



Dayton, Ohio

Exploring Open Data Portals and Data Consortia for VAD Property Interventions

Memorandum

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RE: Exploring Open Data Portals and Data Consortia for VAD Property Interventions

This memorandum explores the benefits of both data consortia and open data portals as tools for local governments to monitor, manage, and address vacant, abandoned, and deteriorated (VAD) properties. The purpose of this research is to help inform the City of Dayton and its partners as they embark on better utilizing the several dozen data sources and software currently used across the city. We hope this is a useful follow-up to your work post-Vacant Property Leadership Institute. While we could not answer every question posed about data consortium and open portals, we hope the included examples can provide connection points for Dayton to more deeply explore its questions. We look forward to hearing about your progress and supporting future next steps in your VAD property journey.

Data and VAD Properties

Data is critical for understanding local market conditions and building market-responsive revitalization strategies. Local decisionmakers when equipped with data from city departments and affiliated organizations are better poised to create equitable, effective, and efficient revitalization strategies. Tracking key indicators of VAD like code violations, crime rates, foreclosures, and delinquencies provides insights on market conditions ranging from understanding changes over time to using spatial analysis to track areas with high concentrations of VAD. Systematic data tracking, updates, and analysis allows for decisionmakers to understand underlying-root factors that keep problem properties “stuck” in decline and combat their negative impacts on neighborhoods. Despite the benefits of strong data collection, setting up and maintaining the necessary systems to collect, monitor, and upkeep this data takes time, skill, and financial investments. As discussed below, data consortia and portals can be designed for a wide range of data needs and are not usually designed to exclusively inform VAD property strategies. Robust data, which is aggregated and connected can aid not only in basic data analysis (e.g., number of vacant houses) but also in robust analysis and evaluation (e.g., crime rates before and after a VAD property intervention). Data consortia and open data portals are both powerful tools that, especially when paired, can increase information and access to robust and reliable data for all community stakeholders.

Understanding Data Portals and Data Consortia

What is a Data Consortium?

A data consortium refers to a group of organizations, often operating in the same geographic area, that decide to pool their respective data, information, and financial resources for the benefit of everyone involved. A data consortium's primary purpose and value stems from the collective ability to source relevant and reliable data. In short, the participating groups agree that “everybody pays, everybody plays,” and as a result everybody enjoys the mutual benefits of coordination. As additional organizations join, participants enjoy greater access to meaningful and reliable information. Data consortia vary in types of data hosted and how much data is publicly shared. Many data consortia support or host their own open data portals to publicly share their pooled data.

Benefits

For all communities—from those with an established or mature [geographic information system \(GIS\)](#) platform to those still streamlining their data tools—the value of implementing a consortium is wide ranging. First, there are the economies of scale resulting from shared costs, greater efficiencies, and enhanced coordination. Reducing duplication or redundancy of effort related to procuring hardware, maintaining software, and designing effective digital infrastructure makes more room for more users to engage in complex analysis and strategic thinking. The possibilities and potential applications span everything from public policy concerns to environmental stewardship to attracting economic growth and development.

Challenges

Data consortia require thorough infrastructure and upkeep. Though sharing tools between organizations can help with the cost of software and any staffing needs, consortia are definitely an investment for a community in cost, staff, and relationship building efforts.

What is an Open Data Portal?

An open data portal refers to an online platform that allows users to easily access a collection of free and downloadable data. In the United States, state and local governments often use open data portals to host government and affiliate data and help increase transparency around programs and operations. These open data portals are generally, but not exclusively, run by public (e.g., government or universities) entities or data consortia. Open data portals are governed by a data governance framework and a set of data standards, practices, and policies.

Benefits

For local governments, there are immense benefits for fostering a strong open data platform. Many local governments use open data portals to meet their Freedom of Information Act requirements. Rather than requiring a formal process to request information, open data portals allow residents, local organizations, and other community stakeholders to easily access information about their communities. Open data access can also grow public trust in government by increasing transparency around government processes and metrics. Access to relevant, reliable, and quality data ultimately allows community stakeholders to better understand their community needs, perform their own research and analysis, and improve public accountability. Some local governments leverage their open data portals to increase civic

engagement, through events like [Baltimore](#) and [Detroit's](#) Data Days and Buffalo's [Community Showcase](#).

Challenges

As with data consortia, open data portals have upkeep costs in software and staffing needs. Data portals especially, without the shared resources of data consortia, are at risk of growing outdated without regular time investment and monitoring. There are a variety of software platforms that can host an online open data portal, though they each add an additional cost.

Connecting base-, place-, & case-level datasets

Though both data consortia and open data portals can store and process non-spatial data as a list or spreadsheet of downloadable data, geospatial (GIS) data allows for compelling visual analysis. Presenting data through GIS allows for more robust visualization helping the user understand patterns and relationships throughout the data. The different levels of GIS data are outlined below.

- **Base-level:** basic data and details about essential infrastructure are compiled and stored for reference, such as streets, railroad, utilities, and parcel boundaries.
- **Place-level:** Planning, political, environmental, or programmatic boundaries that have a corresponding geographic location. If the underpinnings of the base-level environment are established in a GIS environment, place-level data can be incorporated and overlaid with base-level data.
- **Case-level:** Functional, community-level, or crowd-sourced data that can contribute to the analysis, interpretation, and visualization of complex topics for further discovery. Case-level data refers to data points that are both geographically significant and tied to functional or programmatic activities related to land use, ownership, code enforcement, budgeting and investment, among many others.

Examples of base-, place-, and case- level data

Base-level	Place-level	Case-level
<ul style="list-style-type: none"> • Parcel identification • Streets & roads • Property ownership • Easements • Water & sewer • Gas & fiber utilities • Topography 	<ul style="list-style-type: none"> • Neighborhoods • Zip codes • Census tracts • Land use & zoning • Service areas • Special purpose districts • Political districts • Floodplains & watersheds 	<ul style="list-style-type: none"> • Investments & expenditures • Tax assessments & delinquencies • Utility shut offs & subscriptions • Real estate sales & purchases • Requests & approvals • Construction & development

Geospatial data and GIS hold the key to unlocking greater understanding and better-informed, data-driven strategies and interventions. Layering base- and place-level data with case-level data from government services, academia, nonprofits, businesses, or community advocates puts powerful analytical tools in the hands of a broader range of stakeholders. The key to leveraging these data is that they are accessible and manageable in a mappable context (often referred to as “geocoding”), meaning they must be digitized, standardized, and specifically structured to serve this purpose.

Investing in Technology and Staff

Early and consistent investments in the foundational data and GIS architecture and design will provide the data management, mapping and visualization, and analytical capabilities both consortia and open data portals require to meet their respective business and functional needs. Today's technology now provides many options that accommodate users across the spectrum of data and GIS knowledge and expertise. Whether users rely on tangible data storage or cloud-based applications, a well-organized data consortium or open data portal can meet all users where they are, particularly when the data are provided in a user-friendly, secure, web-based, online environment. Providing data in user friendly and accessible ways is incredibly important for supporting residents and mission-driven community organizations.

Elements for Effective Data Sharing

1. A digital platform (computer infrastructure and software) that supports access to and the use of GIS data and applications;
2. Comprehensive, high-quality, and regularly updated databases;
3. Custom GIS services, applications, and support to users; and
4. Administrative and management services and systems to ensure efficient operations.

The cost of hosting platforms, updating software, and data upkeep can vary. A community's needs, staff capacity, and existing technology will all impact what investment is needed. Software like [Esri](#), [Azavea](#), or [Tolemi](#) can help take away part of the technical burden of upkeep and hosting these data but at a greater price point. Data consortia or open data portal hosting entities with greater in-house technical staff may pay less for technological upkeep but more for staffing.

Long-term Sustainability

The need for building interpersonal and interagency trust, shared values, and collaboration is paramount for long-term sustainability of data consortia and open data portals. Local champions and visionaries are often the driving force of successful, sustainable and effective data consortia and portals. Without strong data governance, technology and staff investment, and open use and communication, these tools risk falling out of date, falling behind technological advances, or becoming obsolete. Having substantive conversations between traditional practitioners and GIS or data specialists can help imbed innovation while also protecting privacy, retaining autonomy, and ensuring proportionate benefits to all involved. Cultivating the lines of communication across stakeholders has the potential to help diverse stakeholders engage and contribute to larger community conversations in a meaningful way. Making space to build consensus and support and grow over time in literal and digital conversation can open minds to the possibilities that are within reach.

Examples of Data Consortia and Open Data Portals

Data Consortia Examples

The following are examples of data consortia hosted by or affiliated with local government entities. These data consortia were selected in part from cities that received Results for America's [What Works Cities Certification](#), a certificate that evaluates a city's data-driven governance, and cities involved in the Urban Institute's [National Neighborhood Indicators Partnership](#), a peer network of open data intermediaries and designated [Census State Data Centers](#). Based on this list, cities were included in the following list if they 1) have high vacancy rates and/or have previously worked with Community

Progress; 2) their data sharing agreements included or centered local government; and 3) their data is routinely updated.

Consortium	City	State	Organizations involved	Description
Northeast Ohio Community and Neighborhood Data for Organizing (NEOCANDO)	Cleveland	OH	<ul style="list-style-type: none"> • Cuyahoga County Fiscal Office • Cuyahoga County Clerk of Courts • Cuyahoga County Land Bank • Case Western University 	NEOCANDO is a suite of innovative data tools from the Center on Poverty and Community Development, a research institute housed at Case Western Reserve University's Jack, Joseph and Morton Mandel School of Applied Social Sciences. NEOCANDO is a key example of land bank involvement in a consortium, focusing on property and health data.
Connecticut Data Collaborative (CTData) and Hartford Data Collaborative	Hartford	CT	<ul style="list-style-type: none"> • University of Connecticut • City of Hartford Department of Family, Children, Youth, and Recreation • Connecticut Department of Education • Hartford Public Library • Hartford Public Schools 	CTData provides accessible public data that they process, curate, and display in a user-friendly format on their online data portal and through interactive data tools . They also support the Hartford Data Collaborative which creates visuals of health and housing data.
Louisville/Jefferson County Information Consortium (LOJIC)	Louisville/Jefferson County	KY	<ul style="list-style-type: none"> • Louisville/Jefferson County Metro Government • Metropolitan Sewer District • Property Valuation Administrator • Louisville Water Company 	LOJIC represents a multi-agency effort to build and maintain a comprehensive GIS to serve all of Louisville Metro, Jefferson County, Kentucky. Their spatial data focuses on properties and utilities in Louisville/Jefferson County. <i>See below for an in-depth description of the LOJIC.</i>
Western Pennsylvania Regional Data Center	Pittsburgh	PA	<ul style="list-style-type: none"> • University of Pittsburgh • Allegheny County • City of Pittsburgh 	Western Pennsylvania Regional Data Center hosts the data for several Pittsburgh and Allegheny County conservation and community development organizations. They have a comprehensive framework for data governance available on their website.

Open Data Portal Examples

The following are examples of open data portals hosted by or affiliated with local government entities. These data portals were selected from cities that received Results for America’s [What Works Cities Certification](#), a certificate that evaluates a city’s data-driven governance. Based on this list, cities were included in the following list if they 1) have high vacancy rates and/or have previously worked with Community Progress; 2) their open data portals include VAD related case-level data; and 3) their data is routinely updated.

Portal	City	State	Organizations involved	VAD-related case-level data available
Open Baltimore	Baltimore	MD	<ul style="list-style-type: none"> • City of Baltimore • Baltimore Neighborhood Indicators Alliance (National Neighborhood Indicators Partnership) 	<ul style="list-style-type: none"> • Crime reports • License and inspection permits • Parcels (all, vacant city-owned) • Tax sales/liens
Open Data Buffalo	Buffalo	NY	<ul style="list-style-type: none"> • City of Buffalo • Local/state organizations (unincorporated, research, nonprofit, and consulting) • State and regional government 	<ul style="list-style-type: none"> • Code violations • Crime reports • Demolitions • License and inspection permits • Property tax assessments • Tax sales/liens • 311 service and information requests
Detroit’s Open Data Portal	Detroit	MI	<ul style="list-style-type: none"> • City of Detroit 	<ul style="list-style-type: none"> • Code violations • Crime reports • Demolitions • Licenses and Inspection permits • Parcels (all, vacant city-owned, vacant land bank-owned) • Property sales
Louisville Metro Open Data	Louisville-Jefferson County	KY	<ul style="list-style-type: none"> • Louisville/Jefferson County Information Consortium • Louisville-Jefferson County Metro Government 	<ul style="list-style-type: none"> • Code violations • Crime reports • Demolitions • License and inspection permits • Parcels (all, vacant) • Property tax delinquencies • Property sales (land bank sales) • Tax sales/liens • 311 service and information requests

Open Data Philly	Philadelphia	PA	<ul style="list-style-type: none"> • City of Philadelphia • Local organizations (unincorporated, research, nonprofit, and consulting) 	<ul style="list-style-type: none"> • Clean and green • Code violations • Crime reports • Demolition • Licenses and inspection permits • Parcels (all, vacant, city-owned) • Property tax delinquencies • 311 service and information requests
Open Data Syracuse	Syracuse	NY	<ul style="list-style-type: none"> • City of Syracuse • Local/state organizations (unincorporated, research, nonprofit, and consulting) • State and regional governments 	<ul style="list-style-type: none"> • Code violations • Crime reports • License and inspection permits • Parcels (all, vacant) • Property tax assessments

The Louisville/Jefferson County Information Consortium

Community Progress interviewed current and former staff members at the Louisville/Jefferson County Information Consortium (LOJIC) to gain a better understanding of the consortium: Jane Poole, a 27-year LOJIC veteran as a GIS Solutions Analyst focused on training and customer support, and Curt Bynum, 39-year LOJIC veteran and the current Director, who has been with LOJIC since the consortium’s initial creation.

Established in 1985, LOJIC’s mission is, “to build, maintain, and proactively support a comprehensive Enterprise Geographic Information System that promotes information sharing and the effective use of geospatial technology for the benefit of our partners, our customers, and our community.” LOJIC represents a multi-agency effort to build and maintain a comprehensive GIS platform to serve all of Louisville-Jefferson County and the surrounding counties.

Primary components included in the LOJIC system are hardware, software, data, applications’ development, products, training, and technical support. Four agencies currently make up the core partner/co-owners of LOJIC: Louisville-Jefferson County Metro Government (LMG), the Louisville Metropolitan Sewer District (MSD), the Jefferson County Property Valuation Administrator (PVA) and the Louisville Water Company (LWC) (a utility company owned by local government). A standing partnership agreement, in the form of a Memorandum of Agreement (MOA), governs the four agencies as full Partner-Owners in the development and stewardship of the consortium.

Operations & Board Governance

The MOA outlines the cost sharing arrangement for general operations. Partner-Owners are expected to share the annual operating costs commensurate with their ability to pay and the magnitude of usage. Within this framework, the Partner-Owners designate which entity will serve as the Managing Partner, which is currently MSD. As Managing Partner, MSD is committed to providing a physical location and human resources for operational staff, oversight of procurement and the administration or maintenance of all the related systems, interfaces, and services. MSD’s Information Technology division currently includes 33 staff members, 10 of which are fully dedicated to the consortium.

The Partner-Owners are represented by their CEOs on a four-member Policy Board. The vast majority of the essential place-, base-, and case-level data for the consortia are sourced by the partners on the Policy Board. The Policy Board is also responsible for designating a ten-member Steering Committee. The Steering Committee is comprised of one staff person from each Partner-Owner and the other six seats are representatives of organizations that hold LOJIC licenses. The Steering Committee advises on matters related to data governance and protocols and makes recommendations to the Policy Board regarding policies and procedures across all user types. LOJIC currently has a staff of ten, who are embedded within the Managing Partner's (MSD) administrative operations. The LOJIC Director serves as the Chair of the Steering Committee.

Approximately 470 individuals and organizations pay an annual license fee to obtain direct access to the consortium's data environment, including citywide agencies such as Jefferson County Public Schools, the Transit Authority of River City (public transportation) and Louisville Gas & Electric (privately held utility provider). While current Partner-Owners are all public and/or quasi-public agencies, the MOA provides opportunities to invite additional partners such as academic, philanthropic and commercial entities in the consortium via approval of the Policy Board. More details can be found in [Louisville/Jefferson County Information Consortium Guiding Documents](#).

Funding and Budget

Subject to the standing MOA, Partner-Owners determine the consortium's annual operations and capital budget. The FY 2025 budget is nearly \$2.4 million. Approximately 90% of the budget covers general operations with the remaining 10% addressing capital needs. While Partner-Owner contributions represent the bulk of the consortium's revenue, an additional \$100,000 in revenue is generated by various fee-for-service requests. This helps support the significant number of individual users who access the consortium's publicly facing tools and resources at no cost for any number of public or private endeavors.

LOJIC in Practice

Consortium staff produce many web-based applications that are informed by customer demand and from the wider community. Examples include the [Louisville MSD Mowing Map](#), which tracks the major mowing areas throughout the region. Systems set up by LOJIC were also set up to manage the Louisville metro area's first property condition survey, supporting data-driven decision making on vacant and abandoned property. For those seeking even more customization, the consortium maintains a database of some 200 datasets that are made freely available for the general public to view and download via [Louisville Metro Open Data](#). Available datasets include demolition data, abandoned property inventory, and property sales from the Louisville/Jefferson County Landbank Authority. Other pre-configured maps include Louisville MSD Mowing Map.

Conclusions and Takeaways for the City of Dayton

Both of these tools are valuable for local governments in addressing VAD properties. However, for either tool to work effectively, they need to have strong data governance policies and frameworks, staffing and funding capacity, and local champions pushing the value of data-driven tools. Without these measures, these tools can easily fall into obscurity as data and technology grows outdated and becomes more of a burden than an asset. While researching existing open data portals throughout the country, many (not featured in the memo) had outdated datasets and unclear update timelines. Ultimately, a data consortium is a natural conductor to help build this infrastructure by leveraging the support and financial resources of multiple entities (e.g., departments, organizations, etc.).

The City of Dayton has begun the initial steps to explore centralizing and sharing data both across departments and with the public. As it continues to assess its current data inventory, Community Progress recommends the following next steps:

- Attend the following sessions at the Reclaiming Vacant Properties Conference:
 - *Partnerships and Pipelines: Data-Driven Strategies for Innovation and Impact*
 - *Using Data to Match Supply of Vacant Property with Demand for Housing and Revitalization*
 - *Community-Informed Demolition: Developing a Prioritization Algorithm from Resident Input*
 - *Strategies for Investor-Owned Rental Properties*
 - *Approaches to Expanding Access to Home Repair Programs*
 - *Preserving Middle Neighborhoods for Future Generations*
- Work with existing data partners, such as CityWide and Tolemi, to explore the best platform or host for the assemblage of data.
- Connect with the consortiums or portals you find most interesting and relevant; Community Progress is happy to help facilitate introductions.
- While building out the full portal or consortium, pilot data transparency by creating a “vacant property dashboard” that aggregates important vacant property data (e.g., number of vacant homes and lots, number of tax delinquent properties, number of code violations), that is updated regularly (e.g., quarterly) and is displayed in a user-friendly manner.
- Leverage the dashboard and accompanying data to develop a comprehensive VAD property strategy, perhaps beginning with coordinated disposition policies across the city and land bank and/or creating stronger rental property regulatory process.

Additional Resources and Guiding Documents

The following are resources from local governments, policies and handbooks on data policies and frameworks, and additional resources uncovered through this research process.

[City Open Data Policies](#) – National League of Cities

Handbook of examples of cities with open data initiatives to help avoid problems or mistakes that other cities have encountered along the way.

[What Works Cities Certification Program](#) – Bloomberg Philanthropies, Results for America

Results for America created [What Works Cities Certification](#), the first-ever national standard of excellence for data-driven, well-managed local government. The program evaluates whether cities have the right people, processes, and policies in place to put data and evidence at the center of decision-making. As of January 2024, 74 cities have achieved this distinction.

[National Neighborhood Indicators Partnership](#) – Urban Institute

Peer network of open data intermediaries in over 30 cities in the US. NNIP shares lessons from local partners to help strengthen capacity for data-driven decision-making. Created in 1995, NNIP is a collaborative effort by the Urban Institute and local partners to further the development and use of neighborhood information systems in local policymaking and community building.

[Why Your City Should Care About Data Cooperatives](#) – Platform Cooperativism Consortium

Article about value of data cooperatives including widespread community access and benefits.

[Data for Empowerment](#) – Mozilla Foundation

A collaborative research series for Mozilla’s Data Futures Lab, it explores how power can be shifted through data governance. Learn with us about the ideas, risks, and opportunities of this new innovation landscape for the internet.

[CitiStat Model](#) – Center for American Progress and the City of Baltimore

CitiStat is the City of Baltimore’s data-driven system to manage all city programs and services. This is a write-up by Center for American Progress’s on the CitiStat Model.

[State Data Center \(SDC\) Program](#) – United States Census Bureau

The State Data Center (SDC) Program is one of the Census Bureau’s longest and most successful partnerships. This partnership between the 50 states, the District of Columbia, Puerto Rico, the island areas and the Census Bureau was created in 1978 to make data available locally to the public through a network of state agencies, universities, libraries, and regional and local governments.

The SDC lead organization is appointed by the governor of each state/commonwealth, Puerto Rico, island area (American Samoa, Guam, The Commonwealth of the Northern Mariana Islands, Virgin Islands) or the mayor of the District of Columbia.