



THE OHIO STATE UNIVERSITY

KIRWAN INSTITUTE FOR THE
STUDY OF RACE AND ETHNICITY

OVERVIEW OF THE OHIO 2018-2019

USR Opportunity Index

A new form-based, user-friendly framework for incentivizing economically stable and socially equitable housing development.



This publication was produced by the Kirwan Institute for the Study of Race and Ethnicity at The Ohio State University. As a university-wide, interdisciplinary research institute, the Kirwan Institute works to deepen understanding of the causes of—and solutions to—racial and ethnic disparities worldwide and to bring about a society that is fair and just for all people.

Kirwan Institute research is designed to be actively used to solve problems in society. Its research and staff expertise are shared through an extensive network of colleagues and partners—ranging from other researchers, grassroots social justice advocates, policymakers, and community leaders nationally and globally, who can quickly put ideas into action.

For More Information

The Kirwan Institute for the Study of Race and Ethnicity at The Ohio State University is known and respected nationally and deeply engaged in social issues. We are focused on projects that are integrated with sound research, strategic communication, and advocacy. To learn more, visit www.kirwaninstitute.osu.edu.



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INTRODUCTION

What would motivate people to move across town, across the country, or across the world?

In the United States, people move to find social and economic opportunity. Ohioans seeking economic opportunity want meaningful jobs, access to land, and a stable economy. Ohioans seeking social opportunity want meaningful human connections, access to education, and a stable social network. The American Dream combines the concepts of economic and social opportunity by describing American culture that is equitable and fair, stable and inclusive. By clearly defining opportunity as access to both social and economic opportunity, we can see why opportunity matters to all Ohioans.

As developers and advocates, we also know that affordable housing in areas of opportunity is a critical to enlarging America's middle class. Affordable family housing in areas of opportunity increases economic and social mobility. Affordable family housing in areas of opportunity also builds more than social and economic capital, it builds American value. By thinking about the value of opportunity at a local and regional scale, developers and advocates are empowered to make Ohio and Ohioans more competitive in economic and social markets. Responding to opportunity also makes Ohio cities more competitive with other cities.

What does it mean to visualize opportunity?

More than a decade ago, Kirwan Institute developed a tool called Opportunity Mapping to help understand exactly where opportunity exists. At its most foundational level, Opportunity Mapping reflects access to the American Dream - access to economic and social opportunity at the neighborhood level. Opportunity Mapping illustrates markets of opportunity for urban, suburban, and rural communities. Building on the Ohio Housing Finance Agency (OHFA) and Kirwan Institute six-county pilot project, the *new* 2018-2019 USR Opportunity Index allows developers and advocates to play a role in caring for current and future generations of Ohioans by further understanding affordable housing needs.

By targeting family housing investment, advocates and developers can build and promote Ohio's middle class by enabling housing choice. The *new* 2018-2019 USR Opportunity Index takes into account developer and advocate feedback to better illustrate differences in opportunity between Cleveland and Clinton County, Blue Ash and Bexley, and Maumee and Marietta. The *new* 2018-2019 USR Opportunity Index is a state-wide, comprehensive, fair, equitable, inclusive, and stable framework to reduce the complexity in measuring opportunity and empower developers and advocates.

Op-por-tu-ni-ty

(ap-er't(y)oonede) *noun*

Access to economically stable and socially equitable choices in a fair and inclusive marketplace that builds value of American communities.



Kirwan Institute developed this definition of opportunity by articulating the difference between social and economic opportunity. Social opportunity is defined as "access to equitable and inclusive choice in a market that emphasizes increasing social value." Economic opportunity is defined as, "Access to fair and stable choice in a market that emphasizes increasing economic value." Both are important facets of the American conception of Opportunity, or The American Dream.

FOUNDATIONS

An Infographic Explainer

The Kirwan Institute for the Study of Race and Ethnicity at The Ohio State University (Kirwan Institute) pioneered ‘Opportunity Mapping’ to support the National Association for the Advancement of Colored People’s (NAACP) amicus curiae (or, ‘Friend of the Court’) brief for the US Supreme Court case, Thompson v. US Department of Housing and Urban Development (HUD). In Thompson v. HUD, the Supreme Court decided that the Federal government, including HUD, must take into account regional opportunity when allocating fair housing money. While the final settlement didn’t occur until 2012, Kirwan Institute has continuously refined Opportunity Mapping. This infographic explains the basics of Opportunity Mapping in a step-by-step process, and answers many of the frequently asked questions Kirwan Institute receives.

THE OPPORTUNITY MAPPING PROCESS



STEP 1: A stakeholder asks, “What does Opportunity look like in *my* community?”



While Kirwan Institute prefers the US Census ACS, we are also able to incorporate local data into Opportunity Index. In the **2018-2019 USR Opportunity Index**, Kirwan Institute collected data for all of the Transit Authorities in the State of Ohio!

STEP 2: Kirwan Institute Digs for *data*...

Kirwan Institute prefers using government sourced data, such as information from the US Census Bureau’s American Community Survey (ACS). As a core dataset of most Opportunity indices’s, Kirwan Institute prefers the 5-Year ACS Estimates, because of its scale advantages.



Kirwan Institute also uses data from state governments, like the **Ohio Department of Education**.

	1 Year ACS Estimates	3 Year ACS Estimates	5 Year ACS Estimates
Data Collected	12 Months	36 Months	60 Months
Best Scale	Areas of 65,000+	Areas 20,000+	Areas 1,000+
Best Geographic Application	Nation, State, & County	Nation, State, County, & Cities	Nation, State, County, Cities, & Neighborhood
Advantages	Most Current Data	Somewhat Current Data Moderately Reliable	Best Geographic Scale High Reliability
Disadvantages	Low Reliability Collected for Large Communities	Collected for Mid-Sized Communities	Least Current Data

STEP 3:

Kirwan Institute

Collects and Cleans the *data* to create *indicators*.

Kirwan Institute selects and sorts the data, with stakeholders, into categories. Kirwan Institute first selects data using research. Kirwan then sorts and cleans data to turn data into indicators at the neighborhood, or US Census Tract level. Some typical categories include:

Typical Indicator Categories



Housing



Education



Transportation



Employment



Health



You could call this a *data deep dive*... This is the most time intensive part of creating an Opportunity Index

STEP 4:

Kirwan Institute

Normalize the *indicators* to create *z-scores*.

After data selection, sorting, and cleaning, Kirwan Institute normalizes the indicators, by measuring how far away each individual data point is from the mean, or average, of all data points. This measurement is either positive (+) or negative (-) and is the a measurement of the number of standard deviations (or, the data spread of all data points) between that data point and the average. This is referred to as the **z-score**.



Indicators with a *'normal distribution'* of data work best for Opportunity Mapping.

STEP 5:

Kirwan Institute

Averages *z-scores* to create a category *sub-index*.

The z-score for each indicator within a category, for example, housing, is averaged. This new housing sub-index helps stakeholders see the cumulative impact of inequality in specific categories.



Sub-Indices reveal *spatial inequalities* in neighborhoods.

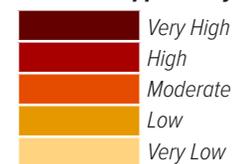
STEP 6:

Kirwan Institute

Averages all *sub-indices* to create an *Opportunity Index*. Then we map it!

Each sub-index is averaged together. This does two things; 1) it ensures that no component is more important than another, and; 2) it allows Kirwan Institute to map Comprehensive Opportunity. Kirwan Institute uses the 'Quintile' approach to equally portion the total number of neighborhoods, or US Census Tracts into Very High, High, Moderate, Low, and Very Low Opportunity. For example, if there is a city with 101 neighborhoods, or Census Tracts, 20 would be Very High, 20 would be High, 21 would be Moderate, 20 would be Low, and 20 would be Very Low. For odd breaks, Moderate opportunity absorbs the uneven tracts.

Shades of Opportunity



The above colors are the official Kirwan Institute color palette for Opportunity Mapping; they represent the shades of Opportunity in American cities.

THE 2018-2019 USR OPPORTUNITY INDEX

This new data tool helps developers and advocates strategize their housing investments by exploring opportunity at a statewide level.

The 2018-2019 USR Opportunity Index is a *new* data tool jointly developed by the Ohio Housing Finance Agency (OHFA) and The Kirwan Institute for the Study of Race and Ethnicity at The Ohio State University (Kirwan Institute). The new 2018-2019 USR Opportunity Index builds on applied lessons and stakeholder feedback and input since OHFA's pilot 2016-2017 Opportunity Index. Changes in the 2018-2019 USR Opportunity Index are consistent with OHFA and Kirwan Institute missions; in addition, changes directly respond to OHFA's priorities.

A 'User' Friendly Opportunity Index
When talking about the USR Opportunity Index you can refer to it quickly by calling it the 'User' Opportunity Index. Kirwan Institute has taken an extensive amount of time to design the USR Opportunity Index to be more user friendly.

Kirwan Institute developed the 2018-2019 USR Opportunity Index with the understanding that Ohio's housing needs and priorities seek to “expand and preserve affordable housing opportunities,” and “focus on customer-driven, sustainable multi-sector solutions to promote public health, welfare, and prosperity of the people of the state.” (OHFA, 2017, pp. 5). In doing so, OHFA and the Kirwan Institute believe that the 2018-2019 USR Opportunity Index is an applied tool that responds to differences between urban, suburban, and rural market areas. This short report details the approach, inputs, methods, and indicators developed to build the 2018-2019 USR Opportunity Index.

*To Access the 2018-2019 USR Opportunity Index
scan the QR Code or visit:*

go.osu.edu/USROpportunityIndex



Lessons learned and differences between the 2016-2017 pilot and the 2017-2017 USR Opportunity Index

The Internal Revenue Code governing the LIHTC program provides incentives for placement of LIHTC into Qualified Census Tracts (QCTs) or Difficult Development Areas (DDA's). QCT's are neighborhoods where more than half of households are under 60% of the Area Median Income or have a poverty rate of 25% or more, to encourage development. DDA's are areas with high construction, land, and utility costs relative to the Area Median Gross Income. In late 2014, OHFA contracted with Kirwan Institute to develop a pilot data mapping tool for a new policy-based approach that took into account the opportunity of local neighborhoods. Rolled out for the 2016-2017 process, the 2016-2017 Opportunity Index was a pilot program that classified Census Tracts on Ohio's six largest counties: Cuyahoga (Cleveland), Franklin (Columbus), Hamilton (Cincinnati), Lucas (Toledo), Montgomery (Dayton), and Summit (Akron).

Available as a mapping and data tool on OHFA's website, the Opportunity index scores Composite Opportunity in Census Tracts on a five-tier scale: Very Low, Low, Moderate, High, and Very High. Composite Opportunity, per the index, is a combination of three smaller indices that quantify educational, economic, and environmental opportunity; each responding to different portions of social and economic opportunity. OHFA awards points to development proposals based on their location in areas of moderate, high, and very high opportunity.

In applying the pilot 2016-2017 Opportunity Index to the process, OHFA and Kirwan Institute learned lessons about how developers and advocates use and understand Opportunity Mapping. One of the key weaknesses of the pilot 2016-2017 Opportunity Index was that it only accounted for the largest counties in the state, leaving the rest of the State of Ohio unmapped. An additional weakness of the pilot 2016-2017 Opportunity Index is that it mapped opportunity across each county, not taking into account the urban, suburban, or rural nature of market areas. To address these weaknesses, OHFA contracted Kirwan Institute in Fall 2016 to conduct stakeholder engagement and develop a statewide model to map opportunity. The result of this work is the 2018-2019 USR Opportunity Index.

Slight changes to the 2018-2019 USR Opportunity Index process include a reduction and simplification in the number of indicators used (from 23 to 16 indicators) to amplify the power of indicators in the dataset. Furthermore, the creation of separate urban, suburban, and rural indexes that reflect their built form helps urban, suburban, and rural markets compete with one another. For example, in urban areas proximity to workforce development and training programs should be closer than suburban or rural areas. Indexes reflect built form by allowing rural economic and social capital to be further apart than in urban and suburban areas. In summary, these changes to the 2018-2019 USR Opportunity Index proportionally increase the number of areas of opportunity throughout the Ohio, enabling new opportunities for developers and advocates to engage in their common mission.

Measuring Opportunity

To measure opportunity, Kirwan Institute calculates a common statistical derivative known as a 'z-score.' In laymens terms, its the distance away from the average; or, z-scores are measured in standard deviations from the average. The greater the number away from 0 (ex. +4 or -4) the more unique that tract is. By combining factors, a comprehensive opportunity model is developed.

Or, how Kirwan Institute built the 2018-2019 USR Opportunity Index.

To develop the 2018-2019 USR Opportunity Index, OHFA and Kirwan Institute built on lessons learned, sought stakeholder feedback, and researched the most cutting edge methods to ensure Ohio's competitiveness among other states. One important piece of feedback OHFA and Kirwan Institute received was that stakeholders wanted a clearer picture of the development process behind the 2018-2019 USR Opportunity Index. Below is a short sketch of steps required to create the new index.

Learning From the 2016-2017 Opportunity Index

Process Matters

Another key piece of stakeholder feedback was that developers and advocates wanted to see what the process for developing the 2018-2019 USR Opportunity Index looked like.

- November 2016* OHFA engages Kirwan Institute in Conversations about developing an updated Opportunity Index that responds to differences in built form.
- December 2016* OHFA and Kirwan Institute schedule engagement sessions and Kirwan Institute begins reviewing professional and academic literature.
- March 2017* OHFA and Kirwan Institute hold engagement sessions in Urban and Rural locations for developers and advocates. Key lessons include simplifying Opportunity Index, clearly defining 'Opportunity,' and ensuring that the new index is fair to urban, rural, and suburban markets.

Building the 2018-2019 USR Opportunity Index

- April 2017* Kirwan Institute begins collecting data for 2018-2019 USR Opportunity Index; Responding to developer and advocate feedback, Kirwan Institute reduces the number of indicators in the Opportunity Index from 23 to 17.
- May 2017* Kirwan Institute builds 2018-2019 USR Opportunity Index

Approval Process

- June 2017* OHFA circulates 2018-2019 USR Opportunity Index for stakeholder feedback and comment.
- August 2017* OHFA feedback and comment period ends.
- September 2017* OHFA responds to feedback, and 2018-2019 USR Opportunity Index is finalized.

The 2017-2019 USR Opportunity Index uses three layers to explore the contours of opportunity in Ohio.



Layer 1:
USR INDEX



Layer 2:
OPPORTUNITY
INDEX



Layer 3:
COMMUNITY
CHANGE INDEX

Layer 1: USR Index

At the core of the 2018-2019 USR Opportunity Index is the delineation of differences between urban (U), suburban (S), and rural (R) markets. Using advanced methods, grounded in cutting edge academic research, Kirwan Institute built the USR index to simply illustrate differences in built form, differences between different housing types, development patterns, and years built.

Layer 2: Opportunity Index

There are five categories with 16 total indicators in the 2018-2019 USR Opportunity Index. The five categories of indicators are: Transportation Opportunity, Educational Opportunity, Employment Opportunity, Housing Opportunity, and Health Opportunity.

Layer 3: Community Change Index

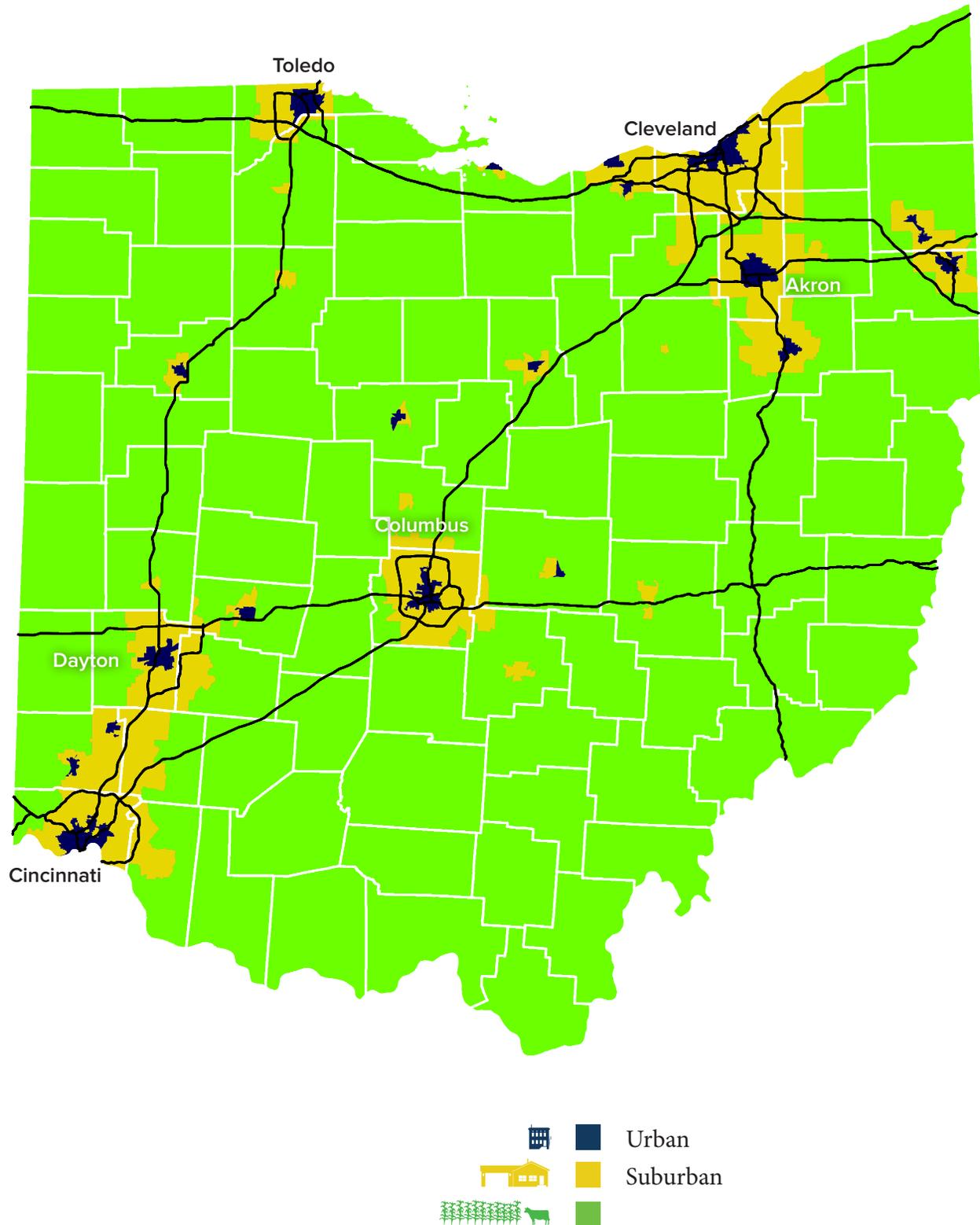
There are two components of the Community Change Index: Housing Market Change and Demographic/Social Change. Within each component there are four indicators. Selected indicators are grounded in professional and academic literature related to neighborhood change and community development. While the Community Change Index indicators have remained the same since the previous Opportunity Index, the data has been updated. OHFA and Kirwan Institute hopes that the Community Change Index helps bridge the gap between developers and OHFA evaluators to better understand the 15-year future of opportunity in a particular place.

LAYER 1: USR Index

Differentiating Urban, Suburban, and Rural built form by using elements of built form such as Road Network Density, Urbanized

Index Component	Index Component Description
<i>Road Network Density</i>	Dense road networks exist in urban and suburban areas, forming networks between neighborhoods within a community. Using road network density helps capture areas at the edges of communities, allowing Kirwan Institute to carefully separate suburban areas from rural.
<i>Urbanized Area</i>	Despite the advantages of using road network density to separate urban and suburban form from rural, small pockets of dense road networks create urban outliers far from central cities. Using the US Census definition of urbanized area, rural areas were further distinguished from urban and suburban forms.
<i>Housing Density & Age</i>	To separate urban from suburban areas, Kirwan Institute built on methods utilized by Cooke & Marchant (2006) and Airgood-Obrycki (2017) that examine the age density of housing units to assess differences between urban and suburban built form.
<i>Population Density</i>	Lastly, by using population density, Kirwan Institute was able to further refine urban, suburban, and rural classifications.

MAP 1: USR Index



LAYER 2: Opportunity Index

Access to transportation is a fundamental requirement to access social and economic opportunity. Assessing the varied forms of transportation, along with the time it takes to get to employment, is a core component of the 2018-2019 USR Opportunity Index.

Index Component	Index Component Description
<i>Public Transit Access</i>	Fixed, Flex, and Demand Route transit refers to the availability and menu of public transportation options. While most major Ohio urban and suburban areas are serviced by transit in some way, understanding which areas are served at higher rates increases economic and social opportunity.
<i>Average Commute Time</i>	The time required to commute to economic and social opportunity directly impacts quality of life. Higher commute times are less desirable than short commute times, therefore higher social and economic mobility is tied with shorter commute times.
<i>Automotive Access</i>	Access to a car for transportation increases economic and social opportunity by expanding the potential reach of households.

Educational quality is a core component of the 2018-2019 USR Opportunity Index because of its links to social and economic opportunity. Proximity to high quality schools that have value added and low poverty rates, combined with existing educational

Index Component	Index Component Description
<i>Educational Attainment</i>	Neighborhoods with high educational attainment attract social and economic opportunities.
<i>School Performance</i>	Neighborhoods with high performing schools provide more opportunities for social and economic mobility.
<i>Free & Reduced Lunch</i>	Schools with low free-and-reduced lunch rates are lower poverty. Lessening the stress on school and neighborhood social and economic infrastructure improves mobility.
<i>Closing Gaps to Access</i>	Schools that go above and beyond their calling to create a value add that expands educational access, which in turn expands social and economic opportunity. Gifted programs and resources for special needs students add value to the performance of a school

A stable, meaningful job is a ticket to the middle class. As a core component of the 2018-2019 USR Opportunity Index, Employment is key to social and economic mobility. Neighborhoods with low unemployment and access to employment opportunities are desirable. Additionally, the ability to improve employee skills through trade schools, junior colleges, and

Index Component	Index Component Description
<i>Entry Level Job Access by Educational Attainment</i>	Jobs are opportunities for careers. Expanding access to economic and social opportunity requires jobs. This indicator considers job competition for entry level employment by considering the relative education of those in a neighborhood.
<i>Workforce Training & Development Access</i>	Building skills increases economic and social mobility by expanding access to higher paying jobs and careers. This indicator incorporates continuing education opportunities for those pursuing a trade or two year degree.
<i>Unemployment Rate</i>	High unemployment rates are an indicator of low economic and social opportunity, while areas with low unemployment have high economic and social opportunity.

Housing Opportunity

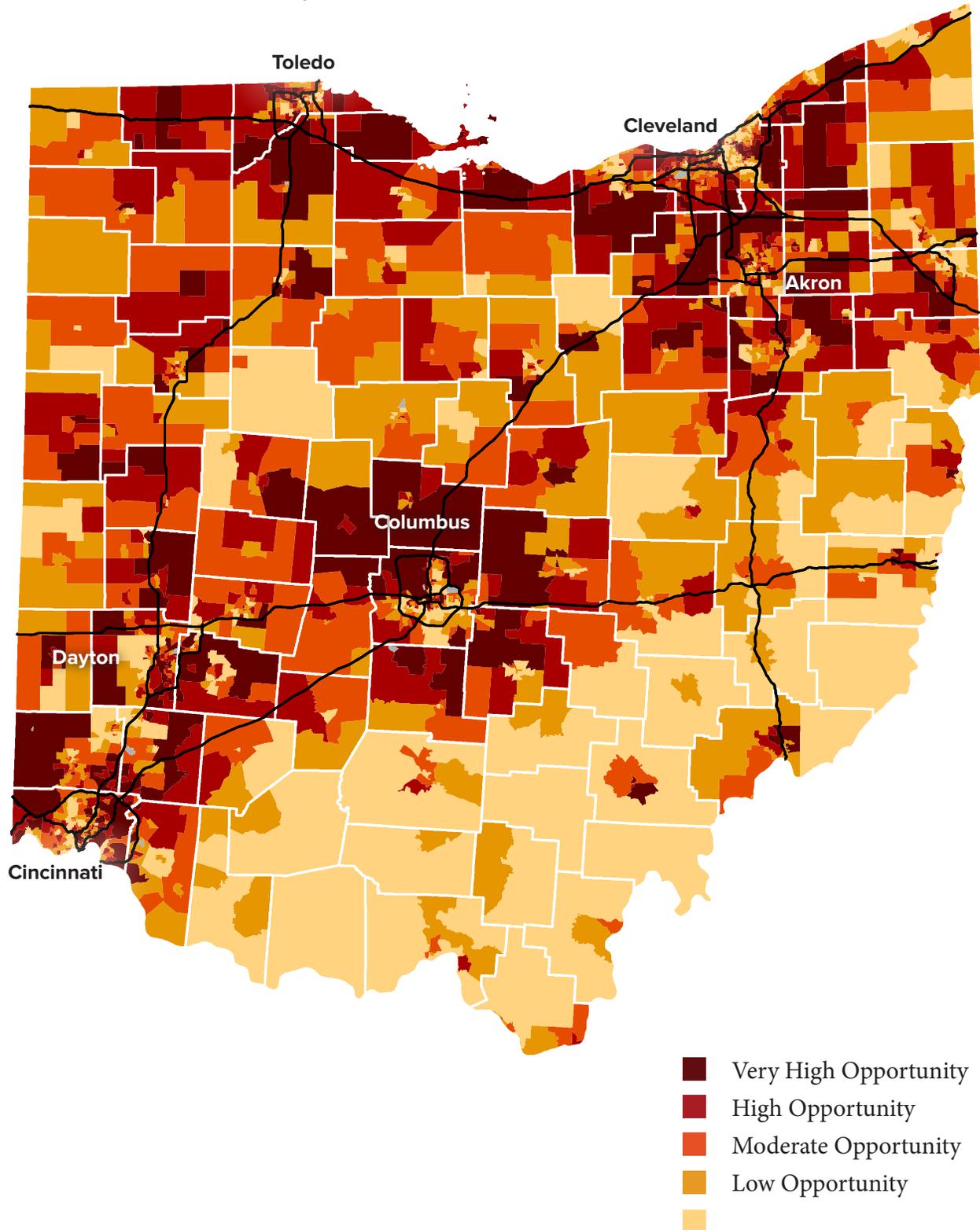
Housing considerations are a core component of the 2018-2019 USR Opportunity Index, because where you live affects household social and economic opportunity. Taking into account challenges like Housing Values and Housing Cost Burden is important when thinking about mobility. In addition, making sure that LIHTC units aren't concentrated enables housing choice.

Index Component	Index Component Description
<i>Median Rent</i>	Rents are part of economic and social mobility. High rents in a neighborhood indicate its desirability in a marketplace. High rent also attract higher earners who increase the spending power of neighborhoods.
<i>Median Home Value</i>	Median home values are an indicator of economic capital, but they also impact social mobility. Areas with high median home values are closely correlated with greater economic and social mobility.
<i>Existing LIHTC Concentration</i>	Placing all LIHTC units in the same place limits consumer housing choice. By distributing LIHTC units in urban, suburban, and rural areas, it expands the areas of opportunity and increases economic and social mobility throughout the state and also prevents poaching from existing LIHTC units.

Health is a core component of the 2018-2019 USR Opportunity Index because healthy people have higher economic and social mobility. Indicators of good neighborhood health are food access, family poverty rates, and the low pre-term (or before due-date) births.

Index Component	Index Component Description
<i>Food Access</i>	Access to healthy food in retail environments is linked with economic and social opportunity. This indicator examines neighborhood ratio of healthy food retailers like grocery stores and markets to unhealthy food retailers like convenience stores and corner stores.
<i>Family Poverty Rate</i>	High concentrations of family poverty create stressful environments for households. Neighborhoods with low concentrations of family poverty have less social and economic stress and higher mobility.
<i>Newborn Health</i>	Pre-term birth rates are a bellwether indicator on the general health of a neighborhood. Linked with environmental stressors, neighborhoods with high pre-term birthrates are communities of low opportunity.

MAP 2:
Opportunity Index



LAYER 3:

Community Change Index

Housing markets are a core component of community change. By measuring housing market change in terms of median home values, gross rents, owner occupancy rates, and vacancy rates Kirwan Institute was able to carefully detail market dynamics.

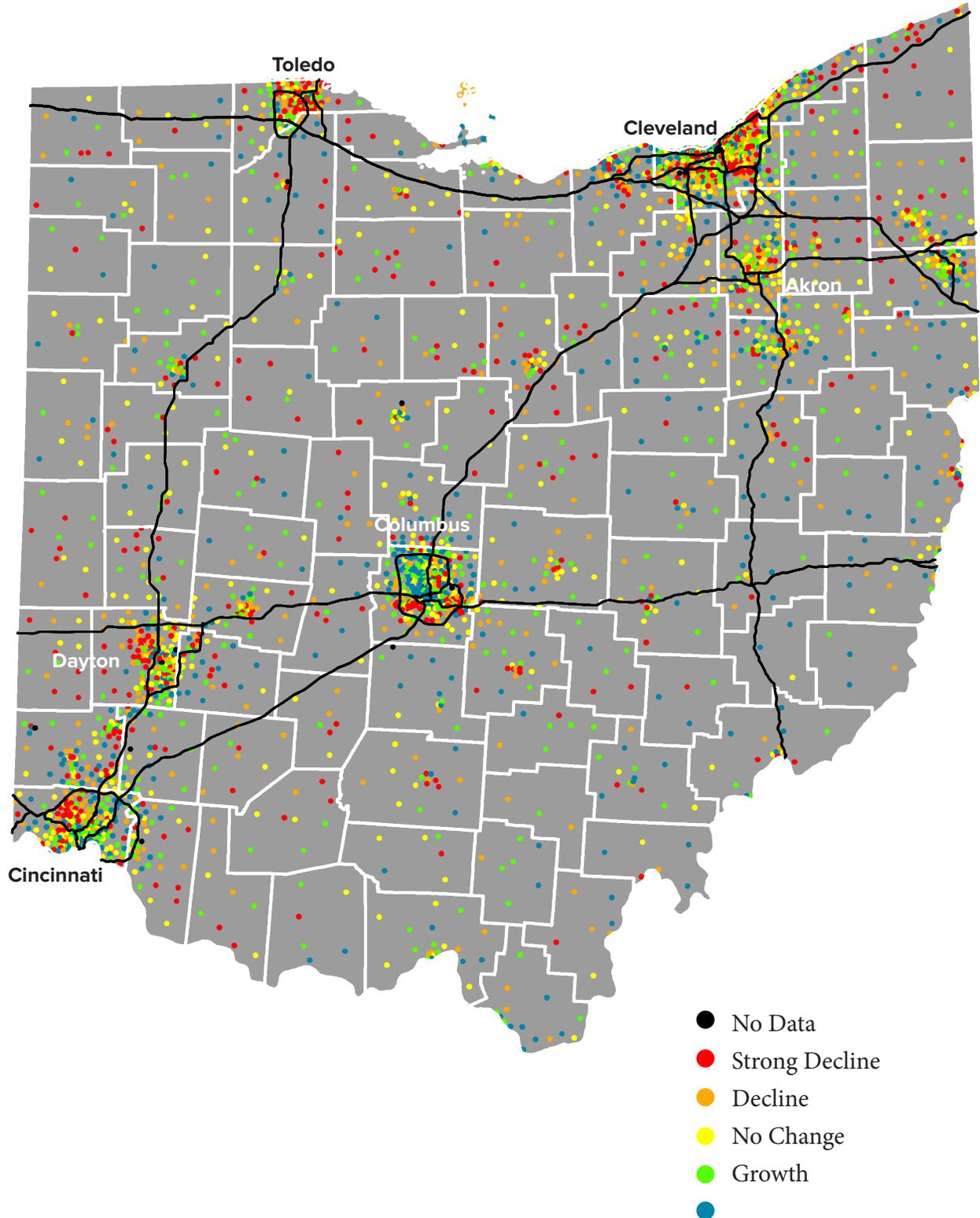
Index Component	Index Component Description
<i>Median Home Value</i>	Collected by the US Census Bureau, Median Home Value is an indicator of the accumulated wealth in a given tract.
<i>Median Gross Rent</i>	Median Gross Rents are the market values associated with housing units; areas with increasing gross rents, relative to other areas, are likely experiencing neighborhood change.
<i>Owner Occupancy</i>	Changes in owner occupancy rates is a primary driver of neighborhood and community change.
<i>Vacancy</i>	Changes to the proportion of vacant units within neighborhoods, cities, and regions affects other variables, such as home values, rents, and occupancy rates.

Demographics and social characteristics are useful in understanding community change. Kirwan Institute is assessing changes in markets by examining key social factors such as Median Household Income, College Attainment, proportion of Non-White Population, and Family Poverty.

Index Component	Index Component Description
<i>Median Household Income</i>	Median Household Incomes drive spending power. By in using Median Household Income as a component of Demographic and Social Change, Kirwan Institute is able to examine what portions of the community are more likely to change in terms of wealth.
<i>College Attainment</i>	Education is one of the most significant predictors of economic and social mobility. By measuring College Attainment, the Community Change Index predicts what areas and communities have an opportunity to improve.
<i>Non-White Population</i>	Understanding the percentage of minorities in communities helps illustrate the social and economic diversity.
<i>Family Poverty</i>	By including Family Poverty in the demographic and social change component it enables the index to reflect differences in opportunity.

MAP 3:

Community Change Index





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