About this Report
This report summarizes the Resilient Louisville Agenda Setting Workshop, which took place in the Muhammad Ali Center on January 31, 2017. The event, hosted by the City of Louisville in partnership with 100 Resilient Cities, gathered stakeholders from various sectors as a first step in the development of Louisville’s Resilience Strategy.

The Resilience Strategy will articulate Louisville’s resilience priorities and specific initiatives for short-, medium-, and long-term implementation. These documents have helped cities across the 100 Resilient Cities network respond to three worldwide trends:

- Globalization: Cities are interconnected. A system failure in one city can cause problems across the globe.
- Urbanization: Urban populations are growing rapidly: of an estimated global population of 9 billion by mid-century, 70% will live in cities.
- Climate Change: Climate change places new social, fiscal and political pressures on urban systems.

About 100RC
Pioneered by the Rockefeller Foundation, 100 Resilient Cities (100RC) helps cities around the world become more resilient to the growing social, economic, and physical challenges of the 21st century. Cities in the 100RC network are provided with resources in the following areas:

- Funding to hire a Chief Resilience Officer (CRO) to guide the City’s resilience efforts.
- Expert support to the CRO and the City to create a Resilience Strategy.
- Access to a platform of solutions, service providers, and partners from the private, public and NGO sectors that can help with the development and implementation of the resilience strategy.
- Membership in a global peer-to-peer network of CROs who can learn from and help each other.

Resilient Louisville
In May 2016, Louisville was selected as a member city within the 100 Resilient Cities network. With the assistance of 100RC, the City will receive technical expertise from Perkins+Will as a Strategy Partner. The Strategy Partner is responsible for supporting Louisville’s City’s Chief Resilience Officer (CRO) and City staff throughout the Strategy Development Process.

Next Steps
The 100RC Strategy Development process lasts about a year. The first phase of the process requires the CRO to prepare a Preliminary Resilience Assessment (PRA). The PRA is an inventory of existing efforts that contribute to Louisville’s resilience, and a prioritization of new resilience-building opportunities.

Following the PRA, the CRO will thoroughly explore Louisville’s resilience-building priorities, and culminate this analysis in a Resilience Strategy. After the Resilience Strategy is released, the efforts of the CRO will focus on the implementation of resilience-building initiatives.

Strategy Development Process

PRE-PHASE
Agenda Setting Workshop

PHASE 1
Strategy initiation

PHASE 2
Strategy Release

IMPLEMENTATION
Implementation Initiation

CRO Selection
PRA: Discovery Areas

Strategy Adoption

MORE RESILIENT CITY
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We wanted to join 100 Resilient Cities because their approach aligns with the work we’ve been doing since the first day I was sworn in...

—Mayor Greg Fischer

City Profile

Mayor Fischer’s platform included a focus on environmental stewardship, equity, access to services, and sustainability. That focus has evolved into a broad base of green initiatives that engaged and benefited communities across Louisville. These initiatives, combined with the City’s focus on long-term planning, create a strong foundation for resilience planning in Louisville. This chapter explores what Louisville brings to 100RC as it begins its resilience journey.
The area encompassed by Louisville has thousands of years of human habitation. The area’s geography and location on the Ohio River attracted people from the earliest times. The city is located at the Falls of the Ohio River. The rapids created a barrier to river travel, and settlements grew up at this pausing point.

Archeologists have found many sites in Louisville associated with the Fort Ancient and Mississippian cultures, which were active from 1,000 AD until about 1650. When European explorers and settlers began entering Kentucky in the mid-18th century, there were no documented permanent settlements of indigenous people in the region. The country was used as hunting grounds by Shawnees from the north and Cherokees from the south.

The City of Louisville was founded by descendants of colonial gentry two years after American independence. From the earliest days, Louisville’s history was intricately woven with high ideals of liberty, while also exploiting and trafficking enslaved people. During the nineteenth century, the city grew into one of the United States’ major inland ports and industrial centers. It was also a major point of departure for enslaved people being sold down the river to southern cotton and sugar plantations, while also maintaining a significant free population of African American’s. German and Irish immigrants also played a major role in supplying the labor to propel Louisville forward towards a more industrial future.

Even as Louisville developed as a manufacturing city, its primary raw materials were corn and tobacco—farm products which underscored the city’s growing dichotomy between its urban and rural characteristics. This gave birth to one of Louisville’s signature products of today, Bourbon Whiskey. Today, Louisville is a dynamic American city that navigates urban and rural characteristics, modern and traditional economies, and traditional American Celebrations like the Kentucky Derby as well as global businesses like UPS.

Since it released its long-term comprehensive plan in 2000, Louisville has undertaken at least eight significant strategic planning efforts in a variety of areas including sustainability, innovation, public health equity, transportation, and the environment. In addition, a series of smaller plans focusing on housing and neighborhood revitalization have also begun to come to life. These documents, coupled with a new comprehensive plan update and a hands-on administration focused on creating economic development, promoting racial equity, and improving education, has set the stage for Louisville to transform.

The city sees more grassroots civic involvement as a younger generation engages with social issues and public spaces through a combination of creativity and volunteerism. Urban events such as the Mayor’s Give a Day program committed to citizens acts of Compassion and Service to the City and Collaborative’s ReSurfaced initiative capture this spirit of civic experimentation, giving Louisville a cultural dynamism typically found in much larger cities.
Political Context and Dynamics

Louisville and Jefferson County have a unified system of government run under a mayor-council structure. The Metro Council has 26 seats, split by party affiliation roughly 2/3 (Democratic) to 1/3 (Republican). As such, Louisville is not immune to the current polarized nature of American politics. While Mayor Fischer’s background as an entrepreneur and civic minded business person helps bridge political differences, significant differences remain. These differences have shaped the recent debate convening a move by the Kentucky General Assembly’s move to assert state control over local issues such as incorporation governance, taxation and environmental regulations. However, there is a widespread sense that successful responses to issues facing Louisville require a collaborative, non-partisan effort.

The city’s geopolitical landscape is more complicated. The Eastern neighborhoods near the city and West Louisville trend Democratic whereas the more eastern and southern areas Jefferson County trend Republican. The further from the city, the more conservative the politics, much like the rest of the nation. However, the city’s land mass is almost evenly divided into the western and central core areas (mostly old urban neighborhoods and downtown) and eastern (primarily affluent suburban) halves representing different cultural backgrounds. This east-west split was a theme heard during the Agenda Setting Workshop, with some people mentioning the south end (suburban, but less affluent) as a third division. Connecting these divisions will be an opportunity in Louisville’s drive to become a stronger and more resilient city.
Social Context and Dynamics

The most pressing social issue facing Louisville’s future is the inequity concentrated in the West Louisville. Job loss due to plant closures, combined with decades of systemic and institutional racism, contributed to what is now pervasive urban poverty in this part of the city. Like other old manufacturing cities, urban poverty is not unique, and in Louisville’s case, it has continued over decades with little change.

Fortunately, many individuals and organizations are aware and working to address these issues. For 13 years, the Greater Louisville Project (GLP) has been supporting research and raising awareness on the relationship between social stratification and economic competitiveness. Mayor Fischer’s Three Pillars – jobs, education, and civic compassion1 – parallel the GLP’s Deep Drivers of Jobs, Education, Health and Quality of Place2 and have put the force of his administration behind tackling these problems. Even residents of gentrifying neighborhoods feel a sense of shared purpose, more young entrepreneurs are getting involved in social initiatives, encouraged by programs such as Lots of Possibilities3.

Stakeholders in the Agenda Setting Workshop were clear about the need to focus on equity as the cornerstone of a resilience strategy. In live polling, 75% of respondents identified economic inequity as the greatest challenge to resilience; and 85% said that the city is most lacking in economic mobility / opportunity and healthy and livable neighborhoods. Many tables discussed equity, and concepts such as economic opportunity and connectedness appeared more than once in the table notes. While this indicates major challenges the city must overcome regarding social dynamics, it also indicates a great willingness to engage.

Cultural and Historical Context

The Louisville region was a product of competition between five portage points around the Falls of the Ohio: New Albany, Clarksville and Jeffersonville in Indiana, and Portland and Louisville in Kentucky. Favored by still water and the construction of the Louisville and Portland Canal, the town of Louisville soon surpassed its rivals and expanded into a milling and warehousing center with radiating connections to Bluegrass farms.

The city evolved into a freight and passenger terminal with the founding of the Louisville and Nashville Railroad in 1850. Technically neutral during the Civil War, Louisville absorbed immigrants seeking jobs in its cotton mills, brickyards and slaughterhouses as its population tripled between 1860s and 1890s.

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1 Initially the mayor’s three goals for the city, now an organizing structure for city initiatives. https://louisvilleky.gov/government/mayor-greg-fischer/mayor-greg-fischers-three-pillars

2 For more on the GLP’s mission and public resources see http://greaterlouisvilleproject.com/

3 A 2014 ideas competition sponsored by the city to redevelop vacant lots into creative temporary and permanent uses. See https://louisvilleky.gov/government/vacant-public-property-administration/ lots-possibility
The city developed its unique blend of Eastern cosmopolitanism and Southern gentility from the 1890s to World War II, fostered by the growth of downtown skyscrapers, the Olmsted park system, the construction of two airports, the rising popularity of the Kentucky Derby, and war production. At times, its connection to fields and forests translated directly into American popular culture through the creation of icons like the Louisville Slugger baseball bat and bourbon.

Like other American cities since the mid-1930’s, the institutionalized policy of redlining has significantly impacted Louisville’s neighborhoods. These redlining policies continue to impact the structure of the city today and contribute to many of the chronic stresses identified during the Agenda Setting Workshop.

Louisville since the 1960’s has been a study in contrasts. Decimated by Urban Renewal and Interstate Highway construction in the 1960’s and 70’s, its urban core—like most other cities in the United States—hemorrhaged residential units, retail and jobs as the country’s interest and investment was focused on sprawling greenfield development in the suburbs. Well meaning, but ultimately unsuccessful attempts to compete with the suburbs, especially with regards to providing cheap surface parking lots at the expense of urban fabric, exacerbated the perceived decline of the urban core. However, many of Louisville’s original streetcar suburbs remained vibrant, and have led the way for what has become a slow moving renaissance and rediscovery of the inner city. One of the greatest local leaders on this front was Humana, whose international design competition for their corporate headquarters downtown helped focus much needed attention to the center city in the early 1980’s. The emergence of the University of Louisville as a major urban research center in the same period brought in younger people from outside the city.

Louisville’s vibrant arts scene, established reputation as a food town, and relatively affordable architecturally significant pre-war housing stock and current building boom, leave many feeling that Louisville is on the verge of great renaissance.

**Economic Context**

Louisville is a mid-America, mid-sized city enjoying the cultural confluence of Midwestern sensibilities and Southern hospitality. Louisville is the economic driver of the Commonwealth of Kentucky with one-fifth (1/5) of the state’s population, one-fourth (1/4) of her jobs, and over one-third (1/3) of the State’s GDP. Louisville’s mid-20th century economy enjoyed a rich history in manufacturing. Louisville was home to the second Ford plant outside Detroit and once
manufactured everything from cars and farm machinery to cigarettes. Louisville’s central location and historic founding on the Ohio River contributes to the city’s other historic calling card - logistics. Louisville knew how to make goods and ship them before “logistics” was a term. Louisville was founded on the banks of the Ohio River at its only naturally occurring obstruction – the Falls of the Ohio. As river travelers had to stop to “port” their boats around the falls, a town developed. Today a region of over 1.5 million people has a different focus on logistics due to the UPS’ WorldPort hub and the city’s access to over two-thirds (2/3) of the country’s population in less than a day’s drive.

Louisville’s manufacturing strength has now evolved into an advanced manufacturing cluster, drawing upon our rich “maker” heritage and support of two (2) Ford plants, GE Appliance Park, over 400 small and medium sized manufacturers, and multiple innovation and maker spaces, including the GE FirstBuild Microfactory at the University of Louisville.

The four (4) “Rs” of logistics – river, rail, road and runway – provide multiple economic advantages for the city. Louisville’s current logistics and e-commerce strategy focuses on our differentiator – end of runway.

With WorldPort’s global reach, Louisville is an attractive location for high value logistics products that need a quick turnaround and access to customers, often patients, across the world. The economic opportunity in logistics exists in small, sensitive packages, often in the personalized medical or genetics sectors.

Louisville’s other historic economic cluster is food and beverage. 95% of the world’s bourbon comes from Kentucky and Louisville is the undisputed home to bourbon – the only spirit defined by Act of Congress. Bourbonism - bourbon and local food tourism, is a 24/7 experience with Louisville as the trailhead. Louisville is home to one-third (1/3) of the country’s distilling jobs and several restaurant brand leaders, including Fortune 500 YUM! Brands, Papa John’s Pizza, and Texas Roadhouse.

One of Louisville’s most unique economic strengths is its lifelong wellness and aging care cluster. Its roots are based in the founding of Fortune 100 Humana in Louisville in the 1960s. Humana started as a nursing home company, grew into a hospital company, and ultimately transitioned into a national leader in health care. The young talent and spin off companies of early Humana seeded dozens of other companies which today form the largest concentration of wellness and aging care headquarters in the country. In 2016, Louisville gained the distinction of an Age Friendly City. The city’s largest business cluster is business services – a broad collection of business and financial services jobs totaling over 100,000 in the region and predicted to hold the greatest opportunity for growth. The city has experienced a string of success with recent company relocations in back office, IT and other business services companies such as Computershare, Hogan Lovells and EY. Louisville offers a robust ecosystem of IT training programs from coding to boot camps to significant density in STEM and IT degrees, and the city is home to IT operations for several large companies.

Louisville is rapidly making the transition from manufacturing economy of the 20th century to knowledge economy of today. Economic development plans focus not just on numbers of jobs, but jobs that pay above the national median wage, and the fact that everyone must have a positive path forward in a rapidly changing, global economy. In 2016, over 10,000 Louisvillians pulled themselves out of poverty and 7,000 households joined the ranks of the middle class.

Spatial and Environmental Context

Louisville’s spatial layout is reflective of the Ohio River shoreline and the earliest wharves and warehouses that set the template for the dominant east-west street system. Bound by the Portland settlement to the west and Beargrass Creek to the east, the pattern extended south for two miles until the topography began to change. Suburban development on higher ground from the 1890s forward gave the city its patchwork of neighborhoods, which aligned with radial highways and railroads extending out from the core. Many of these corridors have since become commercial and industrial districts supporting the neighborhoods with jobs and services.

Oak scraps are burned inside the finished barrels to char them. Noah Adams/NPR
The city’s location on the river determined its form and its fortune. While the Ohio River is responsible for Louisville’s location, development and economic success, the river has also caused destruction from flooding. The floods of 1937 and 1945 were so catastrophic that the city created the Metropolitan Sewer District (MSD) in 1946 to build and maintain control projects. Some of this infrastructure is now posing obstacles to achieving greater environmental resilience.

Because tributaries flood as easily as the Ohio River, MSD built conduit and storage structures with the purpose of channeling water away from flood-prone areas as quickly as possible. This had the collateral effect of causing more flooding downstream and carrying pollution with it such that low-lying residential areas were exposed to contaminants and toxins. Similarly, the rebuilding of the city for automobile use during this same period had the effect of increasing impervious surfaces, causing even more flooding in the Ohio River’s alluvial plain. Fortunately, there is now widespread awareness of the environmental consequences of stream channelization and urban deforestation. MSD is working with groups such as the Beargrass Creek Alliance to explore stream restoration in the city’s watersheds.

Louisville’s air quality has greatly improved since the Air Pollution Control District was established more than 70 years ago. While significant challenges remain, such as continuing to meet tighter national standards for pollutants like ozone, the air is cleaner than it has been in any time since the Clean Air Act was passed. But as smog has declined, focus has shifted toward specific air toxics such as 1,3-butadiene and other chemicals prevalent in the Rubbertown industrial area on the city’s southwest side. Established in the early 20th century to take advantage of the Ohio River’s abundant water supply and low-cost shipping, Rubbertown boomed during World War II, when the military’s demand for synthetic rubber prompted a massive expansion of the complex. Although city officials have imposed tighter restrictions on emissions of industrial chemicals via the groundbreaking, local Strategic Toxic Air Reduction Program (STAR), challenges to the regulatory balance of community concerns and economic development remain.

The recent Urban Heat Management Study has provided an assessment of city warming and its impacts on livability, health and sustainability. The document provides tools for improving and cooling the city through material and planting strategies. In addition, two new organizations, Trees Louisville and Louisville Grows, are promoting tree planting to improve air and water quality, wildlife habitat, and positively impact growing temperature concerns. Metro Parks Department has contingency plans to open fifteen community centers as heat relief stations during heat waves to help protect vulnerable citizens.

**Government Capacity**

The ability for Louisville Metro Government to pinpoint challenges in issues such as neighborhood blight and environmental distress, conduct research to identify possible solutions, and take action is evident in the various studies and programs listed in the following section.


Destruction from the 1937 Flood. Image Credit: University of Louisville Archives
City Context Maps

Social Historic Context

Louisville Redlining Map, 1930s: Redlining refers to the practice of denying loans in certain neighborhoods based on the racial or ethnic composition of those areas rather than physical, design, or structural characteristics. Image Source: https://lojic.maps.arcgis.com/apps/MapSeries.html?appid=4d29907b5c4d934a77bdea8889d8e09a.html?appid=a73ce5ba85ce4c319b05e65abff8910q

Image Credit: Louisville Metro Government
As noted in the previous section, it is important to understand the distribution of health status and health outcomes. One way to capture a snapshot of the health of a community is to examine the life expectancy of the different neighborhoods. For simplicity, life expectancy is an easy way to communicate the overall adjusted death rate in a more readily understandable manner. By definition, “life expectancy is the average number of years a person can expect to live, if in the future they experience the current age-specific mortality rates in the population.”¹⁸ For example, and by referring to the map on the left, if infants born in Fairdale today experience exactly the same death rates at the same specific ages, they will likely live to 74.8 years old. However, this is based on current death rates. The fact is that environmental and social changes over the next 74.8 years will likely occur and impact the true longevity of those infants. In this way, life expectancy isn’t the fate of the population, but rather a measure of what the current environment offers as a whole and a glimpse of what the future would hold if we don’t act to change it. Life expectancy then becomes a measure of how an environment supports or depresses our opportunities for health -- such as behaviors, choices, and exposures -- that determine our longevity.

This map demonstrates the gradient of life expectancy across Louisville Metro using 2006-2010 death records to produce average life expectancies by neighborhood. There is obvious geographical clustering of lower life expectancies concentrated around the downtown and western portion of Louisville Metro. This map shows the five-year average disparities in how long people live based on where they live. This difference results in an 15.9-year gap between the highest- and lowest-ranked neighborhoods.

Although it may appear that just the downtown area needs improvement, this only tells part of the story. Typical mapping analysis, such as that presented here, can visually bias results. The color divisions are relative to the average for a specific area or group and should not be taken out of context. In this particular case, the map shows the differences in life expectancy of neighborhoods by moving from light blue (high life expectancy) to dark blue (low life expectancy).
Plans, Studies and Initiatives Related to Resilience

Louisville demonstrates a commitment to planning through many different efforts undertaken by the Office of Advanced Planning, and other departments and partner agencies including the Louisville Downtown Partnership, the Louisville Metro Housing Authority, MSD, and the Transit Authority of River City. The city is currently updating its comprehensive plan, which will provide a roadmap to guide Louisville’s growth in the next two decades. The resilience issues that the city faces will be a significant factor in how it chooses to deploy its resources in the same time period.

The following PLANS AND STUDIES capture a small portion of the planning efforts focused on neighborhoods, corridors, redevelopment areas, and special topics completed since 2000. They have been highlighted for their strategic orientation or ties to resilience, or both. A timeline of plans and studies is presented on the following page.

VISION LOUISVILLE (2012) is a strategic plan that advances seven goals with connections to resilience. The document is a policy statement on the city’s position on growth, as well as a window into the aspirations of city leaders and stakeholders.

SUSTAIN LOUISVILLE (2013) is the city’s sustainability plan that builds on topics introduced in Vision Louisville. The plan covers several issues related to resilience, including climate adaptation, health and equity, and urban heat island effect.

FAIR HOUSING ACTION PLAN (2013) relates to affordable housing, including housing production, regulation and funding.

CENTER FOR HEALTH EQUITY’s 2014 Health Equity Report mapped out health inequities across Jefferson County. The focus of the report was to identify health disparities tied to poverty and inequity, much of which is related to race and ethnicity in Louisville.

HEALTHY LOUISVILLE 2020 (2014) is a local version of a national initiative to build healthy communities by 2020. It is an action plan developed by the Louisville Metro Department of Public Health and Wellness that tracks hundreds of community health indicators across 8 topic areas and provides programs and strategies for addressing community health challenges.

TREE CANOPY REPORT (2015) assesses the condition and extent of Louisville’s urban forest, including an analysis of canopy reduction and projected losses to 2052. The report identifies the benefits of increased tree cover to reduce heat island effect and flooding, and outlines actions the city can take to expand tree coverage. The Tree Canopy Report is a precursor to the Urban Heat Management Study described below.

HAZARD MITIGATION PLAN UPDATE (2016) addresses risks presented by 13 environmental hazards. The report includes risk assessments, mitigation strategies, and potential disaster scenarios. The Hazard Mitigation Plan could be a foundational document for Louisville’s resilience strategy.

MOVE LOUISVILLE (2016) is the city’s mobility plan, based on the seven goals articulated in Vision Louisville. Move Louisville recommends 17 priority projects to diversify the city’s mobility choices. It is a foundational document for building the city’s resilience strategy.

URBAN HEAT MANAGEMENT STUDY (2016) is the first comprehensive study of its kind in the U.S. The document synthesizes issues and recommendations included in several prior plans. The study was referenced by many stakeholders during the Agenda Setting Workshop, indicating its relevance to the city’s resilience.
# Resilience Initiatives

In addition to the plans and studies listed on the previous pages, a number of INITIATIVES spearheaded by Louisville Metro Government (LMG) or its partners provide input for resilience building through data gathering, community and stakeholder conversations, and program implementation.

## GENERAL ADVOCACY/RESEARCH

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<tr>
<td>Greater Louisville Project (GLP)</td>
<td>Independent civic initiative supported by a consortium of foundations. Collaborative initiatives in four focus areas: Education, Jobs, Health, Quality of Place. (Since 2003)</td>
<td><a href="http://greaterlouisvilleproject.com/">http://greaterlouisvilleproject.com/</a></td>
</tr>
<tr>
<td>Louisville Racial Equity Here Initiative</td>
<td>Over a two-year period, Racial Equity Here cities will develop a blueprint to begin to understand how and where municipal operations affect people of color, not only understanding their role in perpetuating these disparities, but will also begin to address them in transformative ways.</td>
<td><a href="https://louisvilleky.gov/government/center-health-equity/local-equity-here">https://louisvilleky.gov/government/center-health-equity/local-equity-here</a></td>
</tr>
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<td>Daniel Rose Fellows participants Classes of 2013 and 2018</td>
<td>The year-long Daniel Rose Fellowship provides participants with leadership training and professional development opportunities, and it benefits their respective cities by offering technical assistance on a local land-use challenge.</td>
<td><a href="https://americas.uli.org/research/centers/daniel-rose-center-for-public-leadership-in-land-use/">https://americas.uli.org/research/centers/daniel-rose-center-for-public-leadership-in-land-use/</a></td>
</tr>
<tr>
<td>AARP Network of Age-Friendly Communities</td>
<td>7-8 year process that creates long-terms plans around the environmental, economic, and social factors that influence the health and well-being of older adults. (Since 2016)</td>
<td><a href="http://www.aarp.org/livable-communities/network-age-friendly-communities/">http://www.aarp.org/livable-communities/network-age-friendly-communities/</a></td>
</tr>
<tr>
<td>Bloomberg Philanthropies’ “What Works Cities” Grant Program</td>
<td>Focuses on open data and citizen engagement around data collection and analysis. (Since August 2015)</td>
<td><a href="https://works.cityfeature.louisville-ky/">https://works.cityfeature.louisville-ky/</a></td>
</tr>
<tr>
<td>LMG Office of Civic Innovation Digital inclusion initiative</td>
<td>Efforts to bridge the “digital divide” in order to provide technological access and its related resources to all. (In program planning phase)</td>
<td><a href="https://louisvilleky.gov/government/performance-improvement-innovation">https://louisvilleky.gov/government/performance-improvement-innovation</a></td>
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## HEALTH

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<tr>
<td>LMG Air Louisville Initiative</td>
<td>Smart inhalers mapping asthma hotspots, connecting patients to services. (Since 2012)</td>
<td><a href="https://www.airlouisville.com/">https://www.airlouisville.com/</a></td>
</tr>
<tr>
<td>Mayor’s Healthy Hometown Movement</td>
<td>Changing the culture Louisville to one in which physical activity and healthy eating are the norms by uniting community partners and initiatives to improve health.</td>
<td><a href="http://www.healthylouisvillemetro.org/">http://www.healthylouisvillemetro.org/</a></td>
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<tr>
<td>Louisville Health Advisory Board</td>
<td>Part of Humana “Bold Goals” Project. Four committees: Social culture, diabetes, continuum of care, behavioral health.</td>
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<tr>
<td>Metro United Way</td>
<td>Initiatives focused on black male achievement.</td>
<td><a href="https://metrounitedway.org/servlet/eAndar.article/682/Our-Work">https://metrounitedway.org/servlet/eAndar.article/682/Our-Work</a></td>
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## HOUSING AND PRESERVATION

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<td>LMG Louisville CARES Affordable Housing Program</td>
<td>Addressing the need for affordable, multi-family housing for households making 80% or less of the area median income.</td>
<td><a href="https://louisvilleky.gov/government/housing-community-development/louisville-cares">https://louisvilleky.gov/government/housing-community-development/louisville-cares</a></td>
</tr>
<tr>
<td>National Historic Trust Green Lab</td>
<td>Three year project funding sustainable preservation work in Louisville. Built database on building conditions.</td>
<td><a href="https://savingplaces.org/places/heart-of-louisville/updates/">https://savingplaces.org/places/heart-of-louisville/updates/</a></td>
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### EDUCATION

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<td>JCPS Young Men of Color Initiative</td>
<td>Collective commitment to help males of color succeed academically and to better prepare them for college and careers.</td>
<td><a href="https://www.jefferson.kyschools.us/learning/young-men-color/">https://www.jefferson.kyschools.us/learning/young-men-color/</a></td>
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<tr>
<td>Building Our Blocks Initiative</td>
<td>Bringing teams of Louisville city workers into neighborhoods for intensive community cleanup and build-up sessions.</td>
<td><a href="https://louisvilleky.gov/buildingourblocks">https://louisvilleky.gov/buildingourblocks</a></td>
</tr>
<tr>
<td>Metro United Way Kindergarten</td>
<td>Boosting improved early educational attainment with a goal that 77% of children will be prepared for kindergarten by 2020.</td>
<td><a href="https://metrounitedway.org/servlet/CargoServlet?cargo=arcps&amp;cid=1416&amp;method=ReadyKids">https://metrounitedway.org/servlet/CargoServlet?cargo=arcps&amp;cid=1416&amp;method=ReadyKids</a></td>
</tr>
<tr>
<td>Say Yes to Education</td>
<td>Providing means for every public school student to not only graduate high school but also be able to afford and complete a college education.</td>
<td><a href="http://sayyestoeducation.org/">http://sayyestoeducation.org/</a></td>
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### ENVIRONMENT

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<td>One Water Initiative</td>
<td>Consolidation of the water and sewer authorities to create operational efficiencies and slow rate increases for customers. (Since 2014)</td>
<td><a href="http://www.courier-journal.com/story/money/companies/2015/08/18/msd-louisville-water-establish-one-water-board/31917649/">http://www.courier-journal.com/story/money/companies/2015/08/18/msd-louisville-water-establish-one-water-board/31917649/</a></td>
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<tr>
<td>Strategic Toxic Air Reduction (STAR) Program</td>
<td>The STAR Program of the Louisville Metro Air Pollution Control District is a regulatory program to reduce harmful contaminants in the air, to better protect the health and enhance the quality of life.</td>
<td><a href="https://louisvilleky.gov/government/air-pollution-controldistrict/strategic-toxic-air-reduction-program">https://louisvilleky.gov/government/air-pollution-controldistrict/strategic-toxic-air-reduction-program</a></td>
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</tbody>
</table>

### COMMUNITY FACILITIES

<table>
<thead>
<tr>
<th>INITIATIVE</th>
<th>DESCRIPTION</th>
<th>WEB ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMG Community Services Strategy Plan</td>
<td>To be developed. See annual report and partner programs for a summary of existing services.</td>
<td><a href="https://louisvilleky.gov/government/community-services/annualreportandexternalfunding">https://louisvilleky.gov/government/community-services/annualreportandexternalfunding</a></td>
</tr>
</tbody>
</table>
What does it take for Louisville to have the world’s most resilient communities?
—Stakeholder

Resilience Narrative

Urban resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what type of chronic stresses and acute shocks they experience.
—100RC

Image Credit: Louisville Metro Government
The Agenda Setting Workshop

City resilience is about making a city better, in both good times and bad, for the benefit of all its citizens, particularly the poor and vulnerable.

—Mayor Greg Fischer

The Agenda Setting Workshop gathered stakeholders from various sectors and industries in the city to discuss the topic of resilience and what it means to Louisville moving forward. The purpose of the event was to familiarize stakeholders with the 100 Resilient Cities (100RC) initiative and to gain local knowledge regarding some of the major issues and opportunities related to resilience in Louisville.

The workshop results highlighted in this chapter will serve as the foundation for a Resilience Strategy that the City will develop as a next step. In addition, the themes surfaced during the Agenda Setting Workshop will provide additional insights which helped the City identify Eric Friedlander as the Chief Resilience Officer (CRO) for Louisville, who will lead the Resilience Strategy process.

Mayor Greg Fischer, along with other City staff and leaders who attended the workshop, expressed commitment to supporting and continuing to spearhead resilience efforts in Louisville. His opening and closing remarks, as well as his attendance throughout the day, underscored the importance of the 100RC initiative. Leaders from 100RC also were in attendance and contributed to the workshop’s success.

Participants included more than two hundred stakeholders including volunteer facilitators and notetakers. The workshop was facilitated by City staff, 100RC leaders and Perkins+Will with the support from 100RC platform partners.
Module 1 (Exercise): What is Resilience?
The objective of Module 1 was to familiarize Stakeholders with 100RC’s definition of Resilience and to obtain a first read on what resilience means to Louisville. Stakeholders at each table were asked to write down their own definition of resilience as it applied to the city and to the organizations they represented. This was followed by a discussion in which each table came to a consensus on their key points and then reported to the larger group. The report out helped set the tone for the day as it provided an overview of the stakeholders’ understanding of resilience in Louisville.

Module 2 (Exercise): Shocks + Stresses
Module 2 aimed to gather information from stakeholders regarding Louisville’s top shocks and stresses. Shocks are one-time acute events such as earthquakes, sandstorms, market crashes, etc. Stresses are chronic conditions that weaken the fabric of a city over time — whether it is on a day-to-day or cyclical basis such as poverty, unemployment, etc.

The exercise had two parts. In the first part, facilitators at each table distributed a series of cards listing various shocks and stresses among the Stakeholders. Stakeholders were asked to rank each issue according to how likely they were to occur (high - low) and what level or consequence each event has/would have (high - low). In the second part, each table was encouraged to build consensus around their top three shocks and stresses that are highly likely and of high consequence. A volunteer from each table reported the table results back to the broader group.
Module 3 (Panel Discussion and Keynote Speaker): Equity
The purpose of module 3 was two-fold: engage the audience in a panel discussion around equity and hear from Norfolk’s Chief Resilience Officer about Norfolk’s Resilience Strategy. This module provided Stakeholders with lessons learned and considerations for Louisville’s Resilience Strategy moving forward.

Module 4 (Exercise): City Resilience Framework (CRF)
Module 4 used the CRF tool, which is built on four essential dimensions of urban resilience: Health & Wellbeing, Economy & Society, Infrastructure & Environment, and Leadership & Strategy. Each dimension contains three drivers (and a series of sub-drivers) which reflect the actions or issues relevant to resilience. For this exercise, each participant was given 12 color dots: 3 green (representing areas of strength); 3 yellow (representing areas in which the city can do better); and 3 red (representing areas in which the city can do much better).

Stakeholders were asked to place one dot per driver ranking the degree to which the City was strong or needed improvement in that area. Following the individual ratings, each table had a discussion around each driver and worked towards building consensus on their rating. Teams reported highlights of their final results to the broader group.

The following pages outline the outcomes of each exercise module.

Module 4 / City Resilience Framework Drivers:

Infrastructure & Environment
• Provides Reliable Communication & Mobility
• Ensures Continuity of Critical Services
• Provides & Enhances Natural & Man-made Assets

Economy & Society
• Fosters Economic Prosperity
• Ensures Social Stability, Security & Justice
• Promotes Cohesive & Engaged Communities

Leadership & Strategy
• Promotes Leadership & Effective Management
• Empowers a Broad Range of Stakeholders
• Fosters Long-Term & Integrated Planning

Health & Wellbeing
• Meets Basic Needs
• Supports Livelihoods and Employment
• Ensures Public Health Services

Agenda Setting Workshop. Clockwise: Module 3: Panel Discussion (from left to right: Arnita Gadson, West Jefferson County Community Task Force; John Marshall, Jefferson County Public Schools; Brian Warren, Louisville Metro Government; Otis Rolley, 100RC; Christine Morris, City of Norfolk); Module 3: City Resilience Framework. Image Credit: Perkins+Will.
Resilience in Louisville begins with having the right lens through which an approach and a strategy is developed. This became clear during the Agenda Setting Workshop in which stakeholders worked through their own definition and diagnosis of resilience as it applied to Louisville. This lens must encompass a wide range of factors, including urban health issues, educational attainment, job stability and crime while also narrowing focus to achievable tasks.

Among these factors, Equity became a reoccurring theme. Initially identified during the city’s application to be part of the 100 Resilient Cities, the need to focus on equity was validated throughout the Agenda Setting Workshop. Placing equity at the core of any future resilience strategy for the city is, according to stakeholders, not only key to addressing other critical issues in Louisville, but also essential to celebrating and leveraging the city’s DNA.

Finding a balance as well as connections between Equity and other key issues facing Louisville will be critical to the success of Louisville’s Resilience Strategy. Building upon the achievements the city is making in related areas will propel the process and end goal. As highlighted by Mayor Fischer’s opening remarks at the Agenda Setting Workshop, this sentiment is already evident in some of the City’s current efforts; especially as it relates to racial and health equity. Louisville is the country’s home of the first city government chartered Center for Health Equity; and one of the first cities in the country to eliminate homelessness among veterans. Last year, it earned the Culture of Health Prize from the Robert Wood Johnson Foundation for its work focusing on overall health and engaging the community in the broadest possible terms on well-being.

The Center for Health Equity equips, trains and advocates for equitable policies and practices across Louisville Metro Government departments, and with community groups, organizations and corporations to advance equity across Louisville.

https://louisvilleky.gov/government/center-health-equity

The 55,000 Degrees initiative seeks to increase educational attainment in Louisville by 55,000 postsecondary degrees by 2020.

http://www.55000degrees.org/

The Louisville Metro Government Office for Safe and Healthy Neighborhoods focuses on ensuring that Louisville is a city of safe neighborhoods, where all citizens feel secure, supported and prepared for lifelong success.

https://louisvilleky.gov/government/safe-neighborhoods

Many other efforts such as the 55,000 Degrees initiative or the Office for Safe and Healthy Neighborhoods are making strides in achieving a more equitable city.

Louisville is a city driven by compassion and tenacity. Hours prior to the Agenda Setting Workshop, Mayor Fischer invited citizens to a rally at the Muhammad Ali Center in support of Louisville’s immigrants, migrants and refugees. His message was clear: Louisville is a welcoming and inclusive city that is inspired by the worldwide legacy of Muhammad Ali. This demonstration of compassion is worth celebrating and will help catalyze the City’s resilience narrative.

Protesters gathered around Muhammad Ali Center for a pro-immigrant rally hosted by Mayor Fischer on January 29th, 2016. Image Credit: Mayor Greg Fischer.
We have more than two Louisville; it is divided. There is no racial tension; there is racism.
—Stakeholder

Mayor Greg Fischer

In a city, everything and everyone is connected. Isolation works against resilience.

Flipping the mindset from responding to an issue to thinking of how to use it as an opportunity and build proactively around it.

Information is key: Do people know what is available to them?

Fix institutional biases?

It’s about having robust and thriving systems, but it is also about being agile and flexible.

Build systems; go beyond responding to crisis. Be flexible.

How do we build a resilient Louisville instead of a resilient half and a struggling half?

Resilience means proactive, not reactive.

Seniors and immigrants are isolated.

It’s about thriving.

Refugees are the definition of resilience. Kids are immediately resilient. What can we learn from them?

Green infrastructure is a necessity, not an amenity.

It’s about our ability to bounce back as an enterprise and a system, but also as individuals.

Flip the mindset from responding to an issue to thinking of how to use it as an opportunity and build proactively around it.

Information is key: Do people know what is available to them?

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Stresses and Shocks.

Agenda Setting Workshop Results: Module 2

Understanding interdependencies:
The shocks and stresses exercise reinforced the need for a holistic approach to resilience that was first raised by stakeholders during Module 1. Stakeholders demonstrated an intuitive understanding of interdependencies between shocks and stresses, and provided a window into the city’s complex resilience challenges related to income disparities.

Although stakeholders noted that Louisville has many high-priority stresses that affect the city as a whole (such as increasingly erratic weather patterns and aging infrastructure) they felt that its most pressing problems will have the greatest impact on its most vulnerable populations. From 2012-2013, Louisville jumped from 32nd to 23rd on an income inequality ranking of the 50 largest cities in the U.S.1 From pollution and environmental justice issues to lagging infrastructure investments, the myriad stresses faced by disadvantaged populations from their surroundings have wide-ranging impacts like poor health, social isolation and diminished economic opportunities. Stakeholders overwhelmingly acknowledged that inequalities are driven by poverty, racism and decades of bad development policy.

Poor air quality, for example, is a health threat faced across the city. However, some types of air pollution are more localized than others and have disproportionate impacts on residents. In Louisville, this includes heavily industrialized areas like Rubbertown with its conglomeration of chemical and related industries; or heavy transportation infrastructure like rail switchyards and associated manufacturing plants. Louisville is home to 58 facilities reporting air emissions to EPA’s Toxic Release Inventory2, four interstates, three significant rail lines, and a healthy logistics / trucking industry. While major drivers of Louisville’s economy, these industrial and transportation facilities can have negative externalities such as diminished air quality, increased noise and dust, and the threat of hazardous material spills that raise environmental justice concerns.

Louisville’s low-income and minority neighborhoods are often adjacent to industrial centers and lack tree canopy and green infrastructure, including parks. This has led to urban heat islands, neighborhoods where ambient temperatures are up to ten degrees higher than in other parts of the city. Another problem exacerbated by the lack of trees and limited infrastructure capacity is rapid stormwater rise, which causes floods during heavy rains.

The areas with the smallest share of canopy cover—and the hardest-hit by urban heat island—often have a lot other problems to contend with: racial and economic disparities, plus years of chronic neglect by the city.1

1 100 Resilient Cities Challenge, Louisville Application, 2015.
2 Ibid.
We are only as resilient as the least resilient of us.
—Mayor Greg Fischer

Like air pollution, these incidents can disproportionately affect low-income populations, further endangering health and economic wellbeing. One needs only to turn to New Orleans to see the struggles low-income residents have faced when confronted with calamitous flooding. Because of limited resources or difficulties with insurance claims, costly repairs often took months; exacerbating other problems such as mold and wood decay.

In sum, stakeholders tied income disparities to increased vulnerability to shocks and stresses. While an economic crisis, such as market crash or industry collapse may affect residents across the board, other shocks like severe weather or infrastructure failure were identified as a greater threat to underserved and vulnerable populations.

Neighborhoods that have historically and intentionally experienced the most disinvestment are often the ones that are least equipped to deal with environmental issues. Because of these locational drivers, populations in poverty have fewer opportunities to access supportive infrastructure. In addition, dependence on transit systems that are incomplete or underfunded limit individuals’ access to critical support in the event of an extreme weather event or infrastructure failure.

By using the resilience lens to examine Louisville’s persistent challenges of inequity, poverty and lack of inclusion, the city will be better equipped to respond, adapt and thrive in the face of unforeseen events.

Shocks are often harder to overcome by imbalanced or disjointed systems; which is why the understanding of interdependencies becomes pivotal to Louisville’s resilience narrative.
FACT: In 2012, 53 people in the Louisville area died from causes likely related to human-amplified temperatures.1

75% of the tables indicated that severe weather is one of the top shocks facing the city. Some tables grouped specific weather events under this overarching category. Of the specific events identified, heat wave and tornadoes appeared several times followed by storms and flooding.

Louisville is at high risk for negative impacts from a heat wave because of the city’s significant urban heat island2. Louisville is the nation’s fastest warming urban heat island since the 1960’s3 and the effect is amplified by the impact of increased global temperatures. A major heat wave is estimated to cause dozens of deaths, increase medical costs for vulnerable populations, and increase utility expenses for all citizens. The toll on human health continues to rise when vehicles idling with air conditioning contribute to increased nitrogen oxide discharge into the air during these extreme events. This burdens the local health care system with hundreds of additional residents suffering respiratory and cardiovascular events.

A 2015 report by the Risky Business Project4 shows that Kentucky faces the greatest global change health risk from rising heat. The report finds that by mid-century, extreme heat events may directly claim up to 300 additional lives annually in Kentucky and significantly more may suffer from secondary health impacts. These downstream impacts arise from broader environmental issues caused by reliance on fossil fuels, worsened by increased cooling demand.

Top Shocks

Severe Weather

Tornadoes, storms and flooding were also identified as having major impacts in the community. The increase in warm and cold front collisions within the Ohio Valley has meant more extreme weather events for cities like Louisville, with more risk of severe rain and ice storms, and sometimes tornadoes. The city’s lack of green infrastructure and large expanses of impervious surfaces increase risk of flooding that can claim lives and damage property.

Economic Crisis: Market Crash; Business Closure

75% of table responses considered an economic crash, industry collapse or business closure to be of high likelihood and/or high consequence in Louisville. Potential impacts on a large employers like UPS were referenced as examples. Though UPS operations are not currently threatened in any way, a minor shock triggered by market failure elsewhere in the world might be felt in Louisville; and the prospect of this led many workshop participants to reflect on how closely the city’s economy was tied to factors outside of local control.

The fear of failure of landmark companies such as Ford, GE, and Humana, however unlikely, was on participants’ minds as they debated how incidents such as hazardous material accidents or shifts in consumer preferences might seriously affect Louisville’s industries. Participants were also quite sensitive to business closures in West Louisville, including grocery store closings that have severe impacts on the health and well-being of communities.

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3 http://www.urbanclimate.gatech.edu/projectList.shtml
4 https://riskybusiness.org/reports/
43% of table responses identified **infrastructure vulnerability and failure** as a top shock in the city, with the four-month shutdown of the Sherman Minton Bridge in 2011 as a recent example. This key river crossing is used by 80,000 vehicles daily to cross between Louisville and Southern Indiana. Cracks found in the steel structure forced an emergency closure and expensive repair, which exposed additional cracks.

The City’s water distribution and collection infrastructure is also aging and in some cases failing, causing environmental damage. Recent coverage in the Courier-Journal described the chronic flooding and wastewater issues faced by the Metropolitan Sewer District (MSD) as they attempted to correct overflow problems identified in a 2005 consent decree. Among other issues, century-old sewers are prone to collapse; leaving dangerous sinkholes and exposure to contaminated water should flooding occur. MSD’s long-term plan identifies solutions but the $4.3 billion cost is difficult to generate through tax increases in an unfavorable political climate. The funding roadblocks surrounding these issues will be decided by the beginning of summer, 2017, which will have immediate implications for the city’s resilience strategy.

### Riot / Civil Unrest

Out of all the shocks and stresses associated with social conditions, **riot / civil unrest** had some of the most urgent appeals and unvarnished sentiments as recorded in the notes. Most comments suggest the presence of a widespread, latent sense of grievance that, given the right circumstance, could trigger social upheaval. This is not surprising considering the current national conversation around the fractured relationship between law enforcement and communities of color, and the divisive rhetoric that resurfaced during the 2016 presidential race.

At least two tables spoke frankly about the presence of racism as the motivating factor in the threat of civil unrest and stated that racism was linked intimately with poverty and inequity. They referred to the Civil Rights Era where decades of disaffection among African-Americans boiled over into protests and sometimes riots, triggered by the assassinations of Robert Kennedy and Martin Luther King Jr.

One table discussed the multiple factors of poverty that could be flashpoints for civil unrest: racial tension, crime and gang activity, substance abuse, poor mental health, and inadequate childcare. This table ultimately did not choose civil unrest as a top shock. Subsequent group discussion examined the relationship between civil unrest and systemic racial and socioeconomic stresses.
Top Stresses

Poverty / Inequity

Participants identified poverty and inequity as the city’s top stress. Recent studies support this conclusion. A 2015 study by the Greater Louisville Project ranked Louisville 15th out of 17 comparable cities for the highest concentrations of people living in poverty (a total of 84,000 residents). Two census tracts including the Portland and Russell neighborhoods ranked amongst the poorest tracts out of 3,228 in 17 peer cities. The report noted that residents in these areas are more likely to be uninsured, unemployed, and undereducated.

In addition, as of 2015, 10% of Jefferson County seniors live below the poverty line, with the highest concentrations among Black or African American and Hispanic or Latino. But perhaps the most sobering figure is that 24% of children in Jefferson County live below the poverty line (higher than national average), with 47% of these children being Black or African American. Getting concentrated pockets of poverty in Louisville to a city “average” level could bring 5,200 children out of poverty and add up to a decade of life expectancy to its residents.

Poor Population Health

Participants identified poor population health as a second top stress. Some of their concerns included poor air quality and pollution (though air quality has greatly improved over the years due to the efforts of the Air Pollution Control District and the community’s support of clean air initiatives and policies); a shortage of healthcare professionals; lack of health insurance; and lack of fresh and healthy food options. A comparison of Louisville to 16 of its peers reveals that the city ranks 15 in health behavior, 16 in adult obesity, 15 in tobacco use and 14 in diet and exercise.

Participants also identified mental health issues (Kentucky has a higher rate of suicide than the national average) and drug addiction as major causes of Poor Population Health.

Low Performing Education Systems

A third of participants considered Low-Performing Education Systems to be a top stress. According to the Greater Louisville Project, kindergarten readiness is currently only 51% (with a goal of 77% by 2020) and K-12 student preparedness is 61% (with a goal of 100% by 2020). Participants were careful to emphasize the linkage between poverty and poor education performance, even noting that food insecurity was a contributing factor.

Others voiced their support for the education system and noted that poor performance was not an organizational problem, but dependent on socio-economic status. This dialogue underscored that poverty is central to the challenges faced by children in failing schools, much like other American cities.

FACT: A PERSON LIVING IN POVERTY IN LOUISVILLE IS NEARLY 9 TIMES LESS LIKELY TO HAVE A HIGH SCHOOL DEGREE, IS ALMOST FIVE TIMES MORE LIKELY TO BE UNEMPLOYED AND IS LIKELY TO HAVE A SHORTER LIFE EXPECTANCY BY NEARLY 12 YEARS.

Half of homeless families in Louisville have jobs. —Stakeholder

Aging Infrastructure

A majority of participants recognized the stress of aging infrastructure and its relationship to the shock of infrastructure failure. Aging infrastructure is a persistent problem that drains local resources as systems that need renewal are patched for the short-term. The findings of the Move Louisville plan illustrate this point.

According to Move Louisville, a 2012 assessment done by Transmap rated 30% of Louisville Metro roadways as deficient. The cost to rehabilitate these roadways is estimated at $112 million. This amount does not account for the additional $86 million needed to repair a portion of the 2,200 miles of sidewalks or the $27 million needed for bridges and culverts. In total, Louisville Metro has a maintenance backlog of $288 million for local streets only. The Interstate system and other major roadways are operated by the state.1

According to stakeholders, the City often has to compete for funds for infrastructure improvements with other municipalities in the State. This makes maintenance of aging infrastructure a major challenge.

In addition, tax issues and tax reform create financing challenges. While the state is examining tax reform issues, Louisville only receives half of every dollar sent to Frankfort in taxes.

1 Move Louisville, 2035 Transportation Plan, 2016.
Louisville’s Strengths and Areas For Improvement

The City’s approach to resilience and equity was illuminated during the City’s Resilience Framework (CRF) exercise. Though participants agreed that Louisville meets some of its residents’ basic needs, the benefits were not deemed to be distributed across the board. The “Meets Basic Needs” driver was therefore ranked as an area in need of significant improvement; especially as it relates to providing affordable, quality and safe housing options, access to healthy food, and health services for all.

The CRF helps cities identify areas of strength and areas of improvements based on 4 main dimensions, 12 drivers and 52 subdrivers.

Agenda Setting Workshop Results: Module 4

RESILIENCE FRAMEWORK DIAGNOSIS

- Areas of strength
- Can do better
- Can do much better

AREAS OF STRENGTH

- Fosters Long-Term & Integrated Planning
  Sub-Drivers: City monitoring and data management; Strategies and plans; Land-use and development; Building codes, standards & enforcement.

- Promotes Leadership and Effective Mgmt.
  Sub-Drivers: Multi-stakeholder alignment; Government alignment; Decision making and leadership; Emergency capacity and coordination.

- Promotes Cohesive and Engaged Communities
  Sub-Drivers: Education; Public risk awareness; Risk monitoring and alerts; Communication between government and public; Knowledge transfer and best practices.

AREAS FOR IMPROVEMENT

- Ensures Social Stability, Security and Justice
  Sub-Drivers: Deterrents to crime; Corruption reduction; Policing to promote safety and security; Law enforcement.

- Meets Basic Needs
  Sub-Drivers: Housing; Energy; Water; Food.

- Empowers Broad Range of Stakeholders
  Sub-Drivers: Education; Public risk awareness; Risk monitoring and alerts; Communication between government and public; Knowledge transfer and best practices.
Insights on the City’s Resilience Framework.

Health & Wellbeing

Meets basic needs
Supports livelihoods and employment
Ensures public health services

Areas to improve:
• Quality and affordable housing options.
• Access to healthy foods (especially for kids). There are many food deserts in the city.
• Public health issues; for example, drug abuse, obesity, etc.
• Response to ongoing opiate crisis.
• Equal access to healthcare and health services.

Areas of strength:
• Supply of basic needs such as water and energy.
• Healthcare facilities in good condition.

FACT: MORE THAN 1 IN 5 OF KENTUCKY’S CHILDREN LACK CONSISTENT ACCESS TO ENOUGH FOOD FOR A HEALTHY, ACTIVE LIFESTYLE.¹

¹ Kentucky Association of Food Banks. http://kafb.org/hunger/

Table Results (Based on 16 tables)

<table>
<thead>
<tr>
<th>Category</th>
<th>Meets basic needs</th>
<th>Supports livelihoods and employment</th>
<th>Ensures public health services</th>
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<tr>
<td></td>
<td>43%</td>
<td>37%</td>
<td>43%</td>
</tr>
<tr>
<td></td>
<td>Can do better</td>
<td>Can do better</td>
<td>Can do much better</td>
</tr>
</tbody>
</table>

Economy and Society

Promotes cohesive and engaged communities
Ensures social stability, security and justice
Fosters economic prosperity

Areas to improve:
• Access to small business loans.
• Reentry programs and services.
• Employment opportunities for ex-convicts and workforce development.
• Equal access to financial opportunities; there is racial bias.
• Support of local business more than of national companies.
• Continued economic growth and opportunity that is mindful of air and environmental quality and equity issues. There shouldn’t have to be a trade-off.
• Land use and development that addresses vacant properties.
• Implementation of planning studies.

Areas of strength:
• $411 million of the City budget for the 2016-2017 fiscal year is dedicated to public safety agencies. This accounts for 58% of its total and includes hiring 40 firefighters and 122 LMPD officers and replacing police cars, fire trucks, ambulances, snow plows and garbage/recycling vehicles.¹


Table Results (Based on 16 tables)

<table>
<thead>
<tr>
<th>Category</th>
<th>Promotes leadership and effective management</th>
<th>Ensures social stability, security and justice</th>
<th>Promotes cohesive and engaged communities</th>
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<tr>
<td></td>
<td>43%</td>
<td>50%</td>
<td>43%</td>
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<tr>
<td></td>
<td>Can do better</td>
<td>Can do much better</td>
<td>Doing well</td>
</tr>
</tbody>
</table>
Infrastructure and Environment
Enhances and provides protective natural and manmade assets
Ensures continuity of critical services
Provides reliable communication and mobility

Areas to improve:
- Connectivity between residential area and job centers.
- Connectivity of the park system.
- Improvement of TARC’s system, including extension of service as well as a more reliable schedule.
- Public transportation options to complement TARC such as additional bus lines, shuttles, etc.
- City policies that support multimodal infrastructure and pedestrian-oriented improvements.
- Implementation of green infrastructure to help reduce the impact of flooding.
- Equal access to communication infrastructure such as internet.

Areas of strength:
- Good parks system and good air quality.
- Good communication technology and information distribution during emergencies.

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Enhances and provides protective natural and manmade assets</td>
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<td>Ensures continuity of critical services</td>
</tr>
<tr>
<td>Provides reliable communication and mobility</td>
</tr>
</tbody>
</table>

Leadership and Strategy
Promotes leadership and effective management
Empowers a broad range of stakeholders
Fosters long-term and integrated planning

Areas to improve:
- Broader representation of stakeholders in leadership. Transfer of knowledge is important.
- Implementation of taskforces, especially for housing.
- Empowering of people who are already doing work.
- Implementation of existing plans.

Areas of strength:
- Robust local government, leadership and management.
- Promotion of cohesive social systems.
- Extensive long-term planning.
- Strong local, neighborhood and community identity.

<table>
<thead>
<tr>
<th>Table Results (Based on 16 tables)</th>
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<td>Promotes leadership and effective management</td>
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<td>Fosters long-term and integrated planning</td>
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Looking Ahead.

Agenda Setting Workshop Results: Module 3

The Agenda Setting Workshop featured a keynote address from Christine Morris, Chief Resilience Officer (CRO) from the City of Norfolk, Virginia. Morris shared Norfolk’s Resilience Strategy and a summary of current implementation efforts. After her address, Morris participated in a panel discussion regarding social equity, which included local panelists representing different sectors.

The panel offered insights on a variety of topics related to equity and resilience. The panel themes were intended to provide insights for Louisville’s CRO to lead the development of a resilience strategy. Below are highlights from these discussions.

Lessons Learned

Adapt and Reconfigure: Is the city changing in a way that makes it thrive or is it looking at its past? It is important to have a mindset that is focused on the future and that might mean changing everything. Resilience is also about risk reduction: How can Louisville be here in the future?

A System of Systems: Think of resilience as a system of systems. At times, a change in one system may have a significant impact in another system. For example, improving the communication network and providing commuters with the right information on where crashes and delays are happening at any given point may improve transportation.

Connect and Build Upon: Organizations tend to be silos. It is important to connect multiple resources and think broadly. Honoring previous work is critical; especially to eliminate the re-creation of data and information. Understanding and building upon previous and existing initiatives is very important.

Challenges are Assets: Issues that cities deal with are often seen as challenges more than assets. In the City of Norfolk, increased flooding due to water level elevations in coastal areas is a challenge. This challenge was used as an opportunity to create innovative approaches to neighborhood planning that included green and blue infrastructure. It also was seen as an economic opportunity to be leveraged.

Individuals First: Resilience should focus on individuals; they create communities and systems every day.

Resilience is a Continuum: Resilience is constantly in motion and systems should be constantly tested, even when they work. Focus on defining your agenda and listen to the next generation. Eliminate other agendas that are distracting and evaluate as you go.
Panel Highlights
Questions and Answers

What happens after the Resilience Strategy?
Having a Chief Resilience Officer and a Resilience Strategy for the city is significant, but the true contribution is the platform and the network contributions by 100RC.

How do you build capacity?
It is critical to use 100RC partners to help the Louisville build capacity from within. The City should consider using non-traditional community outreach methods, like holding open houses in community centers, recreation rooms or people’s houses.

Empower communities by engaging their localized leaders—those already working in the ground—because they can act as “doors.” Foster cross-sector, cross-cultural and cross-generational collaboration and eliminate redundancies by respecting previous work.

What are some basic do’s and don’ts?
Determine early if the City wants to work with an existing portfolio of initiatives or not. Identify pros and cons. The City of Norfolk chose to work with no portfolio, but it is dependent on resource availability. Regardless, always honor everyone’s work.

As Louisville thinks about its Comp Plan 2020, how does the City design for equity?
Place and space matters; land use drives people’s experience. Think about the experience. Is there a quintessential Louisville experience? Is it diverse? Is it familiar? Is it quiet? The experience has to be unique, from Louisville. Stakeholders already decided it will be compassionate and equitable, but how does that translate into the physical environment?

What are some of the issues you are addressing?
Trust. Building a strong level of trust is important. It is important to be unapologetic in a district that is not white. We need to provide access to our students. Speak the truth. Challenge and address some of the gaps. Put race at the center. Be louder and “grumpier.”

What is the difference between environmental protection and environmental justice?
Environmental protection has an overall approach while environmental justice is about ensuring that nobody is disproportionately affected by issues. We need to distinguish between what is equity and what is fairness.
The fight is won or lost far away from witnesses—behind the lines, in the gym, and out there on the road, long before I dance under those lights.

—Muhammad Ali
Case Study
The Compassionate Schools Project.
Resilient Louisville in Action.

Based on the Agenda Setting Workshop findings, building resilience in Louisville will start with individuals in their neighborhoods and their interactions with the city’s broader systems. The Compassionate Schools Project (CSP) exemplifies such a program. CSP is an elementary school curriculum that integrates development of mind and body. The program interweaves support in academic achievement, mental fitness, and physical health. CSP is building Louisville’s resilience by empowering children to manage the shocks and stresses of their daily lives and equips them with tools to build lifelong health and wellness.

Mindfulness-based instruction, social-emotional skills training and attentive movement are being used increasingly in individual schools across the United States. CSP is the first to implement and study these skills across a sample representative of an entire school district. It is also the first curriculum to integrate these with skills shown to aid child physical health.

Starting with three pilot schools, the curriculum was implemented for all K-5 students twice each week. The classes served more than 1,300 students and were evaluated and adjusted for optimal teacher and student engagement, schedule integration, age appropriateness and compatibility with the data measurement plan.

The three CSP pilot schools received positive feedback from principals and teachers. Results included improvements in students’ ability to self-regulate and self-monitor behavior in the classroom. Additional outcomes include reduced test anxiety and increased focus in the classroom.

By the 2017-2018 school year, there will be 25 schools in Louisville receiving the CSP curriculum and 25 control comparison schools.

CSP Testimonials
“The curriculum in the Compassionate Schools Project is unlike any curriculum I have ever taught. We are literally teaching our students how to focus, be resilient and have self-management. I believe every teacher can agree that these are components our students desperately need. Many of our students are living lives that encounter emotional trauma on a daily basis, this curriculum is teaching our students to process their emotions in a healthy way. I have never felt more passionate about my role as an educator as I have this year teaching in the Compassionate Schools Project.”

– Meghann Clem, CSP Teacher, Cane Run Elementary

From top to bottom:
Mayor Fischer with CSP students. Image credit: Courtesy of LMG.
Students in the classroom. Image credit: WDRB News
Students practice calming breaths in the school’s gym.
Moving Forward
Mayor Fischer concluded the Resilient Louisville Agenda Setting Workshop with an explanation of how he intends to use the day’s discussions to guide the city’s resilience strategy, together with Louisville’s Chief Resilience Officer (CRO). The workshop affirmed that Poverty/Inequity, Poor Population Health, and Low-Performing Education Systems are Louisville’s top stresses. Severe Weather, Economic Crisis, and Infrastructure Failure surfaced as top shocks.

Louisville’s new CRO will use this guide for further exploration, engagement, and validation of the city’s resilience challenges. The CRO will also work with stakeholders to better define key drivers like equity and their relationship to the city’s resilience.

The following points are Strategy Partner and workshop participant recommendations as Louisville embarks on its resilience building efforts:

**Education**
- Help residents understand the full breadth of shocks and stresses facing the city.
- Explore partnerships with local schools, colleges and universities.
- Develop an effective outreach plan to communicate resilience issues and to generate buy-in.
- Facilitate greater communication between municipalities in the region.

**Funding Sources**
- Explore public/private programs and partnerships with local industry (i.e., UPS for extreme snow/weather events) in exchange for possible emergency support.

**Food Security**
- Examine ways to expand fresh food options in neighborhoods with limited or a complete lack of access.
- Build upon Louisville’s burgeoning reputation as a local culinary destination to encourage urban food production.

**Role of the Commonwealth**
- Identify opportunities to pursue resilience through the state legislature.

**Water/Stormwater Management**
- Develop a comprehensive plan to address stormwater, water supply and sanitary sewer that identifies the benefits of an integrated approach.
- Develop infrastructure design criteria that addresses projected climate change.
- Empower property owners to proactively manage storm water together with the city.

**Economic Development**
- Strengthen programs designed to grow and support local small businesses.
- Explore the impact of improved education systems on the local economy.
- Identify opportunities for further economic diversification.
Housing
• Survey national precedents for affordable housing programs that could be applicable to the region.
• Evaluate Louisville’s existing services for homeless individuals and identify opportunities to boost education and health programs.

Community Engagement
• Expand conversations beyond traditional stakeholder groups to generate new and deeper perspectives.
• Review potential partnerships with representative nonprofit organizations in an effort to help broaden the message of Resilience.

Policing
• Continue to develop programs to overcome community mistrust of police.

Livability and Place-Making
• Identify strategies to attract new residents to Louisville and retain existing ones.
• Enhance the public realm and underlying infrastructure to improve urban environmental quality.
• Strengthen building and development policies to reduce carbon emissions and increase utilization of clean energy sources.

Income Disparity
• Develop strategies to address income disparity and foster economic mobility, including education opportunities and business incentives.

Building Capacity for Resilience.

Louisville’s resilience challenges extend beyond its geographic and political boundaries; the city government alone cannot build a successful Resilience Strategy. Building resilience requires collaboration between Louisville Metro government, residents, local businesses, non-profits, institutions, foundations, surrounding communities, and regional and federal government agencies. Stakeholders identified to date include the following organizations that were represented at the Agenda Setting Workshop:

Key stakeholders identified to date include the following list of organizations that were represented at the Agenda Setting Workshop:

GOVERNMENT
Center for Health Equity
Jefferson County Public Schools
Louisville Free Public Library
Louisville Metro Council
Louisville Metro Government
— Advanced Planning
— Air Pollution Control District
— Community Services
— Criminal Justice Commission
— Develop Louisville
— Health and Wellness
— Globalization
— Management and Budget
Louisville Metro Housing Authority
Louisville Metropolitan Sewer District
Transit Authority of River City

MetroSAFE911
Parks
Performance Improvement and Innovation
Police Department
Public Works
Safe and Healthy Neighborhoods
Sustainability
## INSTITUTIONAL
- KentuckyOne Health
- Norton Healthcare
- University of Louisville

## NON-PROFIT
- 55,000 Degrees
- Americana Community Center
- American Institute of Architects
- Breckenridge Counseling Center
- Catholic Archdiocese of Louisville
- CE&S Foundation
- Center for Neighborhoods
- Centerstone
- Childcare Advocates of KY
- Choose-Well
- Coalition for the Homeless
- Family and Children’s Place
- Family Health Centers
- Family Scholar House
- Foundation for a Healthy Kentucky
- Greater Louisville Inc
- Greater Louisville Sierra Club
- Greater Louisville Project
- Home of the Innocents
- Humana Foundation
- Institute for Healthy Air, Water and Soil
- Interdenominational Ministerial Coalition
- James Graham Brown Foundation
- Jewish Heritage Fund
- Kentucky Refugee Ministry

## NON-PROFIT, continued
- Kentucky Solar Energy Society
- Kentucky Waterways Alliance
- Legal Aid Society of Louisville
- Lift a Life Foundation
- Louisville Grows
- Louisville Sustainability Council
- Louisville Urban League
- Metro United Way
- Neighborhood House
- Norton Foundation
- Restorative Justice Louisville
- Smoketown Family Wellness Center
- Solar Over Louisville
- The Nature Conservancy
- Trees Louisville Inc.
- YouthBuild Louisville
- West Jefferson Community Task Force

## PRIVATE SECTOR
- AEG Facilities
- Argo Networks
- EY
- Ford Motor Company
- Intermedix Corporation
- Lazarus LLC
- Property Developers
- Stantec
- UPS
- Walsh Construction
- Yum! Brands

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The following organizations were invited, but unable to attend the Agenda Setting Workshop. They will be engaged in future phases of the Resilience Strategy:

Future phases of the Resilience Strategy will provide opportunities to engage an even broader network of stakeholders across the City and region.