.00%
The impact that fees and fines have on property owners.	36.00%	40.00%	14.00%	8.00%	2.00%
Market data of the city and neighborhoods (e.g. housing sales, prices, trends, median rent rates, foreclosures).	52.00%	36.00%	4.00%	8.00%	2.00%
Primary ownership of properties (analyze multiple names, deeds, mortgages, liens).	48.98%	24.49%	12.24%	8.16%	6.12%
Property owner rental history (rate of utility shut-offs, citations, inspection reports, arrears on bills & taxes, evictions).	53.06%	32.65%	6.12%	8.16%	4.08%

As shown in Table 5, the Analytic data point receiving the highest number of "Extremely Valuable" ratings was defining "nuisance properties"(63%), with an additional 29 percent viewing this as "valuable." Blitz on Blight data (84%) and Types of Appeals granted by the Housing Appeals Boards (82%) also received high "Extremely Valuable" and "Valuable" ratings. Over 60 percent said it was valuable to know the demographic profiles of those impacted by liens.

Table 5
Value Ratings of Types and Incidence of Blight, Appeals by Housing Appeals Board, Lien Criteria,
Demographic Impact of Liens, Nuisance Property Criteria

How valuable do citizens consider collecting data related to the following:	Extremely Valuable	Valuable	Neither Valuable/Not	Somewhat Valuable	Not Valuable
Types and incidence of blight within neighborhoods (e.g. "Blitz on Blight).	48.98%	34.69%	12.24%	2.04%	4.08%
Types of appeals granted by the Housing Appeals Board and to whom.	36.73%	44.90%	8.16%	4.08%	6.12%
Criteria used to warrant that a lien be issued.	34.69%	36.73%	12.24%	12.24%	4.08%
Demographic profile of those impacted by liens.	28.57%	30.61%	20.41%	8.16%	12.24%
Criteria used to define "nuisance properties."	63.27%	28.57%	4.08%	4.08%	0.00%

Community Engagement: Survey Open-Ended Comments and Focus Group Proceedings

Though not directly related to data, some raised concerns as to how owners should be held more accountable in inspecting their own properties rather than the onus being on inspectors and neighbors to file complaints. These stakeholders felt that data is skewed downward regarding the number of complaints, because both renters and neighbors fear retaliation when complaints are made, even if anonymously.

On questions related to the Housing Appeals Board (HAB), 82% of survey respondents wanted to know the "types of appeals granted by the HAB"; they also want to know "data on who sits on the board and what organizations they represent and support." One individual suggested that community members need data to know whether "codes [are] being enforced disproportionately on those who are not 'connected' in the City. Are really big realty companies and corporate landlords getting a pass because of who they are?"

Another data point that one stakeholder recommended be analyzed was, "[t]he percentage of absentee landlords compared to the percentage of liens." The rationale to this suggestion was this individual's awareness that some properties of absentee landlords "had more than 20 liens against them that took 2 years to clear" after the property was purchased.

2.2 Ideal State / Promising Practices

The era of "big data" in government operations has shown how data collection and analysis can transform government service delivery. In the context of code enforcement, data collection and analysis may enhance a city's ability to do the following:

- Enable code enforcement performance management.
- Track and measure outcomes.
- Tailor policy responses and target reinvestment funds and grant programs.
- Efficiently allocate and direct resources of the code enforcement department.
- Identify and manage vacant, abandoned properties, and nuisance properties.
- Improve interagency collaboration and coordination.

2.2.1   Enable code enforcement performance management

All governmental agencies – whether engaged in code enforcement or otherwise – should utilize performance management to ensure that their efforts are effective and efficient. These are macro-level indicators that provide snapshots of a department's performance. For example, performance management would allow DNS to know whether complaints are addressed in a reasonable amount of time, and whether the amount of time required is trending upward or downward. A code enforcement agency should track the number of inspections completed each month or each quarter, and whether inspections are being completed on schedule. Other indicators should include total number of violations at any given time, the total number of violations by type, the number of units with a rental license, and the amount of fees collected for follow-up inspections.

Collecting data is essential for measuring Key Performance Indicators (KPIs), a common method for governments to track agency performance. For code enforcement agencies, KPIs are usually centered

around the amount of time taken to respond to complaints with an inspection, the total number of inspections or violations completed in a certain time period, violations requiring multiple re-inspections, cases referred to an administrative judge, and the dollar amount of fines collected.[16,17,18] Kansas City, Missouri, conducts an annual performance audit of its code enforcement operations, compiling and analyzing performance data across a variety of indicators – from numbers of violations and site visits to types of violations and neighborhood trends, including the code enforcement timeline from complaint to resolution.[19]

2.2.2   Track and measure outcomes

While the previous section described high-level performance management, "tracking and measuring outcomes" refers to a more targeted evaluation of how agency actions affect defined policy outcomes. By tracking and measuring outcomes, a code enforcement agency may be able better to understand if enforcement actions are leading to the desired results or not. Intended outcomes may include code compliance, improved health and safety, more resilient market values, fewer incidences of displacement, and others.

For example, evaluating outcomes such as compliance may include determining if there are certain types of violations that are cured after the first notice, or if certain types usually require multiple inspections or referral to an administrative judge or body.[20] An agency could measure the impact of placing an assessment on a property by tracking certain outcomes such as changes in ownership, foreclosure, or tenant eviction.

A code enforcement department must identify metrics that define success and failure, and reveal inequitable outcomes. Choosing what is measured is just as important as the underlying data used to make the measurement: According to a Ford Foundation-funded report by Cities for Responsible Investment and Strategic Enforcement (CitiesRISE) and Hester Street Collaborative, "Without an explicit equity focus, data tools can exacerbate disparate impacts in a variety of ways, including by: making inequitable processes more efficient; codifying racial and economic bias under the cover of objectivity; obscuring municipal procedures from the public; and inadvertently skewing incentives – such as overvaluing punitive measures."[21]

2.2.3   Tailor policy responses and target reinvestment funds and grant programs

When code enforcement data reveal patterns and underlying conditions, or illuminate negative outcomes that exist because of the status quo, the data may be used to develop policy interventions or channel already-existing programs better to address the issue. Code enforcement agencies may prioritize and tailor actions "using market, neighborhood condition, and real property data to help deploy a portfolio of

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[16] https://oca.dc.gov/sites/default/files/dc/sites/oca/publication/attachments/DCRA19.pdf

[17] https://www.collinsvilleil.org/home/showpublisheddocument/1547/637336122837900000

[18] https://www.burlingtonvt.gov/sites/default/files/BTVStat%20Dept%20Metrics%20CE%20May%20-%20F_0.pdf

[19] https://hesterstreet.org/wp-content/uploads/2019/07/CR_-Phase-I-_Equitable-Code-Enforcement-report_FINAL-JUNE-2019.pdf

[20] https://engagedscholarship.csuohio.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1894&context=fac_articles

[21] https://hesterstreet.org/wp-content/uploads/2019/07/CR_-Phase-I-_Equitable-Code-Enforcement-report_FINAL-JUNE-2019.pdf

legal and policy interventions to address diverse neighborhood and property conditions ... matching interventions to market types."[22] This type of approach recognizes that some property owners are unable to make repairs, thus, a punitive approach may not necessarily help achieve the goal of compliance, and may ultimately lead to further neighborhood destabilization.

2.2.4   Efficiently allocate and direct resources of the code enforcement department

Data collection and analysis allows a code enforcement agency to monitor changing conditions on the ground and shift resources or intensify efforts in response. Managers can monitor inspector caseloads, new complaints, and scheduled inspections to determine if any staffing changes or additional inspectors are required. Data may show trends or violation "hotspots" that necessitate intervention.

Predictive analytics allow managers to anticipate forthcoming enforcement needs. For example, the code enforcement agency in Chelsea, Massachusetts, used machine learning tools to predict the probability that a given property would pose certain high-risk public health violations such as overcrowding. The data analysis allowed the city to pinpoint areas at elevated risk for housing-related health problems that were then used to prioritize inspection of properties based on their risk level.[23]

The Centers for Disease Control and Prevention offers states and localities access to a data tool called *Healthy Homes and Lead Poisoning Surveillance System* (HHLPSS) to direct resources and to target properties for inspection. This web-based tool provides a centralized surveillance repository for blood lead data, environmental sampling results, and follow-up information for case management. The tool assists states and localities to collect blood lead test results; standardize, validate, and geocode patient addresses; manage medical treatment; coordinate with the investigation and remediation of lead hazards in the home; and generate standardized reports and notification letters.[24]

2.2.5   Identify and manage vacant, abandoned properties, and nuisance properties

Blighted and abandoned buildings are health and safety hazards, and can lower property values and lead to neighborhood destabilization. Determining which buildings are vacant, identifying the owners, and managing property conditions are significant challenges for code enforcement. Neighborhood Services is currently working on enacting a vacant property registration to address this concern. Data analysis can allow a code enforcement agency to identify properties and owners with high-risk factors such as underwater mortgages, foreclosure, property tax arrears, utility shut offs, and code complaints. Using this information, code enforcement may prioritize and target houses that are vacated or notify social service agencies to assist owners and tenants remain in the home.[25] A code enforcement agency may also want to use data to identify properties that have been abandoned by the creditor after foreclosure. For example, tracking foreclosure sales records to find properties that were withdrawn from sale or not sold because there was not a sufficient bid may indicate that the creditor will walk away from the property.[26]

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[22] https://vacantpropertyresearch.com/wp-content/uploads/2018/09/20180910_CEBrief-FINAL.pdf

[23] https://datasmart.ash.harvard.edu/news/article/hiding-plain-sight

[24] https://www.cdc.gov/nceh/lead/data/hhlpss.htm

[25] https://engagedscholarship.csuohio.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1894&context=fac_articles

[26] https://engagedscholarship.csuohio.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1894&context=fac_articles

2.2.6 Improve interagency collaboration and coordination

Data from code enforcement activities may help illuminate festering problems within neighborhoods that have a social services, public health, or community development impact. In turn, information and data from agencies charged with these latter functions may inform code enforcement activities. For example, in Elmira, New York, the code enforcement department began to share a list of "problem landlords" with the social services department in order to avoid placing tenants in unsafe boarding homes owned by problem landlords who consistently neglected their buildings. The code enforcement department also began to provide social services staff with advance notice of an impending condemnation, so that the social services department could line up housing for any current occupants that might be displaced.[27]

2.3 Needs Assessment

As stated earlier, the Department of Neighborhood Services currently is analyzing the data it collects on a very limited basis. The transition to EnerGov has meant that the Department cannot extract most data points – such as the record of complaints, inspections, and Housing Appeals Board decisions – from individual case files. This results in the Department's inability to acquire a basic understanding of the overall number of open violations at any point in time, for example, and therefore limits the Department's ability optimally to monitor conditions, direct resources, track outcomes, and tailor policy responses.

The City has used data to track properties that have been designated as blighted with the Blitz on Blight program, but it is not analyzing the impact that a blighted designation, demolitions, or renovations may be having on the surrounding neighborhood.

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[27] https://hesterstreet.org/wp-content/uploads/2019/07/CR_-Phase-I-_Equitable-Code-Enforcement-report_FINAL-JUNE-2019.pdf

3.0 Transparency

3.1 Current State

The sole public data source provided by the Des Moines Department of Neighborhood Services is a website for the Blitz on Blight program. The website includes a map of all properties designated as a public nuisance and includes a description of the current status of the property, ranging from council-approved legal action to rehab agreements or demolition. The website tracks the total number of properties in the program and the cost incurred for the demolition of properties to-date.

The public may find additional property information on the Polk County Assessor's website, which provides a public portal that can be searched by parcel number, address, or owner. The categories of data available there are listed in Section 1 of this report, "Accountable." In addition, the Polk County Auditor provides a web-based map with property information.

Neither Polk County nor the City of Des Moines has an open data portal that includes code enforcement data. Both, however, provide open GIS data, including Census blocks and tracts, neighborhood boundaries, building footprints, and zoning.

Community Engagement on Current State

Respondents were asked to rate levels of priority among four ways in which data is open and shared with the public:

- creating a Code Enforcement Dashboard,
- continuing the Blitz on Blight Dashboard,
- developing an online Property & Landlord Profile Portal, and
- instituting a Neighborhood Profile Dashboard.

The results of those ratings are presented on the following page in Table 6. Overall, the fifty-one community stakeholders who completed this survey believed that sharing such data is either an "Extremely High" or "High" priority. Three out of four were especially interested in the City developing a dashboard on a series of Key Performance Indicators, such as knowing the number of open complaints and the length of time to respond to a complaint, investigate it, and subsequently resolve it.

Respondents also considered it a priority to create a dashboard that shows data reviewing the outcomes of Housing Appeals Board actions, fines, and decisions. Nearly half of the respondents rated the development of a "Property & Landlord Profile Portal" as an "Extremely High Priority."

Nearly 70 percent rated the Blitz on Blight Dashboard a priority to maintain, and sixty percent viewed a "Neighborhood Profile Dashboard" as either an "Extremely High Priority" or "High Priority." The only strategy given a "Not a Priority" rating was conducting a Community Satisfaction Survey (29%)

Table 6

Making Data Transparent via Code Enforcement Dashboard, Blitz on Blight Dashboard, Property &
Landlord Profile Portal, and Neighborhood Profile Dashboard

How valuable do citizens consider collecting data related to the following:	Extremely Valuable	Valuable	Neither Valuable or Not	Somewhat Valuable	Not Valuable
An online "Code Enforcement Dashboard" on performance (e.g. # of open complaints, length of time to respond, investigate & resolve; review outcomes of Housing Appeals Board actions, decisions, fines).	40.00%	36.00%	16.00%	8.00%	0.00%
Continue "Blitz on Blight" Dashboard with interactive map and cite declarations of blight, outstanding judgements, nuisance violations & liens imposed by the City.	36.00%	30.00%	28.00%	4.00%	2.00%
A "Property & Landlord Profile Portal" with data on building specs, location, number of units, age of building, roof, boiler, shut-off history, building code violations, inspection reports & citations, owner/landlord profile, status of rental license).	48.00%	28.00%	12.00%	10.00%	2.00%
A "Neighborhood Profile Dashboard" consolidates data from other dashboards and a Market Value Analysis but in neighborhoods or other areas e.g. school districts, city council districts, police precincts.	32.00%	28.00%	20.00%	18.00%	2.00%

Survey Open-Ended Comments and Focus Group Discussion

The qualitative stakeholder input recommended posting updates on data findings on a website, including police reports on neighborhood crimes such as burglaries and robberies, at least monthly: *"Neighbors should know what's going on in their immediate areas."* Stakeholders also regarded the number and names of properties in violation, along with corrective action being or having been taken, as very important information for the public to know. In addition, several raised the value of meetings with housing inspectors on a regular basis, as well as encouraging them to use virtual meetings, email and even text as additional ways of communicating with neighbors.

Our question referencing the "Blitz on Blight Dashboard" motivated one respondent to voice their concerns as to the direction that the program is taking by focusing mostly on tearing buildings down rather than implementing *"goals of rehabilitating properties or helping to clean them up."* In addition*, "with no transparency as to how reports [on blighted properties] get to code enforcement, it can be used as retaliation between neighbors."*

Some participants in the focus groups said they had regular meetings with the housing inspector for their area, while others did not and wondered why they didn't. Participants also expressed awareness that there is a shortage of inspectors and suggested that one way to address this is to create a central *"liaison available to answer questions and add context"* to community members' concerns.

3.2 Ideal State / Promising Practices

3.2.1   Department Dashboard

One primary way that a code enforcement agency can achieve transparency and trust with the public is through the development of a Department Dashboard that tracks overall agency performance measures. Data may include the number of open complaints, the amount of time to respond to/inspect a complaint, total number of violations, and time to resolve a violation, among others. These data could be reported publicly, used internally, or presented in reports to the legislature or executive leadership. The dashboard function can also incorporate performance measures on individual enforcement officers for internal use by managers.

3.2.2   Property Profile Portal

Another useful tool is a Property Profile Portal providing a wide array of information about a particular property. This public-facing portal may include details about a building such as the year built, square-footage, number of units, and the age of the roof or boiler. It also may show a property's location on a map and provide the information in a sidebar. It may include information about the number of complaints directed at the property over a certain period, the number of current open complaints, the number of violations and their severity or type. It would do well to also cite publicly-available ownership data, including the business address of the owner.

The profile could present rental registration data, citing whether a property has a current license, the date of the most recent inspection (including the number of violations found at that time), and the date of the next inspection. Finally, the Property Profile could include socio-economic data about the surrounding area or neighborhood, including the percent of residents in poverty, those with a disability, and heads of households over the age of 65 years, race, ethnicity, foreign birth, and language other than English spoken at home would also be very helpful to cite and share on the Property Profile.

A code enforcement department can make available lists of all properties that match certain criteria such as blighted status or rental license. Cities such as Minneapolis, Minnesota, and Boulder, Colorado, make rental license data available through their open data portals, and Minneapolis also displays this information on a map.[28,29] Louisville, Kentucky, and New Orleans, Louisiana, provide data on licensed short-term rentals.[30,31]

The Property Profile can provide even richer data for code enforcement officers tasked with inspecting a particular property, such as recent change in ownership, indicators of financial distress (tax bills in arrears, pre-foreclosure notices), recent mortgages or changes in ownership, and evictions. The choice of information to be presented publicly requires careful consideration among policy makers, stakeholders and the City's legal team.

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[28] https://opendata.minneapolismn.gov/datasets/cityoflakes::active-rental-licenses/explore?location=44.967736%2C-93.261431%2C16.23
[29] https://data-boulder.opendata.arcgis.com/datasets/92f70ea894ef47a582bb0d656aa4aa7d_0/explore?showTable=true
[30] https://catalog.data.gov/harvest/df573dd9-dda2-439d-be4a-c5a3e9b0cc03
[31] https://data.nola.gov/Housing-Land-Use-and-Blight/Map-of-Short-Term-Rental-Licenses/j5u3-2ueh

3.2.3   Neighborhood Profile

A Neighborhood Profile is similar to the Property Profile, but reports data on a wider geographic area, such as the neighborhood, city council district, police precinct, school district, or any other geography deemed to be useful by the city. Instead of reporting the age of an individual property, age is represented by a neighborhood-wide median of building age. Instead of the number of violations at a particular building, the profile assigns a number for the whole geographic area. A Neighborhood Profile could identify individual properties with a high number of violations as pins on the map.

3.2.4   Market Value Analysis (MVA)

A Neighborhood Profile can also include metrics from a Market Value Analysis (MVA). An MVA "defines a set of housing market types, which characterize the level of market strength or distress in housing submarkets within a community."[32]

In a Neighborhood Profile, trends are important, showing, for example, whether violations are moving up or down as well as comparisons with city-wide averages and those in other geographies. A Neighborhood Profile enables residents to see how they rank on various measures, indicating, for example, that their neighborhood has the second-longest response time to complaints. Violations may also be displayed as a "heat map" using shades of color to indicate geographic concentrations (red indicating more violations while green represents fewer).

A Neighborhood Profile also may allow the user to isolate one or two metrics in order to focus on a particular concern. By applying filters, a user may be able to visualize electric utility shutoffs along with overdue tax bills to locate areas that may be experiencing abandonment.

Promising Practices on "Property Hub" Data

Memphis, Tennessee Property Hub: A project of Innovate Memphis, a non-profit that focuses on innovation in municipal government, and the University of Memphis, Memphis Property Hub is a tool to share parcel-level data with government, education and non-profit partners in Memphis, Tennessee. The property hub integrates data on utility disconnections, deeds and transaction data, eviction filings, tax data, 311 data, building permit and demolition data, and others. It generates maps and reports on property condition, ownership, vacancy, tax delinquency, service requests, and zoning. Data may be examined at the parcel level, or through a neighborhood report. Property Hub requires that users register to access the data application.[33]

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[32] https://www.reinvestment.com/wp-content/uploads/2020/10/Reinvestment-Fund-MountVernon.pdf
[33]
https://www.neighborhoodindicators.org/sites/default/files/publications/Memphis%20Property%20Hub%20Demo_Councilman%20Smiley_20.03.19.Innovate%20Memphis.pdf

> **Promising Practice on Neighborhood Snapshots**
>
> **Providence, Rhode Island:** Though it is not focused on code enforcement, Neighborhood Snapshots is an example of a data platform that allows the public to view data on neighborhood indicators in the form of charts, graphs, and maps. It includes data on demographics, transportation, economics and housing, new development projects, social and environmental health, flooding, and sea level rise.[34]

3.2.5   Landlord Profile

A Landlord Profile aggregates complaint and violation data according to a landlord's portfolio. This allows city officials and the public to identify which landlords have the most violations across the city. Identifying building owners is not always simple, as investors in rental properties will often establish a unique Limited Liability Corporations (LLC) for each property (for example, "123 45th Street LLC") and use this name as the property owner.

However, property ownership data can come from several different sources, such as the tax assessor's office, rental registration licenses, and the name on a recorded deed. And all of these sources include a business address supplied by the owner, which can sometimes serve as a better indicator that two or more buildings are owned by the same landlord.

> **Promising Practice on Landlord Watchlists**
>
> **New York City Landlords Watchlist:** The watchlist is a public tool that enables tenants, public officials, advocates, and other concerned individuals to identify which residential property owners have the most violations of the New York City Housing Maintenance Code. The list is published annually by the City's Office of the Public Advocate, a unique city-wide elected office that oversees city service delivery and helps to resolve issues faced by residents trying to access services. The Watchlist uses ownership data provided to the City's Department of Housing Preservation and Development to link landlord portfolios and aggregate the total number of violations. The data is presented as a list and as a map, and users can search for a building address to learn how many violations the building's owner has across the city.[35]

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[34] https://neighborhood-snapshots-pvdgis.hub.arcgis.com/
[35] https://landlordwatchlist.com/landlords

> **Promising Practice: "Who Owns What?" Data**
>
> **New York City:** The non-profit JustFixNYC uses ownership data to expand on making connections among multiple business and personal addresses used by landlords. This helps overcome the limitations created when landlords register their properties using different LLCs. The linkages made are only speculative, however, as there may be reasons that more than one landlord uses the same address, such as the use of the same management company or attorney, whose address is registered with the City. Who Owns What? provides the number of violations at a building, the year built, the number of units, and the number of evictions. It also provides information about the landlord's entire portfolio, including an average number of violations across the portfolio compared with the city-wide average.[36]

3.3 Needs Assessment

Residents of Des Moines have very little access to data and reports from DNS. Focus groups with residents revealed that some neighborhood associations previously received reports on current conditions and trends from DNS inspectors who would provide the information while attending regular community meetings. There is no publicly available data, however, on complaints or violations at a particular property, or the status of the property's rental license. The City does not link landlord portfolios to show which landlords collectively have the most violations across the City.

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[36] https://whoownswhat.justfix.nyc/

4.0 Actionable

4.1 Current State

The Des Moines Department of Neighborhood Services uses data to prioritize rental inspections. The City's tiered rental inspection protocol, in which the expiration date of a property's rental license is determined by how many violations are found during an inspection, is dependent upon violation data, and properties with more violations are inspected more often.

Data is also used to inform the decisions of the Housing Appeals Board. DNS inspectors prepare a report for the Board that includes data points such as the property's violation history and current conditions. There are no set criteria by which this data is evaluated, however, and the decisions of the Board are discretionary.

Under the City's Invest DSM program, owners of property within the boundaries of City-designated Special Investment Districts are eligible for grants and other financial incentives to make improvements to their properties. The program is based on data from a 2018 Market Value Analysis conducted by a third-party consultant on behalf of the City.[37] The analysis used "demographic, socioeconomic, real estate, and City-provided data sets," as well as visual observations about residential property conditions. Properties were given a score and these scores were used to designate neighborhoods as either Strong Submarkets, Distressed Submarkets, or Middle Submarkets.

Using this analysis, the City designated four pilot areas, called Special Investment Districts, on which to focus and to test strategies to strengthen middle-market neighborhoods, or those neighborhoods that are "neither the strongest in the city in terms of residential property conditions, nor the weakest."[38] Programs available in these areas include:

- Block Challenge Grant Program, in which groups of at least five neighbors are eligible for matching funds up to $2,500 for property improvements.

- A Homeowner Renovation Program, in which owners may receive forgivable loans and grants to invest in their homes through renovation projects that "improve the curb appeal, functionality, and marketability."

- A Single-Family Developer Program that provides financial incentives to "encourage investor-developers within the Special Investment Districts to make above-market investments in properties that improve the desirability of the neighborhood."

- A Commercial/Business Program that provides a one-to-one matching grant for 50% of eligible project costs, up to $10,000 for pre-development costs or $25,000 for construction.

- A Rental Rehab program for owners of rental properties with ten or fewer units, which provides owners with a forgivable grant, secured with a promissory note and mortgage on the property.

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[37] https://councildocs.dsm.city/Resolutions/20180625/czbllc%20report.pdf
[38] https://investdsm.org/about/

Community Engagement on Current State

Respondents showed a very strong interest in analyzing data to address indications of racial disparities, or assessing the impact that fees and fines may disproportionately affect the working poor. The majority also felt it was either "Extremely Valuable" or "Valuable" to hire data analysts for the Department of Neighborhood Services to conduct analyses along with those that may be requested by a Community Advisory Team.

Three out of four respondents viewed forming a task force to address specific issues such as blight, evictions, nuisance properties as either "Extremely Valuable" or "Valuable," as they did with forming an ongoing Community Advisory Team that "collaborates with code enforcing agencies on what's learned from data and ways to respond." And nearly three-quarters considered monitoring and responding to data that indicates racial disparities and biases in general a priority.

Table 7
Actionable Value Ratings of Task Forces, Community Advisory Team, Disparity Indicators
Research, Data Analysts, and Digitalization of Data

How valuable do citizens consider collecting data related to the following:	Extremely Valuable	Valuable	Neither Valuable/ Not	Somewhat Valuable	Not Valuable
Form a Task Force to address a specific issue raised by data (e.g. on evictions, neighborhood blight).	32.00%	46.00%	4.00%	10.00%	8.00%
Form a Community Advisory Team that collaborates with code enforcing agencies on what's learned from data and ways to respond.	28.00%	48.00%	10.00%	8.00%	6.00%
Do further research to address findings requiring action (e.g. address racial disparities, fees that disproportionately impact the poor).	44.00%	28.00%	8.00%	12.00%	8.00%
Hire data analysts dedicated to collecting, analyzing & integrating data across agencies	14.00%	40.00%	22.00%	16.00%	8.00%
Invest in digitization & resources to adopt best practices in collecting, analyzing and acting on data.	10.00%	50.00%	20.00%	14.00%	6.00%
Monitor & respond to data that indicates racial disparities & biases in general	38.00%	34.00%	14.00%	6.00%	8.00%

Community Engagement | Survey Open Comments and Focus Group Discussion

Most discussion centered upon the benefits of the ideas that were presented in Table 7, above. A Community Advisory Team was seen as very positive and an opportunity for collaboration to help identify issues, review findings from data, and discuss what it means and how to respond. A liaison assigned at

DNS to work with the Neighborhood Associations was seen as extremely valuable, as many recognized the difficulty in residents and inspectors attending monthly meetings.

The sentiment shared by one of the participants that being *"data-driven and intentional about what you want to get done, gives purpose to your work"* resonated with the group. Regarding data and criteria for decisions made by the Housing Appeals Board, one of the survey respondents recommended that the Housing Appeals Board be replaced with Administrative Law Judges who better *"understand how to handle such issues through due process and a fair trial process."*

At the end of the survey, respondents were asked if they had any other thoughts that they'd like to share.

A good number of the respondents who wrote a comment (30%) welcomed the open conversation via focus groups and the open-comment opportunities in the survey. They were also appreciative of the work that Housing Inspectors and DNS do, exemplified in this comment:

"I do appreciate all the hard-working folks at neighborhood inspections and zoning. They certainly do not have an easy job and I have been satisfied with the service received from them when voicing my concerns."

On the other hand, concerns were raised by others on the need for maintaining a *"database on older and handicapped individuals to allow them either more time to clear sidewalks or actually helping them clear those sidewalks."*

And finally, one touching comment that captures why the work of enhancing neighborhoods is so vital:

"When I was coaching and took kids home after practice, some would whisper 'take me last' because they were ashamed of their housing situation. This always stuck with me. Let's make kids proud of their housing situation and hold all landlords accountable."

4.2 Ideal State / Promising Practices

As governments have placed an increased emphasis on identifying inequitable outcomes that may arise from a jurisdiction's institutions, laws, and policies, researchers and practitioners have approached the question of how code enforcement can contribute to or protect against inequitable outcomes. Are there policies or practices that harm vulnerable communities? Can code enforcement be used to mitigate inequitable conditions?

According to a report by CitiesRise**,** a consortium of cities and town in New York State, and the Hester Street Collaborative, an urban planning, design and development nonprofit:

> *Like many powerful tools, code enforcement often reflects the values and goals of those that wield it. It can be used to intentionally or inadvertently target, penalize and displace vulnerable populations, particularly low income, immigrant and other communities of color.*
>
> *It is therefore critical for code enforcement to institutionalize equity and ensure that standard operating procedures do not disparately impact vulnerable populations. In fact,*

code enforcement policies and practice must be designed to advance equity through proactive protection, increased investment and meaningful civic engagement in those same communities.[39]

Advancing equity may seem like a tall order for a department that is concerned with enforcing building and property codes. But code enforcement officers face challenges related to inequities that exist in our cities and neighborhoods today, such as concentrated poverty and segregation, crime and incarceration, disinvestment and discriminatory lending policies, limited economic opportunity, poor health and access to care, and an inadequate social safety net. All of these factors weigh on a code enforcement agency's ability to keep properties up to code and to improve the physical upkeep of neighborhoods. And code enforcement efforts may inadvertently contribute to existing inequities.

Conversely, intelligent code enforcement can contribute to ameliorating or reversing these conditions.

To ensure equity, a code enforcement agency must act strategically, collaborate with other agencies, and be equity-centered.

- **Strategic code enforcement** emphasizes the use of data to make decisions on how to deploy resources, administer programs, and enforce the codes. Data allows the agency to be proactive instead of reactive, to prioritize inspections and enforcement, and to target the right responses at the right time. Strategic code enforcement emphasizes compliance – and the support, education, and outreach that leads to it – as its core strategy. And it uses a portfolio of strategies ranging from outreach and education to civil litigation, market mechanisms and other levers outside of the traditional code enforcement toolkit.

- **A cooperative approach to code enforcement** means taking a holistic view of how code enforcement is related to social services, public health, and community development. Data sharing or reporting between departments allows for relationships between variables to be studied, and to understand how the policies and practices of one department may impact outcomes related to another department. Agencies collaborate and cooperate to tailor policy responses and use data to measure impact.

- **An equity-centered code enforcement approach** means reorienting code enforcement officials to serve as partners of the community and ensuring that they are respectful of and responsive to the populations they serve, are culturally competent, and equipped to meet a wide range of resident needs. Like strategic code enforcement, equitable code enforcement uses a portfolio of enforcement strategies and brings in other resources including grants to help distressed neighborhoods.

  An equitable approach to code enforcement is one that recognizes that:

  o Some property owners are in non-compliance because they unable to make repairs, while others are in noncompliance because they don't want to make repairs.
  o Generally, landlords have power over tenants.

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[39] https://hesterstreet.org/wp-content/uploads/2019/07/CR_-Phase-I-_Equitable-Code-Enforcement-report_FINAL-JUNE-2019.pdf

- o Some residents have trouble understanding English.
- o Fines and fees have a bigger impact on low-income property owners than those with more resources.
- o Education and assistance may result in higher rates of compliance than fines and fees.
- o Complaints may be the result of bias or discrimination.
- o Some residents feel empowered to engage with government agencies and employees, and some may be reluctant to do so.

When an equity-focused approach is practiced, data can be used to understand the demographic and socio-economic factors of a neighborhood and how different enforcement approaches might impact neighborhood residents. Data can guide outreach and education efforts by identifying households at risk. It can guide policy development by targeting certain properties and measuring the impact of new programs.

When taking all these approaches holistically, data can be used to measure whether certain code enforcement actions lead to inequitable outcomes, such as whether code-related assessments or judgements against property owners in low-income neighborhoods lead to further destabilization, such as evictions, tax delinquency, or foreclosure. It can use code enforcement data to address existing inequities, such as racial disparities in childhood asthma.

Data can be used to give tenants more information about their landlords and buildings, such as the number of violations and how many buildings their landlord owns. It can be used to tell a code enforcement agency whether it needs to provide language translation services. And data can be used to uncover bias in discretionary decisions. There are likely dozens of other questions that could be asked to better understand inequities. An equity-centered lens allows policymakers to ask questions about inequitable impacts, to use data to answer these questions, and use cross-departmental collaboration to tailor policy to get to the desired outcome.

Community Engagement Views on Equity

Both the survey and focus groups touched upon issues of equity, disparities and bias that have been discussed throughout the report on community engagement. One open-ended question asked specifically, "Do you have any thoughts on what an equity lens should look like to analyze data that helps identify disparities on race, ethnicity, age, gender, and income?"

Most respondents entering comments recognized that issues of equity, disparities and bias do exist, that "evening the playing field for all people" is needed, and that rules to make housing and neighborhoods safe and "up to code" should be applied uniformly and fairly. Approaches to applying an equity lens offered by some respondents include recognizing that generational home ownership *"has historically made it difficult for people of color to own property and build wealth"* and tracking *"the issue of redlining and its [e]ffect on the community*."

Some also raised the equity issue of language barriers and their impact on understanding code requirements, data ,or how to access services. As one respondent explained it:

"If something isn't being cleaned up, work with the owners to determine why and not just issue a 6-page legal document threatening legal action and fines. The city is full of people whose first language is not English, thus a document like that is never going to be read properly and acted on accordingly."

To prevent people from feeling singled-out with regard to meeting standards of property up-keep and zoning, a few offered the idea of providing "Welcoming Packets" when families and individuals move into a neighborhood. These would explain in a friendly manner resources, services, and social/recreational opportunities in the neighborhood along with code enforcement standards in lay terms and in multiple languages.

One person summed up what they felt an equity lens would provide this way: *"I would hope that through an equity lens that those who need a 'leg' up get it, and those who don't need it correct the problem themselves."*

Only about 10 percent of the respondents responded that there is little to no need for an equity lens when rules are objectively applied to everyone.

4.3 Needs Assessment

In comparing the Current State of DNS "Actionable" data with the Ideal State of promising practices in the field of data and code enforcement, four core needs emerged. They are:

4.3.1 Need for a DNS Strategic Plan

Strategic plans set an organization's vision and strategic course as to how they will achieve that vision, usually over a three-to-five-year time-period. The process involves identifying goals and objectives along with Key Performance Indicators that measure how well an organization operationalizes those goals and realizes its vision. Monitoring progress allows an organization the capacity to fine-tune its strategies as needs and circumstances arise. Data is an essential building block to the foundational support that a strategic plan brings to an organization.

Currently, DNS functions without a Strategic Plan that would provide it with the infrastructure from which to build its data system. The Department also appears to lack Quality Assurance policies as to the accuracy, completeness, validity, consistency and timeliness of data and information collected and recorded.

4.3.2   Need for Key Performance Indicators

Key Performance Indicators are quantifiable measures of performance over time for specific goals and objectives. These KPIs provide benchmarks for teams to gauge progress over time and reassess and/or refine the strategies used to attain them. KPIs further serve as guideposts for determining an organization's strategic, operational and service performance. Currently, DNS has identified six Key Performance Indicators for the department, focused on the response-time regarding inspections of Priority One and Two Complaints.

There are, however, no Key Performance Indicators on data related to the collection, analysis and use of data with DNS or how and what is shared with the public, City leadership, policymakers and community

stakeholders. Furthermore, there is no methodology for assessing how data informs the decision-making of code enforcing management or inspectors in the field or is used for collaborative community problem-solving.

4.3.3 Data Informing Housing Appeals Board (HAB) Decisions

DNS inspectors prepare reports for the Board that include data points such as the property's violation history and current conditions. Beyond that, however, there are no standardized metrics or criteria that are applied to the violation and/or issue to determine what specific action should be taken. Since the Board's decisions are discretionary, allowing broad interpretation, it would do well to have objective, validated metrics and criteria to guide its decisions.

There also appears to be no data listing the amount of fines issued by HAB, as a result, it's not possible to determine analytically whether or not fines at various levels of severity are a deterrent or simply considered the "cost of doing business" by property owners.

There is also a need to gather data on how many appeals are accepted and rejected by neighborhood, demographics of appellant, and type of enforcement taken.

4.3.4 Data Informing Equitable Outcomes

By collecting, analyzing, and reporting data, the City of Des Moines can evaluate whether its code enforcement efforts are leading to equitable outcomes. By tracking community development indicators such as evictions, foreclosures, and tax delinquencies, the City may determine what impact its actions (or inactions) are having on residents in neighborhoods with particular socio-economic indicators, such as high poverty rates or foreign-born populations. The City could track inequitable health outcomes such as high blood lead levels in children and asthma hospitalizations to understand how they are related to property conditions, and to design interventions. Data analysis could tell City leaders whether decisions by the Housing Appeals Board are made in an equitable manner, as are the impact of fines and fees on property conditions. Data may indicate whether gentrifying neighborhoods experience a spike in complaints against rental properties or renters themselves, as new residents attempt to compel enforcement actions against conditions that they may find personally distasteful but do not impact health and safety.

An equitable code enforcement lens also may lead City leaders to reconsider the priorities of Invest DSM, under which, currently, neighborhoods with more economic and physical distress have less access to grant and loan programs than "middle" neighborhoods.

5.0 Recommendations

The consulting firm was asked to develop a set of recommendations for the City to consider in applying what was learned as a result of the Needs Assessment and promising practices that frame an Ideal State that the City can achieve by enhancing its Current State of code enforcing activities. Thirteen recommendations are presented.

5.1 Create a three-to-five-year strategic plan for DNS that includes a focus area on data accountability, analytics, transparency and acting upon data as presented in this report.

As the Department of Neighborhood Services is developing a strategic plan, it should appoint an employee or hire an experienced strategic planner with strong facilitation skills to guide the process and produce the plan. A strategic planner may be an employee of the City of Des Moines who has the skillset and experience, university interns and/or professors who perform strategic plans as a case study or a consulting group that performs strategic planning. The planning process would include a Strategic Planning Leadership Team and gather input from the code enforcing staff, administrative and planning staff of DNS, and staff from the City's IT Department among others considered integral to DNS.

Implementation:

DNS leadership should form a Strategic Planning Team to guide the process. The elements of the strategic plan would include refining the mission of the NID and identifying values and a vision statement for the organization. A Strengths, Weaknesses, Opportunity, and Threats (SWOT) analysis should be conducted that includes assessing what resources will be needed over the course of the next three to five years and gathering insights from community member stakeholders (e.g. Neighborhood Associations, non-profit and business sectors). Goals, objectives, action steps, timelines and Key Performance Measures should then be developed to complete the plan.

5.2 Develop Data Key Performance Indicators to assess and track the outcomes DNS intends to achieve resulting from collecting, analyzing, sharing, collaborating, and acting upon data.

Implementation:

DNS should adopt additional Key Performance Indicators beyond the six-complaint response-time KPIs it currently tracks by reviewing the nine data points cited in the Analytic Ideal State section of this report (1.2.1 thru 1.2.9). Each provides the basis from which to create Key Performance Indicators.

For example, one set of Ideal State data points concerns the percentage of housing appeals that go to assessment and tax sale, or that result in the loss of the property. A strategy for reducing these rates might be for DNS to introduce a program to coach people to achieve compliance with code (rather than the current enforcement and sanctioning efforts). A Key Performance Indicator for this strategy would be the reduction achieved in the percentage of housing appeals that go to assessment and tax sale or result in the loss of the property; DNS would set target percentage reductions within certain time periods whereby it would consider the strategy a success. This results in a possible KPI for this set of data points. This same process could then be repeated to develop Key Performance Indicators for *all* the Analytic Ideal State data points.

5.3 Dedicate additional resources to conduct ongoing data collection and analysis.

Data analysis can be used to track agency performance, identify trends, inform enforcement decision-making and policy responses, provide public transparency, and measure outcomes. Currently, there is a lack of human resource capacity to generate the kinds of reports and analyses, and to create public-facing data portals and tools, from which policymakers, City Neighborhood Services staff, neighborhood associations and the public would benefit.

There are no data analysts on staff at DNS and no centralized City staff who conduct data analysis on behalf of agencies on a regular basis. In the past, DNS staff produced reports that allowed the Department to track department performance and identify trends in complaints or violations and to present reports to the public. One neighborhood association reported that it used to receive a DNS-generated report on complaint and violation trends semi-annually, but that this is no longer the case. DNS, however, has recently transitioned to a new software platform, EnerGov, that provides enhanced digitized capability for reports to be generated, but this functionality is still in the process of being fully activated.

Agencies are allotted a certain amount of tech support from the City's central IT agency, including DNS. However, staff at DNS have stated that the Department has already designated its IT support time for another project, and it is unclear when City staff might be available to build additional data analysis capability for DNS. Additionally, the City, through its contract with the developer of EnerGov, Tyler Technologies, is provided a certain number of service hours that can be used to program the software in a way that would allow the production of reports and to create new public-facing data tools.

Implementation:

DNS leadership should identify the types of data reports that would be useful for the Department to generate automatically, or through an easily navigable interface via EnerGov. In addition, DNS leadership should collaborate with the City's Chief Equity Officer and the Code Enforcement Policy and Practice Review Committee to identify sample models of public-facing data portals and tools that could be used for internal analysis and to share information with the public. DNS leadership and the City Manager's Office should then develop a list and prioritize the action steps to implement them.

DNS, the City Manager's Office, and the Information Technology Department (ITD) should then:

o compare the need for data reports, portals, and tools in concert with the City's current and new capabilities via EnerGov to create and maintain them.

o conduct an internal Task Analysis of "who does what" in data collection and analysis, the amount of time required to perform said tasks, and what skillsets are required to complete them.

o determine the number of hours of central City IT staff time will be allotted to DNS over the next 2-3 years, minus the time already committed to other projects, as well as the number of service hours that will be provided by Tyler Technologies in the next 2-3 years minus any time already committed for other purposes.

- determine if the City's existing software platforms can create the reports and tools that were identified, and if any additional software modules must be procured from Tyler Technologies.

- estimate the amount of City staff time required to produce the desired data reporting capabilities and to provide ongoing support and assess whether there is a gap between existing human resources and the need. If there is a gap, determine whether it would be more cost-effective for the City to hire more internal staff or to outsource these services.

5.4 Provide additional training to Neighborhood Services staff on using the EnerGov software. Staff have had access to the EnerGov software but have found it challenging to use, and as a result, are not taking advantage of the full potential of what the software provides.

Implementation Steps:

As discussed earlier, the City has engaged three training programs to fully use the EnerGov platform. It may be helpful to maximize the training by conducting a survey among all DNS staff using the platform and end-users to identify the nature and extent of their challenges. DNS should then create an internal data committee to review the survey results and determine the current needs of staff and gaps in current data output and reports. The EnerGov Project Manager and DNS leadership can then identify action steps to address any obstacles cited.

5.5 Collect additional data points that better inform policy and practice and the state of those being impacted by code enforcement.

Even though the Department of Neighborhood Services doesn't directly oversee such actions as evictions, foreclosures, water utility shut-offs, whether a tenant is present during an inspection of the property, or if a foreign language is spoken by the tenant, this type of data can uncover potential disparities that are not apparent without the data when matched with demographics.

Implementation Steps:

DNS leadership, in collaboration with the Chief Equity Officer, should develop outcome measures to help identify inequitable impacts of the City's code enforcement efforts. The City IT Department (ITD) should support DNS in data analysis among such areas as health and safety, habitability and sanitation, DNS service levels and response times, enforcement patterns and performance, community development outcomes, and neighborhood stability. Using these categories, DNS and the Chief Equity Officer, and ITD should identify outcome measures and Key Performance Indicators, and then apply an equity lens to assess how to continually enhance data collection, analyses, transparency and actionability of the data generated.

5.6 Integrate data from other existing sources.

Currently, there are other sources of data available that could better inform policymakers, community stakeholders and the public as to issues that require attention. For example, elevated lead blood levels and incidence of asthma, trackable through Emergency Department visits and hospitalizations, and the incidence and location of fires could be all related to building conditions that require inspection and remediation.

These data are accessible and could be integrated with EnerGov to inform code enforcement to redress poor quality-of-life outcomes.

Implementation Steps:

DNS, the Chief Equity Officer, and the Information Technology Department (ITD) should determine who holds the data and collaborate to find solutions for data integration. ITD should be the point of contact for communications with other agencies and organizations concerning data sharing and access, along with setting up the infrastructure for data transfers to occur automatically and at regular intervals.

5.7 Develop and provide an Open Data Portal available on the City of Des Moines website.

The Open Data Portal would provide access to data from across City agencies. The portal would include datasets from DNS such as: complaints, inspections, violations, rental registration status, enforcement actions of judgements or assessments, and decisions of the Housing Appeals Board.

Implementation Steps:

The City's Information Technology Department should lead the creation of a City open data portal:

1. ITD should consult with the City Manager's Office and City Attorney to create an open data policy and to determine which data sets should and could be uploaded onto an open data platform.
2. ITD should determine the data formats that will be provided to gain access to multiple datasets. Spatial data would provide local and global projections.
3. ITD should determine which data platform will be used, such as ArcGIS or Socrata.
4. The City Manager's Office should establish an Open Data Working Group made up of ITD and representatives of agencies that manage data for their agency.
5. ITD should begin with a "pilot" in which it posts only a few data sets. This pilot could begin with DNS data.
6. Protocols should be established for automating and populating data uploads and updates.

5.8 Host a "university challenge" in which colleges are encouraged to access open data and answer an equity question related to code enforcement.

With data available through an Open Data portal, colleges and universities will be able to access and analyze the data, as will the public. The City could identify whether there are any existing external grant opportunities to work with local colleges and universities to craft data partnerships. The City could also make funding or other resources available to academic research and data teams. These teams would develop research questions and the methodology to measure the impact of code enforcement actions on equity and publish the results.

Implementation Steps:

The City Manager's Office should direct the Chief Equity Officer to contact the social science departments of nearby colleges and universities to discuss the goals of the project and how a partnership might take form. Simultaneously, the Chief Equity Officer should lead an effort to identify grant opportunities for a data partnership (this task can be delegated by the Chief Equity Officer). The City may also consider creating a grant for a data partnership program.

College and University teams would be encouraged to submit proposals for a research project that would utilize public data and would address an equity question regarding the City's code enforcement activities. The proposals would be judged by the Code Enforcement Policy and Practice Review Committee, DNS leadership, representatives from Neighborhood Associations and the Chief Equity Officer.

5.9 Develop standardized criteria, outcome and performance measures that guide the Housing Appeals Board (HAB) decision-making.

This would apply to appeals, variances, enforcement action and penalties in the administration of the Housing Code. It would require developing a matrix of data points that can be measured and analyzed to inform policy and practice in housing code enforcement as related to the decision-making of the Housing Appeals Board. For example, it would be helpful to know the number of appeals granted per year, per neighborhood, per infraction type; demographics (race, age, gender, home owner, corporate owner, rental property) and circumstances of appellants (e.g. COVID-19 related, change in property ownership, elderly status of home owner); number of appeals denied per type of complaint; demographics of appellant; length of time between when the complaint is received, a determination issued, appeal filed, appeal heard, and action taken; criteria for determining an appeal, providing a variance, and rendering a penalty; and amounts of fees and penalties assessed.

Implementation Steps:

DNS staff should develop a decision-making rubric for HAB members based on the criteria for decision-making included in the most recent training developed for the Board. DNS should also, with the help of ITD, develop a HAB database that can be used to aggregate HAB decisions and the details of the cases, and for DNS staff to perform analyses to test for bias and track outcomes.

5.10 Develop code enforcement related data portals and applications that can be used by the general public to learn about the conditions of their neighborhoods.

The City would develop data portals and web applications populated by code enforcement and other data that can be used by community members to generate reports on conditions in their neighborhood. Web applications would include a property profile portal upon which users can see current and historical data on complaints, inspections, violations, and enforcement actions including rental license status

Implementation Steps:

DNS leadership should collaborate with the City's Chief Equity Officer and the Code Enforcement Policy and Practice Review Committee to identify models of public-facing data portals and tools that could be used both internally and with the public. DNS leadership and the City Manager's Office should then

develop a list and prioritize that list. The City should then asses the additional capacity analysis as needed fully to conduct such ongoing data collection and analysis.

5.11 Develop a Landlord Property Profile that allows the public to view all buildings owned by a landlord across the City along with the violation, complaint and inspection status at these buildings, individually and in the aggregate.

Implementation Steps:

DNS with assistance from the City Manager's Office and ITD, should determine a methodology for aggregating rental code violation data according to the building's owner. The simplest method may be to use the owner information on file for the rental license, though this data should be confirmed to ensure that landlords are not using multiple names to prevent aggregation. Data should be presented for both the current year as well as the cumulative numbers over the landlord's entire history.

Data points that should be reported include:
- Number of units citywide.
- Building addresses.
- Number of complaints.
- Number of violations found.
- Number of violations cured.
- Number of open violations.
- Number of cases referred to the Housing Appeals Board.

Before publishing the data, DNS should test the tool for accuracy and all text or copy that will be used on the Property Profile should be approved by the City Attorney. Landlords should be mailed correspondence from the City explaining the Profile and providing a point of contact for any questions or concerns.

5.12 Develop an "Equity Lens" that identifies criteria and methodology to assess whether code enforcement efforts lead to equitable outcomes.

This recommendation requires creating and developing indicators and research questions that can be used to measure the impact of code enforcement on equity. The research questions can focus on the impact of enforcement actions on a property and the owners, such as outcomes related to judgements, assessments, and fees. This would mean examining community development indicators such as financial or physical distress of buildings, "triggering" events such as an eviction, foreclosure, tax lien, or abandonment. The questions would also focus on health outcomes, compliance, and market values.

Implementation Steps:

DNS leadership should collaborate with the City's Chief Equity Officer and the Code Enforcement Policy and Practice Review Committee to apply the City's Equity Framework and Toolkit to questions measuring the impact of DNS services. Using the categories previously discussed in Recommendation 5.3, the City would develop questions that can be measured, such as, "Are enforcement actions against landlords followed by an increase in evictions?" DNS should perform this type of data analysis with the support of the City IT Department and other appropriate departments that can provide insights on the issue being queried.

5.13 Develop a data-sharing agreement with the Polk County Health Department to connect the relationship between housing conditions and children's health. This recommendation would include tracking cases of elevated blood lead levels in children and incidence of asthma cases and hospitalizations.

The City and the Polk County Health Department could begin such an initiative by exploring how negative health outcomes related to building conditions can be measured, tracked, analyzed and integrated with housing inspector reports and aggregate health care provider data. The City and County would develop this data-sharing agreement by working with health care providers and public health experts to create a reporting system for children with asthma or elevated blood lead levels. These reports would lead to inspections of building conditions of the affected child's home.

Implementation Steps:

The City Manager's Office, ITD, and DNS should meet with staff at the Polk County Health Department, the Polk County Department of Community and Family and, potentially, the Iowa Department of Public Health, to discuss a data-sharing agreement and to discuss programs from other jurisdictions that monitor negative health outcomes related to asthma and elevated blood lead levels and direct code inspections.

The City should aim to establish an agreement in which data is sent over by Polk County once a month, indicating incidences of negative health outcomes, and including the address of the impacted family and contact information available as per HIPPA requirements. Discussions would determine which agency might be responsible for contacting families for follow-up services and the best method for coordinating home inspections and providing resources to homeowners and landlords.

6.0 Moving Forward

At the beginning and conclusion of our focus groups we asked participants a "before and after question," as you can see in the side bar.

We first asked them at the beginning to simply enter in the chat function of our Zoom focus group the first word(s) that come to mind when you hear "Code Enforcement." It was a way of framing our discussion as to the "current state" of enforcing code today. Many of the words that were entered also came up through open-ended comments from the survey that 51 people answered as well as the key informant interviews we conducted.

Many felt that the City is working hard to keep people safe and preserve the quality of life in neighborhoods. But they did find code enforcement confusing and, oftentimes, slowly chasing complaints rather than getting ahead of the conditions that cause them. They wanted access to data so they can be proactive and collaborative partners with the City in making neighborhoods thrive while all neighbors and businesses follow the codes designed to preserve the quality of life they embrace.

At the conclusion of the focus groups, we asked participants to share what words would come to mind if the strategies and ideas they generated in the session came to fruition. This is what we refer to as the Ideal State throughout the report.

With the City's resources, vision and commitment to enhance code enforcement, as described and shown by all those who shared their insights, the positive accolades in the word cloud to the right will surely be realized.

CURRENT STATE
First word you think of when you hear "Code Enforcement"

IDEAL STATE
If ideal strategies are used, what word comes to mind when you hear "Code Enforcement?"

public works
making good ideas work for the better

Des Moines CODE Enforcement Data Initiative
Community Stakeholders Survey (January 2022)

The Mayor and City Council has asked the public policy firm, Public Works LLC, to review how law enforcement and code-enforcing agencies (e.g. housing and zoning) collect, analyze, share and act upon the data they assemble. In addition, the consultants have been asked to identify data best practices for the City of Des Moines to consider moving forward.

The focus of this survey is to gain insights from the community on **CODE ENFORCEMENT** data. We'll cover areas related to housing and property along with the fees, fines and appeals associated with each. The survey explores how, when and what is collected, how it is analyzed and shared with the public to inform sound and equitable policies and practice. Results from this survey will be included in the full report of this project due in the spring of 2022. To maintain confidentiality, this survey is anonymous.

Please complete the survey by January 22nd.

Our questions focus on four core principles that Code Enforcement data should achieve as shown in the graphic below. So, let's begin.

CORE PRINCIPLES OF CODE ENFORCEMENT DATA

Accountable
What, When, How to Collect

Analytic
Assess, Research, Interpret

Transparent
Share Openly & Discuss

Actionable
Insights Lead to Action
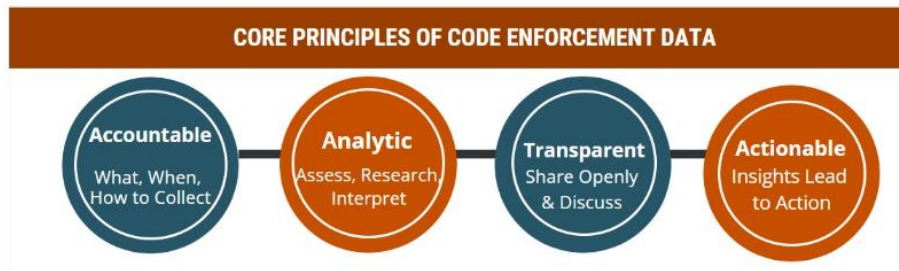
1. If you are affiliated with an organization, which category best describes it? (Please choose one)

○ Advocacy

○ Business

○ Human Services

○ Faith-Based

○ Health Care Services

○ Education

○ City/Government Services

○ No Affiliation with an Organization and/or Retiree (Please tell us about yourself in the comment box below)

Other

DATA RELATED TO HOUSING

2. How valuable do you consider collecting data related to the following:

	Extremely Valuable	Valuable	Neither Valuable or Not Valuable	Somewhat Valuable	Not Valuable
Percent of health & safety violations per property/owner	○	○	○	○	○
Data that describes outcomes resulting from violations	○	○	○	○	○
Percent of homeowners and renters by race, gender and age	○	○	○	○	○
Data that tracks racial, age and gender disparities in housing	○	○	○	○	○
Number of health & safety complaints made by renters per property/owner	○	○	○	○	○
Action taken by Housing Inspectors in response to complaints filed.	○	○	○	○	○

Any other ideas you'd like to share?

3. Some say that complaints are under-reported because renters who are low-income are hesitant to complain about health & safety concerns because they have nowhere else to go and fear retaliation. How much do you think this to be true?

○ Very True   ○ Somewhat True

○ True   ○ Not True

○ Neither True or False

Feel free to share further insights on your answer:

4. How valuable do you consider collecting the following data:

	Extremely Valuable	Valuable	Neither Valuable or Not Valuable	Somewhat Valuable	Not Valuable
Percent of housing appeals that go to assessment, tax sale and/or result in loss of property	○	○	○	○	○
Demographic data on housing appeal cases resulting in loss of property (e.g. age, gender, race, income)	○	○	○	○	○
Breakdown of Health & Sanitation violations by rental and private property owners	○	○	○	○	○
Property Clean-Up citations issued by zip codes, neighborhoods	○	○	○	○	○
Demographics of property owners cited for Property Clean-up (e.g. age, race, gender,	○	○	○	○	○

income)

Outcomes of Property Clean-up citations (resolved, Public Works Clean-up, assessment bill, liens, loss of property)	○	○	○	○	○
Percent of property owners who sign-up for payment plans on assessments and fines	○	○	○	○	○
Number of rental licensees issued by neighborhoods	○	○	○	○	○
Percent of liens waived and to whom (e.g. property owner, developer)	○	○	○	○	○

Any other thoughts you'd like to share?

[text box]

DATA RELATED TO FEES, FINES AND APPEALS

5. How valuable is it to analyze data to determine:

	Extremely Valuable	Valuable	Neither Valuable or Not Valuable	Somewhat Valuable	Not Valuable
The impact that fees and fines have on the working poor	☐	☐	☐	☐	☐
The impact that fees and fines have on property owners	☐	☐	☐	☐	☐
Market data of the city and neighborhoods (e.g. housing	☐	☐	☐	☐	☐

sales, prices, trends, median rent rates, foreclosures)	☐	☐	☐	☐	☐
Primary ownership of properties (analyze multiple names, deeds, mortgages, liens)	☐	☐	☐	☐	☐
Property owner rental history (rate of property shut-offs, citations, inspection reports, arrears on bills and taxes, evictions)	☐	☐	☐	☐	☐
Types and incidence of blight within neighborhoods (e.g. Des Moines "Blitz on Blight)	☐	☐	☐	☐	☐
Types of appeals granted by the Housing Appeals Board and to whom	☐	☐	☐	☐	☐
Criteria used to warrant that a lien be issued	☐	☐	☐	☐	☐
Demographic profile of those impacted by liens	☐	☐	☐	☐	☐
Criteria used to define "nuisance properties"	☐	☐	☐	☐	☐

Is there some other data you think would provide valuable insights with regard to code enforcement?

[ ]

DATA TRANSPARENCY

6. Below are some ways that Code Enforcement Agencies make data transparent. How

much of a priority would you rate any of the following strategies?

	Extremely High Priority	High Priority	Somewhat of a Priority	Not a Priority	No Opinion
An online **"Code Enforcement Dashboard"** on performance (e.g. # of open complaints, length of time to respond, investigate & resolve; review outcomes of Housing Appeals Board actions, decisions, fines).	○	○	○	○	○
Continue **"Blitz on Blight" Dashboard** with interactive map and cite declarations of blight, outstanding judgements, nuisance violations & liens imposed by the City.	○	○	○	○	○
A **"Property & Landlord Profile Portal"** with data on building specs, location, number of units, age of building, roof, boiler, shut-off history, building code violations, inspection reports & citations, owner/landlord profile, status of rental license).	○	○	○	○	○

A **"Neighborhood Profile Dashboard"** consolidates data from other

dashboards and a Market Value Analysis but in neighborhoods or other areas e.g. school districts, city council districts, police precincts.	○	○	○	○	○
Conduct **Citizen Satisfaction Surveys** by an independent organization.	○	○	○	○	○
Provide updates on data findings (via email, website, mail)	○	○	○	○	○

Do you have other suggestion(s) on how to enhance data sharing and transparency?

[ ]

APPLYING AN EQUITY LENS

7. Using an equity lens to analyze data that helps identify disparities based on race, ethnicity, age, gender and income can inform policy makers on how to make code enforcing policy and practice more equitable. Do you have any thoughts on what an "equity lens" should look like? What would you want it to accomplish?

[ ]

DATA LEADING TO ACTION

8. Some Code Enforcement Agencies take action steps to address issues that come to light via data through the strategies below. How valuable do you consider each of these?

	Extremely Valuable	Valuable	Neither Valuable or Not Valuable	Somewhat Valuable	Not Valuable
Form a Task Force to address a specific issue raised by data (e.g. on evictions, neighborhood	○	○	○	○	○

blight).					
Form a Community Advisory Team that collaborates with code enforcing agencies on what's learned from data and ways to respond.	○	○	○	○	○
Do further research to address findings requiring action (e.g. address racial disparities, fees that disproportionately impact the poor).	○	○	○	○	○
Hire data analysts dedicated to collecting, analyzing & integrating data across agencies	○	○	○	○	○
Invest in digitization & resources to adopt best practices in collecting, analyzing and acting on data.	○	○	○	○	○
Monitor & respond to data that indicates racial disparities & biases in general	○	○	○	○	○

Do you have any other strategy to consider?

9. We've reached the end of our survey but before we conclude, are there any other insights that you'd like to share?

10. It would be helpful for us to know the geographic distribution of our survey respondents. Would you be kind enough to share your zip code?