



MEASURING PROGRESS TOWARD DOWNTOWN REVITALIZATION AND ENGAGING PUBLIC SPACES:

A REVIEW OF EXISTING RESEARCH

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**KNIGHT
FOUNDATION**



EXECUTIVE SUMMARY

Knight Foundation supports inclusive and equitable engagement in the communities where the Knight brothers owned and operated newspapers. Knight believes that an engaged community is one where people are attached to the place where they live and invested in the community's future.

To enhance efforts to revitalize downtowns and neighborhoods, Knight wanted a clearer understanding about how best to assess the impact of these investments. That is, which metrics, according to experts, indicate that work to revitalize downtowns and communities is taking hold? These questions were raised before the COVID-19 pandemic occurred and before the current reenergized dialogue about addressing racial inequities in the United States began. They are now more vital than ever as cities begin to reopen and recover as vibrant, equitable hubs of social, economic and civic life.

Knight commissioned Community Science to conduct a review of existing research on downtown revitalization, equitable economic development and public space activation to investigate these questions. The purpose of this report is to share learnings about what to measure in order to support similar efforts, post-COVID-19 recovery and steps to eliminate racial inequities in United States cities.

The following conclusions emerged from the review of the literature. The first two synthesize strategies that cities commonly use to foster revitalization. The remaining four are what the literature tells us about how to measure these strategies.

- **Seven well-known strategies emerged from past research as key drivers of revitalization.** These strategies include creating and sustaining a business improvement district, promoting downtown through branding and marketing efforts, investing in a diversity of mixed-use developments, attracting and keeping businesses downtown, expanding employment opportunities in the downtown or city center, creating and activating public spaces and implementing tax or other fiscal incentives.
- **Many cities build and program public and civic spaces as a revitalization strategy, seeking to increase resident and visitor attachment to these places.** Research suggests that the basic qualities that make a good place can be captured using four concepts: multifunctional spaces used every day of the week, inclusive and safe gathering spaces, attractive and comfortable places, and proximity to nature. For spaces to feel inclusive for all races, their design, including perceived safety features such as police presence and other surveillance, need to be carefully considered and balanced. These public spaces can then create a sense of place and place attachment among residents, who are motivated to protect, improve and take care of the broader place in which they live.

- **Movement of people seems to matter (as residents, employees and visitors).** One measure of successful revitalization includes measuring the flow of people in and around key focus areas. Post COVID-19, understanding how movement across a community is changing will be even more critical as cities work toward recovery—even if residents' preference for density decreases.
- **“Revitalization” should be measured comprehensively, looking at trends in employment, poverty, demographics, cost of doing business, the resident experience, the health of the business and housing markets, and with an eye toward whether benefits are distributed equitably.** Interim progress measures should reflect a city's unique strategies and desired short-term goals. They should also assess equitable access to the benefits of revitalization to help prevent displacement of longtime residents and businesses.
- **Assessing civic space quality and a city's progress toward activating those spaces is best measured with multiple indicators.** Those include diversity of users, potential for interacting with the space and with others, design features that support user safety and comfort, users' immediate perceptions of the space, the presence and strength of cultural assets in or near the space, the diversity of the surrounding business mix and how often the space is used.
- **Individuals' attachment to public or civic spaces is a critical step toward revitalization; people must want to be in and draw benefit from being in an area for revitalization to occur. Measuring progress toward increased place attachment, therefore, must be measured at tangible and psychological levels.** Tangible evidence of place attachment include employment, property ownership and resident family members. Psychological indicators of attachment are positive memories and emotions, sense of belonging, positive self-esteem and positive health and well-being.

IT IS CLEAR THAT THIS IS A MOMENT FOR CITY LEADERS TO TAKE STOCK AND PRIORITIZE RECOVERY AND REVITALIZATION STRATEGIES FOR THE FUTURE. IT IS ALSO THE TIME TO DECIDE HOW THESE STRATEGIES WILL SEEK TO ADDRESS RACIAL INEQUITIES IN AMERICAN CITIES.

These findings are based on U.S. cities' experiences over the last 20 to 30 years.^A Under normal circumstances, these experiences would serve as a valuable guide for future revitalization work. The advent of the COVID-19 pandemic, though, makes these insights even more important. It is not yet clear how social distancing and mandatory closures will affect downtowns over the long term (e.g., will residents be afraid to travel to or live downtown? Will businesses lease less office space and allow their workers to work remotely? Will public events be possible, and if not, will businesses that rely on their foot traffic leave the downtown area?). Nonetheless, it is clear that this is a moment for city leaders to take stock and prioritize recovery and revitalization strategies for the future.^B It is also the time to decide how these strategies will seek to address racial inequities in American cities.

There is value in looking to the past and adapting those lessons to the current reality. For example, knowing that people who feel connected to a place and to each other are more likely to stay and invest can inspire

A This time frame was selected because it includes most of the literature related to revitalization and public spaces.

B See Richard Florida et al., “How Life in Our Cities Will Look After the Coronavirus Pandemic,” *Foreign Policy*, May 1, 2020, <https://foreignpolicy.com/2020/05/01/future-of-cities-urban-life-after-coronavirus-pandemic>, and Derek Thompson, “The Pandemic Will Change American Retail Forever,” *The Atlantic*, April 27, 2020, <https://www.theatlantic.com/ideas/archive/2020/04/how-pandemic-will-change-face-retail/610738/>.

innovative strategies for fostering connections even within the constraints of COVID-19. Similarly, cities may prioritize supporting the recovery of their small independent retailers given their importance in creating vibrancy and drawing visitors and residents to the area. They may also seek to invest in small businesses owned by people of color to ensure they have the resources to thrive and support the communities in which they are located. The outcome measures highlighted in this report will continue to be relevant, though adaptations may be needed at times. For example, it will still be important to measure the quality of a public space but specific questions related to safety and comfort may need to be adapted to reflect social distancing.

Cities have been at the center of public health crises in the past and have found ways to adjust and thrive once more. With strategic and coordinated action by business and government leaders, this can again be possible. As leading global experts recently explained, “if the world’s cities find ways to adjust, as they always have in the past, their greatest era may yet lie before them.”^C With city leaders focused on addressing racial inequities, there is hope that this great era will include pathways for access and prosperity for all residents.

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INTRODUCTION

Knight Foundation believes that an engaged community is one where people are attached to the place where they live and are invested in their community's future. One of Knight's priorities is to accelerate existing momentum to revitalize downtowns and neighborhoods, with a particular emphasis in several communities on supporting engaging public spaces.

But what does success look like? What are the signposts that show work to revitalize downtowns and communities is taking hold? Knight asked Community Science to review existing literature in the field to help answer these questions. The purpose of this report is to share learnings as widely as possible, in order to support other, similar efforts. This is even more important in the wake of the COVID-19 pandemic and as a part of the reenergized dialogue about addressing racial inequities in the United States. City leaders must decide how to reopen and rebuild their local economies, attract visitors and reknit a sense of community among residents. This year has brought new challenges and opportunities; the findings in this review may help in that they highlight how cities have recovered from past crises and returned as vibrant, equitable hubs of social, economic and civic life.

The review focused on three bodies of literature—literature focused on downtown revitalization (revitalization),^D equitable economic development, and public space creation and activation.^E The specific focus on separate bodies of literature for revitalization and equitable economic development was necessary because traditional revitalization practices and literature rarely consider how strategies and their

outcomes may benefit or harm different groups and constituents. This is clear when one looks at historic policies and practices that have limited—and even denied—opportunities for people of color and people from low-income communities.¹ Because of this, and the likely cost of not considering equity and inclusion, we reviewed and integrated findings from studies in the emerging field of equitable economic development into the relevant discussions of downtown revitalization and investments in public spaces.

The literature review found that research conducted on revitalization, equitable economic development and public spaces primarily used direct observations, case studies and perspectives from city administrators and city planners. There were a small number of cases focused on validating measurement tools, exploring trends over time and providing theoretical connections of strategies to measurements, but these were rare and almost exclusively focused on strategies related to public spaces. Additionally, large-scale, longitudinal studies relied on macro-level indicators (e.g., employment rates, average household income, overall GDP and poverty rates), which are not as accurate or timely when measuring micro-level changes in specific neighborhoods or communities.

D In our review, we defined “revitalization” as improvements to downtowns or cities to reinvigorate the designated areas, making them desirable places to live, work and play.

E Creating and activating public spaces is a strategy used on its own or in connection to revitalization efforts where community spaces and other public spaces are developed or redesigned to create a greater sense of place and attachment to the area.

From these studies, we identified strategies that leaders in the field consistently support and consider effective (see next section) even if not proven effective by rigorous study designs. Additionally, there is evidence that comprehensive revitalization strategies focus on the “double bottom line” of economic returns and community benefits.² These strategies focus on improving a specific place in a community and the lives of the people who live in and near that place. By taking this more comprehensive approach, there is greater opportunity to capitalize on the community's assets (i.e., purchasing power, innovation or collective energy). These initiatives and investments consider the likely beneficiaries and take steps to ensure that existing residents and businesses can participate in the local improvements. This is critical in that “there is evidence that diversity is good for growth: more diverse metro areas have more business starts and higher rates of self-employment, which in turn are associated with growth in jobs, output, productivity, and per capita income.”³

There are also a large number of overlapping revitalization metrics recommended in the literature, which the authors prioritized based on their review across sources and our experience in the field. Some metrics are based on commonly used strategies or proposed theoretical connections between a strategy and its outcome.

The literature on strategies and metrics for public spaces used a wider set of research methods (e.g., surveys and focus groups) and analysis procedures (e.g., content analysis, structural equation modeling [SEM] and factor analysis) to validate measurement tools and understand the qualities of a good public space. The authors reported the findings from these studies and organized the literature on public spaces around a theoretical pathway depicting how public spaces relate to place attachment. They theorized that public spaces strengthen place attachment, retaining current residents and attracting new residents and businesses. This attachment, in turn, contributes to the growth of the local business sector and the desire of current residents to take ownership over the future of their spaces. This is consistent with the foundation's belief that an engaged community is one where people are attached to the place where they live.

The authors attribute the field's reliance on experiential data rather than statistically proven best practices to a number of interconnected factors. First, understanding impacts of revitalization, equitable economic development and public spaces requires the measurement of whole community systems over a long period of time to establish an accurate correlational relationship. These types of research studies are costly and difficult to conduct as cities, communities and neighborhoods are constantly changing and affected by myriad programs and initiatives. Over the last two decades, several initiatives (e.g., National Neighborhood Indicators Partnership and Community Indicators Consortium) have worked to establish frameworks for measuring community change, however resources are limited for the evaluation and research needed to test and validate these approaches. Finally, the availability of local data that is representative and publicly accessible is a constant challenge. Advancements in data science, technology and the proliferation of smart devices in public settings will help to alleviate some of these issues and strengthen future research on these subjects.

The remainder of this report will describe the strategies, metrics, contextual limitations and strength of evidence for revitalization and public spaces. Inclusion and equity strategies and metrics will also be used as running themes throughout this report to highlight the ways that revitalization and the creation and activation of public spaces can be implemented in equitable ways.



INVESTMENT IN DOWNTOWN REVITALIZATION

Downtown districts, whether in small, medium or large cities, function as the heart and soul of their cities.⁹ They are “symbolic forces and unifying centers” and often provide connections to the cities’ history and heritage.⁹ Downtowns are also the heart of consumer spending, with one study finding that 80% of all non-lodging related spending occurs downtown and is a key contributor to local tax revenues.^{85, 86} With this context, many cities seek to develop or revitalize their downtown centers in order to bring greater prosperity to their communities.

2.1 Which strategies contribute most to downtown revitalization?

Historically, the strongest strategic contributors to revitalization have been related to economic development (e.g., creating and sustaining a business improvement district and implementing tax credit programs and incentives) and placemaking.^F These contributors were complemented by an emerging body of literature about the importance of equitable economic development. All of the strategies shared a focus on regenerating city centers to make them accessible to all residents and local business owners and attractive places for people to live, work and play at different times of the day, seven days a week.

In addition to these overarching themes, a few other key elements emerged as important for revitalizing downtowns and neighborhoods:

Inclusive Growth. If revitalization efforts are to improve the lives of all residents and remove structural barriers to achieving a high quality of life, then inclusive growth must be the focus for local economic developers, city officials and mayors.^{1,4,5} By putting equity and inclusion at the center of their thinking, cities can create the conditions to raise standards of living for all residents, which evidence has shown is

F Placemaking is a “collaborative process by which we can shape our public realm in order to maximize shared value. . . . Placemaking facilitates creative patterns of use, paying particular attention to the physical, cultural, and social identities that define a place and support its ongoing evolution.” “What Is Placemaking?,” Project for Public Spaces, <https://www.pps.org/article/what-is-placemaking>.

BY PUTTING EQUITY AND INCLUSION AT THE CENTER OF THEIR THINKING, CITIES CAN CREATE THE CONDITIONS TO RAISE STANDARDS OF LIVING FOR ALL RESIDENTS, WHICH EVIDENCE HAS SHOWN IS NEEDED FOR CITIES TO BE COMPETITIVE AND HAVE ECONOMIC GROWTH.

needed for cities to be competitive and have economic growth.⁶ Key elements for equitable and inclusive growth are investing in people (e.g., committing to skill development strategies for the entire workforce and improving living standards for all residents through programs such as apprenticeships and livable wages) and acknowledging and working to address the uneven balance or effects of investments in less advantaged neighborhoods and local clusters of business. These strategies require a level of intentionality to embed equity and inclusion in every aspect of revitalization efforts. Without this, strategies tend to focus on the place without the complimentary focus on the people. This can result in vibrancy that benefits new residents and displaces existing residents and business owners,⁷ falling short of the comprehensive revitalization that holds promise for the greatest community gain. A critical way to embed equity in revitalization work is to include a set of mixed metrics focused on measuring poverty and inequity based on race, ethnicity, class, age and gender (and other less-advantaged identities) to the measurement process.

Context of Place. Context and people matter—and are unique. Revitalization will look different in any two cities based on the city or on the region in which they are

located;⁸⁻¹⁰ existing businesses and land use patterns; cultural, institutional and natural assets;^{9, 11, 12} and stakeholders' visions and goals of revitalization.^{10, 13-16} Revitalization, therefore, must include strategies that are customized for a particular community.

Build on Assets. One important way to ground strategies in place is for downtowns to leverage their unique cultural and institutional assets and natural amenities to draw businesses, residents and tourists. Cities and downtowns should consider both their assets and goals when determining their revitalization strategies, as well as engaging a diverse range of residents and public and private sector stakeholders in determining their vision and goals.^{10, 12, 15, 17} The questions to ask when planning revitalization are: “What does your community want to become?” and “Who does it want to welcome and include?”²⁸

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Even though no two downtowns are alike in their starting points, patterns emerged that point to strategies and resources to leverage to create healthy, vibrant downtowns. Exhibit 1 shows the downtown equitable economic development strategies that were most frequently identified in the studies and literature reviews we analyzed as critical to revitalization success.⁶ As stated earlier, there were no studies that definitively showed that one strategy was more

⁶ As mentioned earlier, we have brought together the two bodies of literature—traditional economic development literature and the emerging literature on equitable economic development—into a single set of strategies. This was feasible given that findings in both bodies of literature were complementary.

effective than another (see section 2.3 on strength of evidence for additional information).

The remainder of this section will review the identified strategies and provide details on what has been observed from our review. We organized strategies into three groups: group 1 included overarching strategies and supporting infrastructures for successful revitalization (see yellow circles); group 2 included traditional economic development strategies (see blue circles); and group 3 included place-related strategies (see pink circles). We present our discussion of the creating and activating public spaces strategy in its own section later in the document to allow for a deeper description of the related aspects of creating quality places and residents engagement with those spaces.

It is important to note that, as recovery and rebuilding begin after the COVID-19 pandemic, there will likely be shifts in the relative importance of these strategies and how they might best be implemented. In fact, leading scholars have differing views on how the pandemic will affect downtowns and what strategy shifts might be needed.¹⁴ For example, if corporations decide to lease less downtown office space and allow for increased virtual working, this could send shockwaves throughout downtowns, affecting businesses that have historically served office operations and their employees. It could also create opportunity for city, downtown and industry leaders to create new visions for their districts and make strategic decisions for future investment, policies and programs.

Because this review was completed prior to the pandemic, the full impact of which is still unfolding, we have reported on the findings of prior literature, though noting where the pandemic is likely to have the greatest influence going forward. For each strategy below, we have also noted how city leaders can use these strategies to foster equity in the recovery.

Exhibit 1. Leading Effective Downtown Development Strategies



Create and sustain a business improvement district.

A business improvement district (BID) is a nonprofit comprising public-private partnerships in which the government collects added taxes or fees on all properties and/or businesses in the area, but the BID determines how money is spent. BIDs exist widely in both small and large cities to plan, facilitate and implement revitalization projects and services that are flexible to local context. Because local governments often lack the capacity and resources to take on downtown regeneration projects and maintenance, BIDs fill human infrastructure needs and perform services such as cleaning, security, marketing, capital improvements (e.g., street lighting and greenery), and equitable economic development (e.g., incentives or loans to bring in and help expand businesses).¹⁸ A New York City study found that BIDs, on average, increased property values by 15% compared to properties in the same neighborhood outside of the BID (with no impact on residential property values).¹⁹ Another study found that BIDs decreased property crimes and that BID security services have a preventive effect on crime.²⁰

¹⁴ Florida et al., "How Life in Our Cities Will Look."

In addition, BIDs can foster equity by ensuring that the distribution of funds and projects across an area does not largely benefit or harm one group of residents and the BID board represents diverse business sectors and a diverse group of people to give voice and decision-making power to all groups in a place.

Implement tax increment financing, preservation tax incentives and other fiscal incentives. Local governments leverage tax increment financing and other tax incentives to attract investments, often in concert with the above economic strategies, to catalyze downtown investment (such as financing mixed-use developments, adaptive reuse or historic preservation). For example, financial incentives such as low-interest loans could be used by property owners for rehabilitation, infill development, historic preservation and façade improvement.²¹ Local governments could incentivize the rehabilitation of historic buildings that contribute to the downtown's sense of place through façade improvement grants, design guides to help ensure redevelopment reflects the character and size of existing buildings, and preservation tax incentives.²² Equity considerations would ensure that any tax or fiscal incentive is accessible to all residents and in all districts, as communities of color have experienced (and continue to experience) discriminatory banking and housing practices.²³

Promote downtown through branding and marketing efforts. Effective branding and marketing of downtowns can draw residents, tourists and businesses downtown. A downtown's brand identity can create or highlight a sense of place and communicate its unique value, or why one should live, work or visit this downtown as opposed to a downtown in another region or city. If the branding of a downtown area is too narrow—for example, focusing on attracting highly educated business executives—a large segment of people may feel excluded. An inclusive branding strategy would be careful to ensure that a downtown's story is representative of all perspectives and experiences that contribute to the culture of the area.

Research shows that business owners, city planners and local government officials perceive that branding, including creating a positive image of downtown,

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creating a sense of community and increasing visibility through marketing is important for a downtown's success.^{11, 24, 25}

Attract and keep local businesses downtown. Local businesses are an integral part of thriving downtowns. Although downtowns are shifting away from a retail model, local businesses still provide additional jobs and tax revenues. Compared to big-box stores, local businesses have a higher multiplier impact on the local economy; local retailers and restaurants return 52% and 78.6% of revenue to the local economy, respectively, leading to additional jobs and tax revenues for the local economy.²⁶ Some incentives to attract and keep businesses include façade improvement grants to help businesses remodel downtown buildings, retail assistance programs to offset the initial costs of the location, and incubators to assist startups with space and to fill vacant lots.⁹ An equity lens for this strategy would pay attention to the types of business

owners that are accessing business improvements and to the types of jobs being brought into the area by attracted businesses. The goal would be for new businesses to bring employment opportunities that benefit current downtown residents at an equal or greater rate than attracting a younger, potentially higher-educated population from outside the local area. In this way, local capacity can be built for businesses and residents, instead of replacing the existent and established workforce.²⁷

Local businesses already located downtown may need additional support as they work to recover from the COVID-19 pandemic. Local businesses tend to be smaller and undercapitalized. Residual effect of the pandemic, with reduced sales and potentially high costs, will put these businesses at greater risk for closure. At the same time, if the pandemic leads to reduced lease rates, there may be opportunities to recruit local businesses to fill downtown vacancies.⁸⁸

Expand employment opportunities downtown or in the city center. Expanding employment opportunities is a strategy that is pertinent to a broad range of cities and is often coupled with other revitalization strategies. When employers are located downtown, they provide a daytime population and customer base for local businesses,²⁸ increasing the cash flow in these areas and contributing to the vitality of the city center. Expanding high-skilled jobs within healthcare and education²⁹ and expanding employment in anchor institutions²⁹ have been shown to successfully increase employment opportunities in downtowns for populations that are educated. As with the equity point in the previous strategy, new employment opportunities can provide the potential for skill-building, advancement and benefits, with the goal of allowing current residents to live meaningful lives and make a respectable living.^{1,4,31} This approach has been successfully implemented in Milwaukee, where the BID requires 22 jobs per acre and that minimum wage standards be met before a business is able to purchase in their industrial park.

In the post-COVID-19 era, there may be a tendency for businesses to explore leaving the downtown area. City leaders will need to engage with businesses to motivate

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them to maintain their presence and commitment to these important city centers. This could take the form of advocacy and branding campaigns that highlight the centrality of the district, additional placemaking efforts and accommodations for COVID-19 social distancing requirements.

Invest in diverse mixed-use developments for commercial and residential spaces and when redeveloping vacant property. The literature shows that diversifying the use of spaces and building on existing assets can be a successful strategy for creating vibrant downtown spaces. Having a mix of uses generates pedestrian traffic throughout the day and creates a lively streetscape.^{22,33} In a survey of cities declining in vitality, nine of the ten lacked a variety of land uses³⁴ and in eleven surveyed downtowns with regional and national reputations for outstanding downtowns, all shared a commitment to mixed-use developments in current design and when planning new developments.³⁵ Critical in the mix of uses are residential properties. Downtown residential markets ensure that there is foot traffic after business hours and on the weekends. Additionally, an influx of residents leads to demand for more amenities, such as supermarkets and entertainment facilities.⁸ However, the literature did not suggest a formula for the

“right” mix of housing, shops, restaurants and cultural and civic centers to create a vibrant downtown. Instead, downtowns should conduct housing and business district market analyses to determine economic needs and unfulfilled opportunities, and decide what can and should be done to improve the economic conditions in the community in ways that align with agreed-upon economic goals and objectives.¹² When filling vacant lots

or underutilized parking lots, another important land use to consider is public space. These lots can be turned into community assets, such as gardens or public art displays that everyone can access and enjoy for free. In each of these cases, policies are needed alongside implemented strategies to protect existing property owners and residents from any rapid new development and potential displacement.³⁶⁻³⁸

2.2 How have others assessed the efficacy of downtown revitalization strategies across time?

Metrics are important for understanding a downtown's starting point, before revitalization has taken place, and for measuring progress of the chosen strategies. Metrics can also be used to understand whether strategies are being applied equitably for all residents and guide any needed adjustments. Our review of the literature saw that metrics on revitalization focused on broad economic measures, demographics and resident experiences, and the health of specific sectors—mainly housing and business. These metrics¹ are presented in Exhibit 2. We also identified metrics that measured the image or brand of the place and other features, which are discussed further in the section on created and activated public spaces (i.e., multi-use, attracting and retaining residents or businesses, pedestrian friendly, cultural diversity, crime, street and building aesthetics, and availability of events and activities).



Economic Metrics

Authors who focused on economic metrics developed comprehensive frameworks to measure the health of a downtown. These included Tyler's Health Perception Index,³⁹ the National Trust for Historic Preservation's Main Street Program Indicators³⁴ and Burayidi's Downtown Resilience Scorecard³³—all of which considered employment rates, job availability,

incomes and poverty as elements to measure and categorize downtowns. International metrics on urban core areas also used variations of broad economic metrics of employment rates, job creation, incomes and poverty.⁴⁰ The work of McKinsey & Company and the Brookings Institution also examines employment rates, job creation and income growth to track revitalization.^{3, 41} These metrics are generally viewed as the best measures to gauge the long-term success of revitalization, though we also recommend considering metrics that capture the movement of individuals (e.g., percent of city's residential population living downtown and growth in retail sales). See section 2.3 on the strength of evidence for predicting revitalization over time.



Demographics and Resident Experience Metrics

Demographic measures are employed to track demographic growth and shifts in the designated areas, as well as to gauge aspects of residents' quality of life. When demographic metrics were used, they included education level and age of the local labor force, income (i.e., median income, income disparity, poverty rates and household income), immigration into the designated area, percent and representation of

¹ The metrics presented in this section were derived from several literature reviews focusing on revitalization as well as individual studies. We also used our own experience measuring community development to determine the usefulness of revitalization metrics. The available literature did not allow us to make a final conclusion on which metrics were optimal because studies did not compare and contrast the usefulness of the metrics. The strength of evidence is further discussed in subsequent sections.

people living and working downtown, and descriptions of the overall downtown population (e.g., education, foreign-born, employed and living downtown).^{3, 8, 10, 12, 13, 16, 42} Anytime demographic growth (e.g., change in educational attainment or income) is assessed, it should be disaggregated by race and ethnicity to understand how trends are affecting different populations and whether growth is inclusive and opportunities are equitable. In terms of key targets for fostering revitalization, Burayidi's scorecard suggests that 5% of a city's population reside downtown and that at least 2% of the city's population be foreign-born. In addition, when downtowns are revitalized, they must ensure that longtime residents are not displaced by rising rents and property taxes.^J To track this, downtown leaders regularly analyze changes in race, gender, education status and income of residents to identify any rapid changes that might indicate displacement. They also compare how representative downtown residents and workers are of the broader city.^{43, 44}



Sector-focused Metrics

Metrics focused on the health of the housing and business sectors were most frequently used to describe the markets of the respective sectors. The business sector metrics examined vacancy rates, business longevity or turnover, diversity of business sectors, sales, available financing and hours of operation.^{9, 12, 18, 24, 45, 51} Housing metrics looked at vacancy rates, length of ownership, property values, land use mix, financing statistics (i.e., loan amounts and mortgage ratios), and quality of housing.^{8, 13, 15, 16, 30, 46} Two data studies went further than identifying metrics, seeking to establish specific thresholds needed for a successful downtown. The Destination Development International surveyed more than 400 small and big downtowns across the United States, Canada and Western Europe to identify 20 ingredients for downtown success. They included a downtown occupancy rate of at least 97%; less than 5% business turnover per year; a minimum of ten businesses open past 6 p.m.; and a good mix of businesses (at least ten that sell food and ten retail shops).⁴⁷

Burayidi's scorecard used a similar threshold to define resilient downtowns as those where more than 8% of all retail businesses in the city are downtown.

In general, the health and business sectors' measures aimed to quantify the costs of or barriers to living and working downtown, facilitating factors for new business or new uses of the downtown, and how long residents and businesses remain downtown. For all of these measures, it is important to disaggregate analysis by demographic characteristics where data is available. This is critical because applying these metrics as neutral and "color blind" unintentionally can mask negative experiences of residents in minority groups who are nested within majority areas.

Selecting Metrics to Measure Progress

As discussed in the next section, the literature has not established definitive metrics that all communities should use to assess whether their revitalization efforts are making a positive difference. Instead, the consistent guidance is that metrics be customized to intended strategies, that they track who is benefitting from and being negatively affected by the strategies and should measure progress over time. Because revitalization occurs over an extended period, planned metrics need to consider this. While process measures such as the existence of a BID or the rehabilitation of a historic property are immediately visible, it takes years after strategies are implemented to show economic growth, population growth or a change in the perception of the image of a downtown.

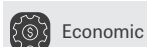
Exhibit 2 presents metrics that have been used to measure each of the previously discussed strategies in regard to revitalization. A more detailed version of Exhibit 2 is also found in Appendix B. The following section describes the strength of these metrics.

J For recent evidence on the prevalence of displacement in rapidly improving neighborhoods, see Jason Richardson, Bruce Mitchell, and Juan Franco, "Shifting Neighborhoods: Gentrification and Cultural Displacement in American Cities," National Community Reinvestment Coalition (March 2019), <https://ncrc.org/gentrification/>.

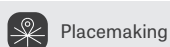
Exhibit 2. Strategies and Metrics of Downtown Revitalization

In the Strength of Evidence column, green represents metrics that were validated and share consistent findings across two or more studies and yellow indicates metrics that were validated but only by one study.

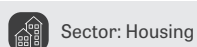
REVITALIZATION STRATEGY	METRIC TYPE	METRIC	STRENGTH OF EVIDENCE
Create and sustain a business improvement district		Number of businesses located downtown	●
		Growth in retail sales	●
		Longevity of small businesses	●
		Increase in property values	●
		Resident representation in the business improvement district advisory board or governance	●
		Racial and ethnic composition of the business improvement district	●
		Citizen attitude toward downtown	●
		Crime rates	●
Promote downtown through branding and marketing efforts		Positive media mentions of downtown	●
		Brand identity and positive image	●
		Visibility of downtown marketing (publicity, social media, peer reviews)	●
		Number of and attendees at special events	●
		Number of hotel and motel rooms per 1,000 central city residents	●
Invest in diversity of mixed-use development, including housing, and in filling vacant property		Percent of city's residential population living downtown (threshold: 5%)	●
		Growth in the number of housing units downtown	●
		Population growth (+/- change over time)	●
		Percent of city's housing units located downtown	●
		Diversity of resident tenure	●
		Percent of civic and cultural facilities located downtown	●
		Percent of city's historic property located downtown (threshold: 20%)	●
		Existence of a gathering place or point of arrival	●
		Vacancy rates (commercial, residential, etc.) and vacant lots	●
		Diverse mix of uses of buildings and spaces (e.g., commercial, residential, civic)	●
Attract and keep businesses downtown		Percent of retail businesses in city located downtown (threshold: 8%)	●
		Diverse business mix/store types	●
		Storefront occupancy rate (threshold: 97%)	●
		Business turnover per year (threshold: <5%)	●
		Growth in retail sales	●



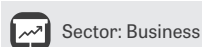
Economic



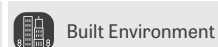
Placemaking



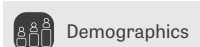
Sector: Housing



Sector: Business



Built Environment



Demographics

REVITALIZATION STRATEGY	METRIC TYPE	METRIC	STRENGTH OF EVIDENCE
Expand employment opportunities in the city and downtown or in city center (disaggregate employment measures by race and ethnicity)		Percent of city residents working in the city	●
		Unemployment rate	●
		Labor force participation rate	●
		Net new jobs	●
		Median household income	●
		Poverty rate	●
		College degree attainment	●
		Foreign-born population	●
		Proportion of jobs in finance, insurance and real estate (FIRE), healthcare and/or education industries	●
Implement tax credit programs and incentives		Amount of private investment leveraged as a result of public funding	●
		Amount of redevelopment funds invested to enhance downtown's public spaces/ attractiveness	●

Note: The appendix indicates which metrics are recommended for assessing equitable processes or outcomes.

2.3 What is the strength of evidence for these metrics and their ability to predict downtown revitalization over time?

When deciding which metrics to use, a community should consider how likely the metrics are to accurately measure the outcomes they are working toward. One way to do this is to look at the ways the metrics have been used in the past by researchers and other cities. The following section describes this history and then explains how this affected the recommendations presented in Exhibit 2.

The majority of articles found and reviewed used a case study methodology, featured a single downtown or cases of downtowns, or relied on reflections from urban professionals, planners and city officials as data sources.^{11, 25, 40} The lack of statistically rigorous studies is likely due to the complexity of measuring downtown revitalization. At a fundamental level, revitalization is a complex concept and a generally accepted definition of revitalization has yet to be agreed upon in the field. This makes it difficult to determine all the metrics necessary to measure the phenomenon. Outcomes of revitalization are also difficult to describe using

quantitative data alone; effective descriptions require the use of qualitative data and examples of what a thriving or vibrant area is like. Additionally, revitalization strategies bridge several fields of study focusing on the interaction between people and place inside a city or local area, which contains its own set of attributes and challenges. Finally, the state of being revitalized is fluid and difficult to capture as an outcome, requiring the use of more process-oriented studies to monitor improvement across time.

Most of the articles examined success by comparing groups of downtowns, and only a small number of articles studied trends over time. In studies that compared trends across time, cities did not always achieve meaningful improvements, despite already being considered thriving or less optimal at baseline.^{42, 48} Additionally, some cities experienced improvements in some areas and had worsening outcomes in others, making it difficult to conclusively say a city achieved revitalization. This may be due to an overreliance on

broad quantitative data alone to measure and predict revitalization, which may have overlooked qualitative changes made in the focus areas, including the feeling or perception of achieved improvement.

From this literature and in light of the complexity described, we have proposed the metrics listed in Exhibit 2. For each metric, we assessed the strength of metrics based on consistent use of the metrics across articles, our own expertise with measuring community development and the presence of metrics in articles that focused specifically on measuring revitalization. Metrics that did not meet at least two of these criteria were not included in our recommended list of metrics. Metrics rated as green were consistently used in articles measuring revitalization and are known to be indicators of community development and/or positive aspects of a community. Metrics rated as yellow have been shown to be of strong practical use or were used frequently in the literature. The strength of evidence did not consider methodologies used, as the majority of articles focused on retrospective case studies and did not present enough variation on this criteria to contribute additional value to the assessment.

The metrics in Exhibit 2 are a comprehensive set of process and outcome measures that account for the challenges in measuring revitalization. It is important to note that, due to the designs of the studies from which we drew the metrics, they should be considered as recommendations and not definitive guidance. As such, communities may want to consider the relevance of all metrics and select the metrics that are most closely aligned with strategy goals, even if the strength of evidence is shown as yellow. Also, in addition to identifying metrics to track by strategy, there may be value in communities tracking the most frequently identified economic metrics (i.e., employment rates, income, poverty and job creation) and a few metrics that track human movement into the downtown (e.g., percentage of city's residential population living downtown and special event attendees), all of which are captured in Exhibit 2. We suggest this because there is inconclusive evidence that the economic metrics alone can indicate revitalization (see above). When measured with metrics that help to illustrate the flow of people, there may be the correct combination of metrics

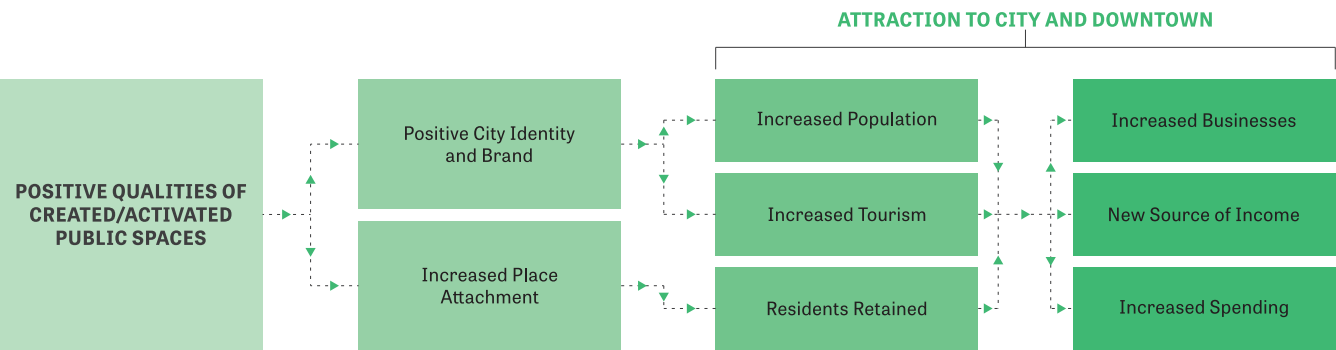
to more accurately assess the presence of vibrant, revitalized downtowns. These additional movement metrics embody qualitative factors of a city and its residents that economic metrics may miss on their own. Understanding the flow of people through an area could be a critical measure of a thriving area because people visit a space for a multitude of reasons beyond economic benefit, allowing this measurement to act as a multidimensional outcome.



INVESTMENT IN PUBLIC SPACE ACTIVATION

Many communities across the United States have chosen to invest in public spaces, which connect people to the places where they live and to the public life of the community. Historically, these connections to public spaces were seen to foster resident commitment to the downtown, neighborhood or overall city, which in turn was believed to increase population and facilitate revitalization. These various objectives of engaging community are illustrated in the pathway presented in Exhibit 3. After the COVID-19 pandemic, the exact role of public spaces in supporting resilient downtowns and neighborhoods may shift but they are still likely to be vitally important to equitable recovery.

Exhibit 3. Pathway Connecting Public Spaces to City Outcomes



The remainder of this section summarizes the degree to which there is evidence that active public spaces foster vibrancy and revitalization, presents characteristics of activated public spaces and how activation can be measured, describes how to measure place attachment and brand identity, and ends with a discussion of the strength of the evidence for these observations.

3.1 How are active public spaces related to vibrancy and downtown revitalization?

Our review of the literature suggests that the connection between public spaces and revitalization is not a direct relationship, but is likely connected through positive place attachment.^K Our experience with creative placemaking also suggests that building public spaces alone does not create thriving downtowns or city centers, especially when spaces are constructed without resident buy-in. The public spaces must first create a sense of place and place attachment among residents, who are then motivated to protect, improve or take care of the broader place in which they live. Also, having public spaces that create a sense of place and place attachment contributes to the development of the identity or brand of the larger city or downtown center, which can be used to attract tourists and new residents. In this way, a city's public spaces and brand

can contribute to improvements of the economic opportunities and outcomes within a city or downtown area (see Exhibit 4). This theory of change is illustrated by the collective work around Reimagining the Civic Commons, an initiative focused on transforming “shared civic assets to foster engagement, equity, environmental sustainability and economic development in [selected] cities.”^L In this work, the initiative uses a measurement framework that assesses aspects of public spaces, civic life, social cohesion, housing, economics and some demographic factors.⁴⁹ While the framework was based on stakeholder experience rather than rigorous research (likely due to the dearth of research studies), it provides an example of measuring a multifaceted revitalization project using a public spaces strategy.

Place Attachment: Place attachment is a construct emerging from various attitudes about a single place (e.g., public park) or a larger geographic area (e.g., neighborhood, city, state) in which people live or wish to live.^{50–52} Place attachment also shares elements with other well-established measures of connection with place, such as sense of community and social cohesion.^{53, 54} Whereas these constructs are broad and place more emphasis on the relationships between people, place attachment focuses on an individual's sense of identity derived from and shared with a place. The strategies and framing for creating good public spaces were more aligned with the place attachment construct, but the use of social cohesion and sense of community as measurement frameworks could provide supplemental metrics for strategies focusing on the relationship aspects of a community.

Three types of place attachment have been operationalized as *attachment/self-extension*, *environmental fit* and *place-self congruity*. Attachment/self-extension refers to how strongly a person's identity is tied to the place; environmental fit speaks to a person's sense of belonging in the place; and place-self congruity is a person's assessment that they and the place share a common set of values or culture. When a person has positive psychological experiences with a place their attachment to the place is strengthened. Other factors that contribute to the formation of place attachment are the extent to which a person is rooted to the place via employment, family ties, memories of life experiences and historical ties.^{46, 50}

Place Identity or Brand: A place's identity, or brand, is a characterization of the place based on cultural values, policies, demographics, assets, or other unique features. Residents and city-sponsored marketing can brand a place internally, but external entities can also brand a place by highlighting key features of the place, in comparison to other places (e.g., “Top Places to Live” and “Most Obese States” lists). The ideal brand represents a net positive of images in the media, comparisons to other cities and perceptions by residents and visitors.

K While the available research does not draw a direct connection from place attachment to revitalization, several theoretical frameworks suggested that place attachment is a vehicle for retaining and attracting people to a place—one of the main outcomes associated with revitalization (see references 10, 12 and 25).

L See <http://civiccommons.us/>.

Places with higher attachment and a positive brand are typically places that people want to live, work and play and are better suited to retain and attract people to that place or downtown area (see call-out box for additional information on the constructs of attachment and identity or brand). This can lead to sustained or increased populations, increased tourism and new economic opportunities for local businesses brought on by the desire to be in the place. Place attachment can also lead residents to have a sense of responsibility over the fate of their place, a motivation that can be leveraged for engaging grassroots actions, increasing civic engagement and building resident capacity to take part in revitalization planning.⁵⁵⁻⁵⁷

As placemaking becomes an increasingly important tool to help revitalize disinvested, underutilized areas, cities can use strategies such as equity mapping, participatory budgeting, complete streets and initiatives such as Detroit's Strategic Neighborhood Fund to center equity and inclusion. If this is not done, there can be the unintended or intended consequence of increasing the desirability of living in low-income communities, making current residents vulnerable to displacement.⁵⁸

PLACES WITH HIGHER ATTACHMENT AND A POSITIVE BRAND ARE TYPICALLY PLACES THAT PEOPLE WANT TO LIVE, WORK AND PLAY AND ARE BETTER SUITED TO RETAIN AND ATTRACT PEOPLE TO THAT PLACE OR DOWNTOWN AREA. THIS CAN LEAD TO SUSTAINED OR INCREASED POPULATIONS, INCREASED TOURISM AND NEW ECONOMIC OPPORTUNITIES FOR LOCAL BUSINESSES BROUGHT ON BY THE DESIRE TO BE IN THE PLACE.

3.2 Which strategies contribute most to public space activation?

In our investigation of strategies that contribute to public space activation, the richest literature focused on the qualities that make a good public space, rather than the effectiveness of any one strategy at activating public spaces.⁵⁹ Implicit in the literature is the hypothesis that successful activation of a public space is dependent on the qualities of the space.⁶⁰ An activated public space is seen as more attractive and is expected to increase foot traffic or use of the space; it also fosters an interplay between the physical environment, existing local cultures and diverse social identities.⁶¹⁻⁶³ Attraction to a place can help a city or downtown area retain current residents and attract new residents or tourists.^{24,}

⁶⁴ Public spaces have also been used to create trust

between people and provide opportunities for residents to interact.^{15, 63, 65, 66}

Types of public spaces are broad, ranging from streetscape elements (e.g., pedestrian-friendly designs or new retail façades) to large public structures on waterfronts or public greenways. Public spaces are also defined as permanent cultural assets (such as museums or historical sites) and temporary events (such as pop-up cafes or farmers markets). The literature also described public spaces as a city's general feel or brand, which can encompass the aesthetics and intangible aspects that draw residents and visitors to the space. Public spaces can also create

implicit messages about who is and who is not wanted in a space through branding, signage, navigation and transit, memorials and other design elements.^{58, 67, 68} Public space researchers and practitioners describe the qualities of good public spaces from observing a wide range of spaces. The strategies used to create public spaces and measure the qualities of a good public space show convergence across four main elements.^{59, 60, 69}

Multifunctional spaces have a good mix of assets and resources that all residents or visitors can use to live, work and play—every day of the week, 24 hours a day. The literature describes these places as having a good mix of businesses (e.g., retail, restaurants and theaters); mixed use of land, with residential and office space; and locations near amenities such as schools and hospitals. These spaces may also be near other types of public spaces, creating “cultural clusters,” historic centers or other thematically similar assets.

Inclusive and safe spaces—also referred to as open, inviting or accessible spaces—make people feel safe and welcome to use the space. The sense of inclusiveness originates from the design of the space or the historical use of the space. Places that are seen as inclusive are accessible to everyone in the area regardless of age, sex, gender, race, ability or sexual preference, and are considered places that single people, couples or families would visit. Inclusive spaces are also characterized as open, with several entry and exit points. Additionally, these spaces are thought of as good meeting places and are often seen as the social center or gathering place in a city. The sense of safety comes from the adequate, but not overbearing, presence of cameras, other people and active patrols, as well as from a space that is well kept and has a positive or “good” image.^{24, 69} It’s important to note that the presence of too many security features (i.e., cameras or uniformed guards) creates a negative, controlled, or overly managed impression, reducing the number of people attracted to the space and the types of interactions that might occur there.⁶⁵ A space needs to strike a balance between safety and surveillance and openness and inclusiveness.⁷⁰ Engaging diverse groups of residents will help city leaders understand how users respond to different features to ensure that the spaces are safe and inclusive for all.

Attractive and comfortable spaces are focused on the physical elements that make a space aesthetically pleasing, innovative or comfortable. This quality encompasses the design or architecture of the space (which may create a sense of awe or promote movement through the space) and innovative features of the space (which facilitate interactions with the space or others in the space). This quality also includes accessibility structures, such as ramps, places to sit, shade or tree cover and other features that support the use of the space for pedestrians of all ages and abilities.^{60, 66, 72} Public spaces that are attractive and comfortable maintain these features regardless of the season or weather, and may also be said to use the space in an environmentally conscious way.^{14, 73}

Spaces that are near nature or embedded within natural or urban green spaces are the final element considered in what makes a good public space. Spending time around parks or integrated green spaces can decrease stress and mental fatigue.⁷⁴ Nature in urban environments improves the area’s aesthetics and helps it be seen as more welcoming. Additionally, spaces that are built around or nearby water (e.g., rivers, waterfronts and streams) often have high foot traffic and constitute good mixed-use spaces (e.g., boardwalks).⁷⁵ Trails and other usable green spaces that facilitate physical activity are also highly visited, but the research is mixed on whether these spaces actually help to increase physical activity or lead to improved health for all residents. This is especially true in low-income communities and communities of color, which typically have fewer accessible and well-maintained green spaces than wealthier, whiter communities.⁶⁵ Additionally, the “greening” of public spaces has resulted in gentrification and displacement of low-income residents as these communities have been made more attractive and the property values have risen.⁵⁹

While these four characteristics are likely to remain important, their relative weight may change (i.e., safety may become more important than proximity to nature). What makes a space attractive, comfortable or safe may shift after the COVID-19 pandemic. For example, consumers may now see larger or outdoor spaces as more comfortable and safer because they allow for greater social distancing between people.

How a space is multifunctional may also shift, taking into consideration new combinations of uses, such as using sidewalks for restaurant dining space and streets for pedestrians.

Barriers and Facilitators to Inclusive Public Spaces

It is important to note that “good” public spaces that are “well designed” may not always be inclusive spaces and it is essential to ask who the public space is for, how it works (e.g., what activities can take root here?), and how it feels to be in the space. The design alone rarely achieves public space activation.⁶²

To ensure that strategies are implemented equitably and inclusively, they must address historic inequities that were experienced by existing residents, particularly in communities of color and low-income communities.^{36, 58} The literature suggests the following strategies: activate public spaces to reflect the cultures of communities already living in the place;^{62, 76} design public spaces that are accessible for people with different abilities—cognitive, sensory, physical or developmental;^{63, 68, 77} approach design by considering how different gender identities might navigate the public space to feel safe and welcome;^{60, 77} and ensure there is adequate space for improvisational and informal activities that allow people to express their cultures in their own ways.^{76, 77}

Developers of public spaces can facilitate these strategies by involving residents in the planning process to find ways that support the diversity of local organizations and vendors (e.g., take neighborhood tours led by residents).^{63, 78} Residents can also guide developers by prioritizing amenities for cultural activities, providing insight into local perspectives and

TO ENSURE THAT STRATEGIES ARE IMPLEMENTED EQUITABLY AND INCLUSIVELY, THEY MUST ADDRESS HISTORIC INEQUITIES THAT WERE EXPERIENCED BY EXISTING RESIDENTS, PARTICULARLY IN COMMUNITIES OF COLOR AND LOW-INCOME COMMUNITIES.

showing how designs can intentionally or unintentionally exclude certain groups of people.⁷⁹

One example of the need for inclusive outreach was observed in a case study in 2016 of Cedar Hill State Park in Texas. Study organizers wanted to understand why black Americans’ usage of the park was so low despite a large black population around the park. It was found that there was a lack of cultural relevant programming that matched the leisure and cultural interest of the black American residents, which reinforced the perception that the park was a space for white people.⁸⁰ This example helps to illustrate the importance of thinking about who is activating a public space and whether inclusive outreach is done with a community to ensure relevant programming of the space.

Additionally, reviewed literature provided a cautionary set of factors that could affect the overall activation of public spaces. This included users’ access to the public space, including connections via public transportation, availability of parking and structures that support and protect pedestrians’ and bicyclists’ use of the space.^{22, 72}

3.3 How have others assessed the efficacy of public spaces and place attachment?

Metrics will be presented in this section as they relate to elements of good public spaces and the pathway

connecting public spaces to revitalization. For brevity, the metrics are presented as high-level concepts,

and examples of specific measures providing a more comprehensive understanding of the metric are presented in Appendices D and E. The presentation of metrics will be followed by a brief summary of the strength of evidence and potential challenges in using the metrics.

Qualities of Created and Activated Public Spaces

Our review of the literature centered on how to best measure the four elements that relate to the quality of public spaces: multifunctional, safe and inclusive, attractive and comfortable, and proximity to nature. The literature highlighted the need for supplemental metrics to understand the availability and health of an area's cultural sector. With these goals in mind, we recommend using a combination of Vikas Mehta's 2014 Public Space Index, a framework that has been validated and replicated to measure the quality of public spaces⁷²,⁸¹ as well as additional metrics from various studies that provide measurements of the broader cultural context (see Exhibit 4). In Exhibit 4, we have mapped all recommended metrics (rows) onto the four qualities of public spaces (columns) as a way to organize the literature and visually represent which metrics can be used to measure which element as well as where there are opportunities to use a single set of metrics for measuring multiple elements of a public space.

The Public Space Index measures five dimensions of public spaces, including inclusiveness, pleasurability, meaningful activities, safety and comfort.

Inclusiveness measures the presence or absence of diversity among people at the public space, including age, gender, class and physical ability. This metric also includes physical structures that limit access to the space, such as obstructive entrances, restricted operating hours, signage forbidding certain behaviors and the presence of oppressive security. **Pleasurability** has slight variations on how it is measured, based on the type of public space (e.g., street, detached plaza or park, or attached plaza or park), but it generally measures the design, density and diversity of elements within or nearby the public space that are interactive. **Meaningful activities** measure a space's potential to be a gathering space and its available amenities, such

as restaurants and other businesses. **Safety** measures design aspects—such as lighting (especially at night), nearness of exits and blind corners—perceived safety or crime in the space, and the appropriate use of security features. Safety has also been measured using secondary data on crime statistics. Note that, as described above, safety features and inclusiveness need to be balanced. **Comfort** measures the physical comforts, such as seating and shade. Comfort also measures the maintenance of the space and its noise level.

The remaining metrics in Exhibit 4 measure aspects that were either not found within the Public Space Index or were used in the literature to assess larger areas than the single public space focus used in the Public Space Index validations (see Appendix C for a more detailed listing of the measures). **Likability** was added to a version of the Public Space Index to capture immediate feelings about a space using a range of adjectives and perceptions.⁷² Mark J. Stern and Susan C. Seifert mapped four metrics to determine the **overall health** of the arts and culture assets across Philadelphia, establishing a Cultural Assets Index.⁵⁷ The index quantified the number of cultural participants, nonprofit cultural providers, commercial cultural firms and resident artists to understand the strength of cultural assets and identify cultural clusters. Additionally, Burayidi's scorecard suggested that at least a tenth of the designated historic property on the National Register of Historic Places was located downtown to improve aesthetics and cultural value.³³

Assessing the **business mix** of an area has also proven useful in understanding how good spaces help create place attachment.^{24,29} However, the research on business mix is inconsistent, as researchers find it difficult to quantify the diversity of businesses in an area, outside of using qualitative judgments. Finally, measuring the direct **use of public spaces** is common in the literature and presents a behavioral metric that can indicate whether a public space is successfully applying the four qualities that make a good public space. These measures include counts of foot traffic, new residential units or percent of vacancies and the number of tourists frequenting the city or downtown area.

Exhibit 4. Measuring the Qualities of Good Public Spaces

In the Strength of Evidence column, green represents metrics that were validated and share consistent findings across two or more studies and yellow indicates metrics that were validated but only by one study.

METRICS FOR MEASURING THE QUALITIES OF GOOD PUBLIC SPACES	QUALITIES OF GOOD PUBLIC SPACES				STRENGTH OF EVIDENCE
	MULTIFUNCTIONAL	SAFE AND INCLUSIVE	ATTRACTIVE AND COMFORTABLE	NEARNESS TO NATURE	
Inclusiveness		◦	◦		●
Pleasurability			◦		●
Meaningful activities	◦				●
Safety		◦			●
Comfort			◦	◦	●
Likability			◦		●
Health of cultural sector via Cultural Assets Index	◦				●
Business mix	◦				●
Use of public space	◦	◦	◦	◦	●

Place Attachment and City Identity and Brand

The metrics used to measure place attachment and brand are fewer in number but represent a strong model that has been well researched.⁵⁰⁻⁵² The metrics we identified cover the psychological and contextual factors that interact to influence place attachment, as well as outcomes that are seen as signs of strong place attachment (see Exhibit 5 and Appendix D for more detail). Foremost in these metrics is the construct of *place identity*, which measures how enmeshed an individual's identity is with the place in which they live or a designated area to which they are intrinsically connected. Place identity is strengthened by longer residency, more ties to the place (e.g., employment, family, positive memories or strong experiences, property ownership and spiritual connections), and a higher overall sense of belonging or social capital. We also saw that place attachment was related to higher quality of life ratings^{14, 46, 82} and higher civic engagement.^{55, 57, 59} These relationships suggest that

place attachment is influenced by the psychological factors of place identity and the personal and contextual factors of length of residence, ties to place, sense of belonging and trust of others. Whereas quality of life and civic engagement are outcomes related to positive place attachment.

Brand was consistently held as an important aspect of attracting people to a place or downtown area. The two measurable aspects of a place's brand were the positive and negative perceptions of the place's image (typically in the media) and distinct or unique features of the place. Higher numbers of positive images and higher frequency of positive coverage were seen with cities that had good branding. Similarly, cities or downtown areas that possessed a unique feature or "feel," compared to other places, were seen as more desirable to visit and also played a role in establishing place identity. The initiative Keep Austin Weird is an example

of good branding and has capitalized on Austin's unique vibe and creative spirit. The initiative has been adopted by residents and attracted music festivals, tourists and new residents. Of course, this is only one perspective on Austin's identity, which excludes the lived experience of residents who are struggling with rising costs of living and disparities of maternal and child health outcomes

between women of color and white women.^{83, 84} By definition, branding will focus on the positive aspects of an area, and strategies should consider how a city's challenges might also play a role in shaping an identity and attracting and retaining anchor institutions to be part of the solutions.

Exhibit 5. Measuring Place Attachment and Brand

In the Strength of Evidence column, green represents metrics that were validated and share consistent findings across two or more studies and yellow indicates metrics that were validated but only by one study.

PATHWAY ELEMENT	METRIC	STRENGTH OF EVIDENCE
Place attachment	Place identity	●
	Length of residence	●
	Ties to place	●
	Sense of belonging	●
	Trust of others	●
Place attachment outcomes	Quality of life	●
	Civic engagement	●
Brand	Image valence (i.e., respondents perceptions of space, partially in response to pictorial branding)	●
	Uniqueness	●

3.4 What is the strength of evidence for metrics connecting public space activation to downtown revitalization?

Our review of the literature found consistent evidence supporting the qualities that make a good public space, and that good public spaces contribute to aspects of place attachment. Similarly, place attachment was consistently defined and measured using synonymous concepts and organizing frameworks. The majority of studies we reviewed used case studies, observations and cross-sectional surveys, primarily to validate measurement instruments. Few articles provided empirical tests of the relationship between place quality and place attachment or place attachment and revitalization. However, there was evidence that place attachment contributes to a person's increased likelihood to take action in their community (e.g.,

being environmentally responsible⁵² or contributing to community development projects), which is a key component of being an engaged community member.¹⁵ Strong place attachment was also related to having a positive quality of life.⁸² While the available research does not draw a direct connection from place attachment to revitalization, several theoretical frameworks suggested that place attachment is a vehicle for retaining and attracting people to a place—one of the main outcomes associated with revitalization.^{10, 12, 25}

Finally, the extent to which a good public space contributes to revitalization was also lacking in our

review of the literature, where studies were more focused on comparing qualities of existing public spaces to each other rather than connecting the presence or activation of good public spaces to any direct outcomes. Despite the lack of explicit evidence of the relationships between constructs, the overlapping streams of evidence allowed us to create a pathway connecting public spaces to outcomes of attraction and retention that contribute to achieving revitalization (see Exhibit 4). To track the success of creating and activating public spaces, a comprehensive measurement plan is recommended that includes the quality of public spaces as a process measure, increased place attachment as an individual outcome and use of the public space as an outcome contributing to engagement and revitalization.

**THERE WAS EVIDENCE
THAT PLACE ATTACHMENT
CONTRIBUTES TO A PERSON'S
INCREASED LIKELIHOOD
TO TAKE ACTION IN THEIR
COMMUNITY (E.G., BEING
ENVIRONMENTALLY
RESPONSIBLE OR
CONTRIBUTING TO COMMUNITY
DEVELOPMENT PROJECTS),
WHICH IS A KEY COMPONENT
OF BEING AN ENGAGED
COMMUNITY MEMBER.**

3.5 Challenges to Measuring Public Spaces and Place Attachment

A potential challenge to implementing the majority of metrics recommended for measuring the quality of a public space, place attachment and branding is their reliance on data collected primarily from individuals using public spaces. Considering the longitudinal schedule for assessments, the costs associated with measuring quality of places and place attachment could become a burden for low-resourced planners or development organizations. These costs are exacerbated by the need to sample large numbers

of users to ensure findings are representative of the population (convenience samples of small numbers of place visitors should be avoided because such methods could unintentionally bias the sample and exclude the viewpoints of people who may not feel comfortable or welcome in existing spaces). Taking the steps to intentionally reach a diverse and representative sample can be costly, but not including underrepresented groups in measurement can create inaccurate results.

CONCLUSIONS

This literature review has highlighted a number of key insights that can be used as city leaders grapple with pandemic recovery and implement measures to ensure equity in their communities. The following can be used to guide future downtown revitalization work and public space investments:

Seven well-known strategies emerged as key drivers of revitalization, each focused on improving economic conditions. These strategies include: creating and sustaining a business improvement district, promoting downtown through branding and marketing efforts, investing in a diversity of mixed-use developments, attracting and keeping businesses downtown, expanding employment opportunities in the downtown or city center, creating and activating public space and implementing tax or other fiscal incentives. The exact strategies depended on a city's unique situations, but the ultimate goal was usually to improve economic conditions within the city. Additionally, cities are recognizing the need to choose strategies that leverage existing assets to meet the desired needs and goals of residents with and without decision-making power.

Many cities focus their revitalization strategies on building and programming desirable public and civic spaces and increasing resident and visitor attachment to these places. Research suggests that basic qualities that make a good place can be measured using four concepts: multifunctional use, inclusive and safe, attractive and comfortable, and proximity to nature. The literature presented variations on these concepts and offered examples of validated frameworks to measure these qualities. These concepts were also present in literature that focused on public spaces as a revitalization strategy, even when not specifically connected to activating or creating public spaces. While there is wide support for these concepts, research has not yet focused on the bare minimum for making high-quality public spaces, which

makes it difficult to establish meaningful thresholds or benchmarks.

Movement of people seems to matter (as residents, employees and visitors). As such, one measure of successful revitalization includes measuring the flow of people in and around key focus areas. Many revitalization strategies, including strategies that use public spaces to support revitalization, are implemented to create thriving downtown areas (e.g., create foot traffic, encourage residents to attend events and spend money downtown, and raise the profile of the area to increase tourism revenue). In many of the models of downtown health that have been created, however, there is an implicit prioritization of economic and business metrics (e.g., sales and increased investments). The inconclusive evidence that has been generated by the studies using these models, though, suggests that additional metrics that capture the flow of people through an area (e.g., residents retained in the downtown, new residents and businesses attracted to the designated area and increased visitors) could be critical complimentary measures that helps cities assess the extent to which areas have begun to thrive.

“Revitalization” should be measured comprehensively and with an emphasis on equity, looking at trends in employment, poverty, demographics, cost of doing business, the resident experience and the health of the business and housing markets. While specific measures should be chosen to reflect the unique approach of each city, monitoring a city's overall economic health, resident experience and business and housing markets can provide general feedback on the progress of revitalization. Specifically, monitoring the trends in employment, poverty, demographics, costs of doing business and costs of owning a home in the designated downtown area and the larger area context will provide general insights over time. Additionally, the literature indicated a few benchmarks and thresholds

that downtowns should achieve to create resilient, successful downtowns. Our review of the literature did not conclude which metrics could best measure the process of revitalization, but the literature advised that measures should match the strategies to identify process measures and short-term goals. The literature also advised that metrics and strategies be implemented with a focus on achieving equitable outcomes, including community representation in planning and decision-making, equitable access to the benefits of revitalization and strategies designed to limit displacement of longtime residents and businesses because of revitalization.

Individuals' attachment to public or civic spaces is a critical step toward revitalization; people must want to be in and draw benefit from being in an area for revitalization to occur. Measuring progress toward increased place attachment, therefore, must be measured at tangible and psychological levels.

Tangible evidence of place attachment might include employment, property ownership and family members who also reside in the place. Common psychological indicators of attachment are positive memories and emotions, sense of belonging, positive self-esteem and positive health and well-being. The literature suggests that both sets of concepts contribute to place attachment, and that the latter set of psychological and motivational aspects may play a primary role in the establishment of place attachment. Measuring place attachment accurately would encompass both tangible and psychological elements to understand the factors facilitating place attachment and a successful public spaces strategy. Additional metrics that focus on relationship building would also be useful when strategies are focused on engaging community members in an activated or newly attractive public space. One critical limitation to this metric is the potential cost in collecting a representative sample across time to estimate trends, as these measures rely on self-reporting. In addition to measuring place attachment, understanding the brand and media presence that a city has is vital to constructing a positive narrative of a city or downtown area.

As these insights illustrate, there is considerable promise for cities and neighborhoods wanting to deepen connections between residents and to revitalize spaces. This review didn't uncover *proven* strategies for revitalizing downtown or public spaces—largely because of the complexity required to measure the influence of specific strategies within highly interrelated systems at a neighborhood or district level. It did identify, though, strategies that leaders in the field consistently support and consider effective (e.g., promoting branding and marketing, creating and activating public spaces and investing in mixed-use development).

These strategies, when grounded in local context and implementing equitable and inclusive strategies, were likely to spur successful revitalization and the building of community around public spaces based on dynamics prior to the COVID-19 pandemic. With the advent of the COVID-19 pandemic, there will likely need to be shifts in the strategies that cities use to revitalize their communities. We do not yet know exactly what these shifts will be as the pandemic is still affecting daily life. It is likely, though, that lessons from the past will be instructive as cities move forward. For example, knowing that people who feel connected to a place and to each other are more likely to stay and invest can inspire innovative strategies for fostering connections even within the constraints of COVID-19. Similarly, cities may prioritize supporting the recovery of their small independent retailers given their important role in creating vibrancy and drawing visitors and residents to the area.

The good news is that cities have been at the center of public health crises in the past and have found ways to adjust and thrive once more. With strategic and coordinated action by business and government leaders, this can again be possible. As leading global experts recently explained, “if the world's cities find ways to adjust, as they always have in the past, their greatest era may yet lie before them.”⁸⁷ And, with city leaders focused on addressing racial inequities, there is hope that this great era will include pathways for access and prosperity for all residents.

REFERENCES

1. Treuhaft, S., J. Scoggins and J. Tran (2014). "The Equity Solution: Racial Inclusion Is Key to Growing a Strong New Economy." PolicyLink, <https://www.policylink.org/reports/reports-analyses/the-equity-solution>.
2. Von Hoffman, A. (2019). "The Ingredients of Equitable Development Planning: A Cross-case Analysis of Equitable Development Planning and CDFIs." Joint Center for Housing Studies of Harvard University, https://www.jchs.harvard.edu/sites/default/files/Harvard_JCHS_Ingredients_Equitable_Development_Planning.pdf.
3. Berube, A., and C. Murray (2018). "Renewing America's Economic Promise Through Older Industrial Cities." Metropolitan Policy Program at the Brookings Institution, <https://www.brookings.edu/research/older-industrial-cities/#01073>.
4. Liu, A (2016). "A Blueprint for More Inclusive Economic Growth." *Harvard Business Review*, March 3, 2016, <https://hbr.org/2016/03/a-blueprint-for-more-inclusive-economic-growth>.
5. Benner, C., and M. Pastor (2012). "Just Growth: Inclusion and Prosperity in America's Metropolitan Regions." *Berkeley Planning Journal* 25(1).
6. Novara, M., A. Loury and A. Khare (2017). "The Cost of Segregation." Metropolitan Planning Council.
7. Zuk, M., A. H. Bierbaum, K. Chapple, K. Gorska, A. Loukaitou-Sideris, P. Ong and T. Thomas (2015). "Gentrification, Displacement and the Role of Public Investment: A Literature Review." Federal Reserve Bank of San Francisco, August 24, 2015 (79).
8. Mallach, A., and L. Brachman (2013). "Regenerating America's Legacy Cities." Lincoln Institute of Land Policy, <https://www.lincolninst.edu/publications/policy-focus-reports/regenerating-americas-legacy-cities>.
9. Burayidi, M. A. (2018). "Downtown Revitalization in Small and Midsized Cities." American Planning Association.
10. Hollingsworth, T., and A. Goebel (2017). "Revitalizing America's Smaller Legacy Cities: Strategies for Postindustrial Success from Gary to Lowell." Lincoln Institute of Land Policy.
11. Filion, P., H. Hoernig, T. Bunting and G. Sands (2004). "The Successful Few: Healthy Downtowns of Small Metropolitan Regions." *Journal of the American Planning Association* 70(3): 328–43.
12. Kures, M. E., and W. F. Ryan (2012). "Challenges of an Organizational Approach to Applied Downtown Market Analysis." *Applied Geography* 32(1): 80–87.
13. Greer, M. M. (2009). "Modes, Means and Measures: Adapting Sustainability Indicators to Assess Preservation Activity's Impact on Community Equity." Master's thesis: 277.
14. Kline, E. (2001). "Indicators for Sustainable Development In Urban Areas." *Sustainability Assessment and the Management of Urban Environments*: 275–97.
15. Semenza, J. C., T. L. March and B. D. Bontempo (2007). "Community-initiated Urban Development: An Ecological Intervention." *Journal of Urban Health* 84(1): 8–20.
16. Weglin, A. (2011). "An Evaluation Tool and Indicators of Success for Cook Inlet Housing Authority's Mountain View Revitalization Strategies." Cook Inlet Housing Authority, <http://www.mpaalaska.org/wp-content/uploads/2013/03/Weglin-Capstone-.pdf>.
17. Thomas, E., S. Pate and A. Ranson (2015). "The Crosstown Initiative: Art, Community, and Placemaking in Memphis." *American Journal of Community Psychology* 55(1–2): 74–88.
18. Grunwell, S. (2014). "Estimating the Economic Benefits a Business Improvement District Would Provide for a Downtown Central Business District." *Journal of Economics and Economic Education Research* 15(3): 89.
19. "The Benefits of Business Improvement Districts: Evidence from New York City." Furman Center for Real Estate and Urban Policy, New York University, <https://furmancenter.org/files/publications/FurmanCenterBIDsBrief.pdf> (2007).
20. Hoyt, L., and D. Gopal Agge (2007). "The Business Improvement District Model: A Balanced Review of Contemporary Debates." *Geography Compass* 1(4): 946–58.
21. Faulk, D. (2006). "The Process and Practice of Downtown Revitalization." *Review of Policy Research* 23(2): 625–45.
22. "Bringing Back Main Street: A Guide to Downtown Revitalization for Local Governments." Houston-Galveston Area Council, <https://www.h-gac.com/bringing-back-main-street/documents/Bringing-Back-Main-Street-May-2015.pdf> (2015).
23. Rothstein, R. *The Color of Law: A Forgotten History of How Our Government Segregated America*. Liveright Publishing, New York, 2017.
24. Runyan, R. C., and P. Huddleston (2006). "Getting Customers Downtown: The Role of Branding in Achieving Success for Central Business Districts." *Journal of Product and Brand Management* 15(1): 48–61.

25. Walzer, N., M. Evans and M. Aquino (2017). "Downtown Development Strategies in Illinois: Assessing the Priorities of Municipal Leaders in Illinois." *Illinois Municipal Policy Journal* 2(1): 69–84.
26. "Indie Impact Study Series: A National Comparative Survey with the American Booksellers Association." Civic Economics and American Booksellers Association, <http://www.civiceconomics.com/indie-impact.html> (2002).
27. Liu, A. (2016). "Remaking Economic Development: The Markets and Civics of Continuous Growth and Prosperity." The Brookings Institution, https://www.brookings.edu/wp-content/uploads/2016/02/BMPP_RemakingEconomicDevelopment_Feb25LoRes.pdf.
28. "Re(building) Downtown: A Guide for Revitalization." Smart Growth America, <https://www.smartgrowthamerica.org/app/legacy/documents/rebuilding-downtown.pdf> (2015).
29. "Center City: Planning for Growth." Center City District and Central Philadelphia Development Corporation, <https://centercityphila.org/uploads/attachments/citfvnu200hx0wqdrqrns9-socc-plan07-westmarket.pdf> (2007).
30. Birch, E. L. (2009). "Downtown in the 'New American City.'" *The Annals of the American Academy of Political and Social Science* 626(1): 134–53.
31. Ton, Z. (2017). "The Case for Good Jobs, Better Pay and More Opportunities." *Harvard Business Review*, <https://hbr.org/cover-story/2017/11/the-case-for-good-jobs>.
32. Treuhaft, S. (2019). "Leveraging Equity Data for Inclusive Growth." PolicyLink, <https://www.policylink.org/blog/living-cities-equity-data-inclusive-growth>.
33. Burayidi, M. A. *Resilient Downtowns: A New Approach to Revitalizing Small- and Medium-City Downtowns*. Routledge, London, 2013.
34. Robertson, K. A. (1999). "Can Small-city Downtowns Remain Viable? A National Study of Development Issues and Strategies." *Journal of the American Planning Association* 65(3): 270–83.
35. Ferguson, G. (2005). "Characteristics of Successful Downtowns: Shared Attributes of Outstanding Small and Mid-sized Downtowns." Unpublished manuscript. Ithaca, NY, Cornell University Civic Fellows Program.
36. Rose, K., M. H. Daniel and J. Liu (2017). "Creating Change Through Arts, Culture, and Equitable Development: A Policy and Practice Primer." PolicyLink.
37. Kennedy, M., and P. Leonard (2001). "Dealing with Neighborhood Change: A primer on Gentrification and Policy Choices." The Brookings Institution Center on Urban and Metropolitan Policy and PolicyLink.
38. Aboelata, M. J., R. Bennett, E. Yañez, A. Bonilla and N. Akhavan (2017). "Healthy Development Without Displacement: Realizing the Vision of Healthy Communities for All." Prevention Institute, <https://www.preventioninstitute.org/publications/healthy-development-without-displacement-realizing-vision-healthy-communities-all>.
39. Tyler, N. R. (1998). "Evaluating Factors Associated With Perceived Downtown Health in Sixteen Michigan Cities." Doctoral dissertation, Michigan State University, East Lansing.
40. Seasons, M. (2003). "Indicators and Core Area Planning: Applications in Canada's Mid-sized Cities." *Planning Practice and Research* 18(1): 63–80.
41. Lund, S., J. Manyika, L. H. Segel, A. Dua, B. Hancock, S. Rutherford and B. Macon (2019). "The Future of Work in America: People and Places, Today and Tomorrow." McKinsey Global Institute.
42. Furdell, K., H. Wolman and E. W. Hill (2005). "Did Central Cities Come Back? Which Ones, How Far, and Why?" *Journal of Urban Affairs* 27(3): 283–305.
43. Chapple K., P. Waddell, D. Chatman et al (2017). "Developing a New Methodology for Analyzing Potential Displacement." UC Berkeley, <https://escholarship.org/content/qt6xb465cq/qt6xb465cq.pdf>.
44. Chapple, K., and M. Zuk (2016). "Forewarned: The Use of Neighborhood Early Warning Systems for Gentrification and Displacement." *Cityscape* 18(3): 109–30.
45. Balsas, C. J. (2004). "Measuring the Livability of an Urban Centre: An Exploratory Study of Key Performance Indicators." *Planning, Practice and Research* 19(1): 101–10.
46. Mullin, J., and Z. Kotval (2003). "Measuring the Effectiveness of Downtown Revitalization Strategies." *Landscape Architecture and Regional Planning Faculty Publication Series* 1:23.
47. Brooks, R. (2013). "The 20 Ingredients of an Outstanding Downtown." Destination Development International, [http://mainstreetmomence.com/Documents/20%20Ingredients%20of%20an%20Outstanding%20Downtown%20\(1\).pdf](http://mainstreetmomence.com/Documents/20%20Ingredients%20of%20an%20Outstanding%20Downtown%20(1).pdf).
48. Burnette, C. (2017). "Predicting Revitalization: A Descriptive Narrative and Predictive Analysis of Neighborhood Revitalization in Atlanta, Georgia." Georgia Institute of Technology.
49. "Measuring the Civic Commons." Reimagining the Civic Commons, <http://civiccommons.us/app/uploads/2018/01/Measuring-the-Civic-Commons.pdf>.
50. Droseltis, O., and V. L. Vignoles (2010). "Towards an Integrative Model of Place Identification: Dimensionality and Predictors of Intrapersonal-level Place Preferences." *Journal of Environmental Psychology* 30(1): 23–34.
51. Scannell, L., and R. Gifford (2017). "The Experienced Psychological Benefits of Place Attachment." *Journal of Environmental Psychology* 51: 256–69.
52. Williams, D. R., and J. J. Vaske (2003). "The Measurement of Place Attachment: Validity and Generalizability of a Psychometric Approach." *Forest Science* 49(6): 830–40.
53. McMillan, D. W., and D. M. Chavis (1986). "Sense of Community: A Definition and Theory." *Journal of Community Psychology* 14(1): 6–23.
54. Schiefer, D., and J. Van der Noll (2017). "The Essentials of Social Cohesion: A Literature Review." *Social Indicators Research* 132(2): 579–603.

55. Anton, C. E., and Lawrence C. (2016). "The Relationship Between Place Attachment, the Theory of Planned Behaviour and Residents' Response to Place Change." *Journal of Environmental Psychology* 47: 145–54.
56. Morley, E. (2014). "The Validating Arts and Livability Indicators (VALI) Study: Results and Recommendations." Urban Institute (for the National Endowment for the Arts).
57. Stern, M. J., and Seifert, S. C. (2010). "Cultural Clusters: The Implications of Cultural Assets Agglomeration for Neighborhood Revitalization." *Journal of Planning Education and Research* 29(3): 262–79.
58. Burrowes, K. (2019). "Making Places for Everyone – With Everyone." *Stanford Social Innovation Review*, https://ssir.org/articles/entry/making_places_for_everyone_with_everyone.
59. Carmona, M. (2019). "Place Value: Place Quality and Its Impact on Health, Social, Economic and Environmental Outcomes." *Journal of Urban Design* 24(1): 1–48.
60. Mehta, V. (2014). "Evaluating Public Space." *Journal of Urban Design* 19(1): 53–88.
61. Silberberg, S., K. Lorah, R. Disbrow and A. Muessig (2013). "Places In the Making: How Placemaking Builds Places and Communities." Massachusetts Institute of Technology: 72.
62. Peinhardt, K., and N. Storrington (2019). "Programming for Inclusion: Enhancing Equity Through Public Space Activation." Project for Public Spaces, <https://www.pps.org/article/programming-for-inclusion-enhancing-equity-through-public-space-activation>.
63. "Public Markets Research." Project for Public Spaces, <https://www.pps.org/article/research-and-case-studies> (2008).
64. Edwards, M., M. Singh and K. Brown (2014). "Downtown Success Indicators: A Review of the Literature." Department of Urban and Regional Planning, University of Illinois at Urbana–Champaign in cooperation with University of Illinois Extension, <https://fyi.extension.wisc.edu/resilientdowntowns/files/2016/06/59491.pdf>.
65. Pearsall, H. (2019). "What Do We Know About Urban Public Spaces? A Research Synthesis of the Economic, Environmental, Equity, Health, and Social Benefits and Costs."
66. Rahimi, S., M. J. Martin, E. Obeysekere, D. Hellmann, X. Liu and C. Andris (2017). "A Geographic Information System (GIS)-based Analysis of Social Capital Data: Landscape Factors that Correlate with Trust." *Sustainability* 9(3): 365.
67. Peinhardt, K., and N. Storrington (2019). "Inclusive by Design: Laying a Foundation for Diversity in Public Space." Project for Public Spaces, <https://www.pps.org/article/inclusive-by-design-laying-a-foundation-for-diversity-in-public-space>.
68. "Equitable Placemaking: Not the End, but the Means." Project for Public Spaces, <https://www.pps.org/article/equity-placemaking-gentrification> (2015).
69. "What Makes a Successful Place?" Project for Public Spaces, <https://www.pps.org/article/grplacefeat>.
70. Sneed, C. T., R. Runyan, J. L. Swinney and H. J. Lim (2011). "Brand, Business Mix, Sense of Place: Do They Matter Downtown?" *Journal of Place Management and Development* 4(2): 121–34.
71. Németh, J., and S. Schmidt. "Publicly Accessible Space and Quality of Life: A Tool for Measuring the Openness of Urban Spaces." In M. Budruk and R. Phillips, eds., *Quality-of-Life Community Indicators for Parks, Recreation and Tourism Management*. Springer, Dordrecht, Netherlands: 41–66.
72. Zamanifard, H., T. Alizadeh, C. Bosman and E. Coiacetto (2019). "Measuring Experiential Qualities of Urban Public Spaces: Users' Perspective." *Journal of Urban Design* 24(3): 340–64.
73. Romão, J., K. Kourtis, B. Neuts, and P. Nijkamp (2018). "The Smart City as a Common Place for Tourists and Residents: A Structural Analysis of the Determinants of Urban Attractiveness." *Cities* 78: 67–75.
74. Maller, C. J., C. Henderson-Wilson and M. Townsend (2009). "Rediscovering Nature In Everyday Settings: Or How to Create Healthy Environments and Healthy People," *EcoHealth* 6(4): 553–56.
75. Arendt, R. (2015). "Design Ideas for Strengthening Downtowns." *Planning* 81(10): 49–53.
76. Lanfer, A. G., and M. Taylor (2006). "Immigrant Engagement In Public Open Space: Strategies for the New Boston." Barr Foundation, <https://barrfdn.issuelab.org/resource/immigrant-engagement-in-public-open-space-strategies-for-the-new-boston.html>.
77. "Planning With Diverse Communities." American Planning Association, <https://planning-org-uploaded-media.s3.amazonaws.com/document/PAS-Report-593-executive-summary.pdf> (2019).
78. Peinhardt, K., and N. Storrington (2019). "A Playbook for Inclusive Placemaking: Community Process." Project for Public Spaces, <https://www.pps.org/article/a-playbook-for-inclusive-placemaking-community-process>.
79. "LGBT+Placemaking Toolkit." Planning Out and Built Environment Communications Group, https://becg.com/wp-content/uploads/2019/07/LGBT-Placemaking-Toolkit.pdf?v=3&utm_source=Website&utm_medium=ToolkitImage&utm_campaign=PlanningOut_Toolkit (2019).
80. Lee, K. J., and D. Scott (2016). "Bourdieu and African Americans' Park Visitation: The Case of Cedar Hill State Park In Texas." *Leisure Sciences* 38(5): 424–40.
81. Evans, J., S. Z. Evans, J. D. Morgan, J. A. Snyder and F. P. Abderhalden (2019). "Evaluating the Quality of Mid-sized City Parks: A Replication and Extension of the Public Space Index." *Journal of Urban Design* 24(1): 119–36.
82. Grodach, C., and A. Loukaitou Sideris (2007). "Cultural Development Strategies and Urban Revitalization: A Survey of US Cities." *International Journal of Cultural Policy* 13(4): 349–70.
83. Cantu, T. (2018). "Austin 'Cost to Live Comfortably' Increase Is Highest In Nation." *Patch*, <https://patch.com/texas/downtownaustin/austin-cost-live-comfortably-increase-highest-nation>.

84. Cole, H. E., P. X. Rojas and J. Joseph (2018). "National Perinatal Task Force: Building a Movement to Birth a More Just and Loving World." *Mama Sana Vibrant Woman*, https://docs.wixstatic.com/ugd/917d5c_760c255e24e9406fbf022a9f44c11c16.pdf.
85. "The Value of U.S. Downtowns and Center Cities: Third Edition." International Downtown Association, <https://downtown.org/publications/> (2019).
86. "The 20 Ingredients of an Outstanding Destination." Destination Development International, <http://www.warrenton.nc.gov/page/open/372/0/20%20Ingredients%20of%20Outstanding%20Destination.pdf> (2012).
87. Florida, R. et al (2020). "How Life in Our Cities Will Look After the Coronavirus Pandemic." *Foreign Policy Review*, <https://foreignpolicy.com/2020/05/01/future-of-cities-urban-life-after-coronavirus-pandemic>.
88. Thompson, D. (2020). "The Pandemic Will Change American Retail Forever." *The Atlantic*, <https://www.theatlantic.com/ideas/archive/2020/04/how-pandemic-will-change-face-retail/610738/>.

Appendix A: Methods

We approached our review using guidelines adapted from the Campbell Collaboration.^M First, we formulated our research questions in collaboration with the Knight Foundation and then developed inclusion and exclusion criteria based on a PICOS framework to scope our initial search of the literature (see Exhibit A.1). We used online databases to search and catalog an initial sample of 100 articles related to revitalization, activating public spaces, making public spaces and strategies for revitalization. Our team identified 109 abstracts, including dissertations, websites, foundations' program reports and peer-reviewed studies, including several literature reviews over the last 20 years.

We captured basic information from each document (e.g., title, author[s] and publication date) and a broad description of each document's substance (e.g., methods, strategies, metrics and relation to our research questions). We used the substantive descriptions to select 50 articles for a more thorough

review and analysis. During the in-depth review, articles that we determined did not contribute to our research questions were dropped from the sample and additional articles were identified. We also found that a handful of strong, related articles did not match our inclusion and exclusion criteria, primarily based on the country in which the research was conducted.

We decided to keep most of these articles, as they built on research conducted in the United States; sampled English-speaking, democratic populations; or contained a detailed review of the literature. Additional articles were also identified during the in-depth review and were added to our sample to fill gaps or strengthen an argument as needed.

We recorded the findings of each article, metrics used, strategies being leveraged and other details that might be useful. We then discussed themes, identified gaps and interpreted the insights from the literature. Our synthesis is presented as a narrative report organized around identified strategies, metrics and frameworks suggested by the literature.

In addition to this process, we drew upon our existing knowledge of literature in the field of equitable economic development and contributed insights from those sources to this literature review.

With the breadth of our search, including the review of multiple literature reviews, we feel confident that we identified the seminal articles in the field and have captured the insights from those studies that used statistical analysis to analyze effectiveness of strategies or metrics.













M Shannon Kugley, Anne Wade, James Thomas, Quenby Mahood, Anne-Marie Jørgensen, Karianne Hammerstrøm and Nila Sathe, "Searching for Studies: A Guide to Information Retrieval for Campbell," *Campbell Systematic Reviews*, February 13, 2017.

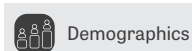
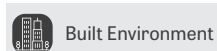
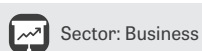
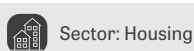
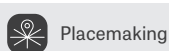
Exhibit A.1 Inclusion and Exclusion Criteria for Literature Review















POPULATIONS	<ul style="list-style-type: none"> ■ Within United States ■ Narrow to similar size of city ■ Narrow to neighborhoods and center-city downtowns ■ Articles published since 2000 ■ Residents who live, work and play in focus areas ■ Employees who work in focus areas ■ Property owners in focus areas ■ Business owners in focus areas ■ Operators of public spaces ■ Entrepreneurs in focus areas
INTERVENTIONS	<ul style="list-style-type: none"> ■ Attention paid to development that uses: <ol style="list-style-type: none"> 1. Public spaces to revitalize 2. Community engagement or inclusive planning for revitalization 3. Equitable economic development (e.g., infrastructure development) for revitalization 4. Strategies used to revitalize or create vibrant downtowns
COMPARATORS	N/A
OUTCOMES	<ul style="list-style-type: none"> ■ Metrics or indicators of downtown revitalization, including residential and population growth and equitable economic development ■ Metrics or indicators of unique or distinctive public space creation (secondary) ■ Metrics or indicators of public space activation ■ Measured relationships between strategies and downtown revitalization or public space creation and activation
STUDY DESIGN	<ul style="list-style-type: none"> ■ Meta-analysis or literature reviews ■ Correlational designs ■ Longitudinal analysis ■ Evaluation and monitoring

Appendix B: Detailed Strategies and Metrics of Downtown Revitalization

In the Strength of Evidence column, green represents metrics that share consistent findings across two or more studies and yellow indicates metrics that are extrapolated from promising or successful strategies to downtown revitalization. Metrics marked with an asterisk and bolded are recommended for their ability to assess equitable processes or outcomes.

REVITALIZATION STRATEGY	METRIC	TYPE	STRENGTH OF EVIDENCE	CITATION
Create and sustain a business improvement district	Number of businesses located downtown			<ul style="list-style-type: none"> Edwards, M., M. Singh and K. Brown (2014). "Downtown Success Indicators: A Review of the Literature." Department of Urban and Regional Planning, University of Illinois at Urbana-Champaign in cooperation with University of Illinois Extension, https://fyi.extension.wisc.edu/resilientdowntowns/files/2016/06/59491.pdf. "Measuring the Civic Commons." Reimagining the Civic Commons, http://civic-commons.us/app/uploads/2018/01/Measuring-the-Civic-Commons.pdf. Runyan, R. C., and P. Huddleston (2006). "Getting Customers Downtown: The Role of Branding in Achieving Success for Central Business Districts." <i>Journal of Product and Brand Management</i> 15(1): 48–61.
	Growth in retail sales			<ul style="list-style-type: none"> Grunwell, S. (2014). "Estimating the Economic Benefits a Business Improvement District Would Provide for a Downtown Central Business District." <i>Journal of Economics and Economic Education Research</i> 15(3): 89. Runyan, R. C., and P. Huddleston (2006). "Getting Customers Downtown: The Role of Branding in Achieving Success for Central Business Districts." <i>Journal of Product and Brand Management</i> 15(1): 48–61.
	Longevity of small businesses			<ul style="list-style-type: none"> Burayidi, M. A. <i>Resilient Downtowns: A New Approach to Revitalizing Small- and Medium-City Downtowns</i>. Routledge, London, 2013. Grunwell, S. (2014). "Estimating the Economic Benefits a Business Improvement District Would Provide for a Downtown Central Business District." <i>Journal of Economics and Economic Education Research</i> 15(3): 89. Runyan, R. C., and P. Huddleston (2006). "Getting Customers Downtown: The Role of Branding in Achieving Success for Central Business Districts." <i>Journal of Product and Brand Management</i> 15(1): 48–61.
	Increase in property values			<ul style="list-style-type: none"> "The Benefits of Business Improvement Districts: Evidence from New York City." Furman Center for Real Estate and Urban Policy, New York University, https://furmancenter.org/files/publications/FurmanCenterBIDsBrief.pdf (2007). Grunwell, S. (2014). "Estimating the Economic Benefits a Business Improvement District Would Provide for a Downtown Central Business District." <i>Journal of Economics and Economic Education Research</i> 15(3): 89. "Bringing Back Main Street: A Guide to Downtown Revitalization for Local Governments." Houston-Galveston Area Council, https://www.h-gac.com/bringing-back-main-street/documents/Bringing-Back-Main-Street-May-2015.pdf (2015).
	* Resident representation in the business improvement district advisory board or governance			<ul style="list-style-type: none"> Hoyt, L., and D. Gopal Agge (2007). "The Business Improvement District Model: A Balanced Review of Contemporary Debates." <i>Geography Compass</i> 1(4): 946–58.
	* Racial and ethnic composition of the business improvement district			<ul style="list-style-type: none"> Hoyt, L., and D. Gopal Agge (2007). "The Business Improvement District Model: A Balanced Review of Contemporary Debates." <i>Geography Compass</i> 1(4): 946–58.



REVITALIZATION STRATEGY	METRIC	TYPE	STRENGTH OF EVIDENCE	CITATION
	Citizen attitude toward downtown			• Mitchell, J. (1999). "Business Improvement Districts and Innovative Service Delivery." The PricewaterhouseCoopers Endowment for the Business of Government.
	Crime rates			• Hoyt, L. M. (2001). "Business Improvement Districts: Untold Stories and Substantiated Impacts." Doctoral dissertation, Department of Urban Studies and Planning, Massachusetts Institute of Technology, Cambridge. • Mitchell, J. (1999). "Business Improvement Districts and Innovative Service Delivery." The PricewaterhouseCoopers Endowment for the Business of Government.
Promote downtown through branding and marketing efforts	Positive media mentions of downtown			• Burayidi, M. A. (2018). "Downtown Revitalization in Small and Midsized Cities." American Planning Association.
	Brand identity and positive image			• Baker, B. <i>Destination Branding for Small Cities</i> . Creative Leap Books, Portland, OR, 2012: 17–22. • Runyan, R. C., and P. Huddleston (2006). "Getting Customers Downtown: The Role of Branding in Achieving Success for Central Business Districts." <i>Journal of Product and Brand Management</i> 15(1): 48–61. • Sneed, C. T., R. Runyan, J. L. Swinney and H. J. Lim (2011). "Brand, Business Mix, Sense of Place: Do They Matter Downtown?" <i>Journal of Place Management and Development</i> 4(2): 121–34. • Walzer, N., M. Evans and M. Aquino (2017). "Downtown Development Strategies in Illinois: Assessing the Priorities of Municipal Leaders in Illinois." <i>Illinois Municipal Policy Journal</i> 2(1): 69–84.
	Visibility of downtown marketing (publicity, social media and peer reviews)			• Brooks, R. (2013). "The 20 Ingredients of an Outstanding Downtown." Destination Development International, http://mainstreetmomence.com/Documents/20%20Ingredients%20of%20an%20Outstanding%20Downtown%20(1).pdf . • Filion, P., H. Hoernig, T. Bunting and G. Sands (2004). "The Successful Few: Healthy Downtowns of Small Metropolitan Regions." <i>Journal of the American Planning Association</i> 70(3): 328–43.
	Number of and rates of attendees at special events			• "Bringing Back Main Street: A Guide to Downtown Revitalization for Local Governments." Houston-Galveston Area Council, https://www.h-gac.com/bringing-back-main-street/documents/Bringing-Back-Main-Street-May-2015.pdf (2015). • Edwards, M., M. Singh and K. Brown (2014). "Downtown Success Indicators: A Review of the Literature." Department of Urban and Regional Planning, University of Illinois at Urbana-Champaign in cooperation with University of Illinois Extension, https://fyi.extension.wisc.edu/resilientdowntowns/files/2016/06/59491.pdf . • Seasons, M. (2003). "Indicators and Core Area Planning: Applications in Canada's Mid-sized Cities." <i>Planning Practice and Research</i> 18(1): 63–80.
	Number of hotel and motel rooms per 1,000 central city residents			• "Bringing Back Main Street: A Guide to Downtown Revitalization for Local Governments." Houston-Galveston Area Council, https://www.h-gac.com/bringing-back-main-street/documents/Bringing-Back-Main-Street-May-2015.pdf (2015). • Filion, P., H. Hoernig, T. Bunting and G. Sands (2004). "The Successful Few: Healthy Downtowns of Small Metropolitan Regions." <i>Journal of the American Planning Association</i> 70(3): 328–43.



Economic



Placemaking



Sector: Housing





















Sector: Business

















Built Environment



Demographics

REVITALIZATION STRATEGY	METRIC	TYPE	STRENGTH OF EVIDENCE	CITATION
Invest in diversity of mixed-use development, including housing, and in filling vacant property	Percent of city's residential population living downtown (threshold: 5%)			<ul style="list-style-type: none"> Birch, E. L. (2009). "Downtown in the 'New American City.'" <i>The Annals of the American Academy of Political and Social Science</i> 626(1): 134–53. Burayidi, M. A. <i>Resilient Downtowns: A New Approach to Revitalizing Small- and Medium-City Downtowns</i>. Routledge, London, 2013.
	Growth in the number of housing units downtown			<ul style="list-style-type: none"> Burayidi, M. A. (2018). "Downtown Revitalization in Small and Midsized Cities." American Planning Association.
	Population growth (+/- change over time)			<ul style="list-style-type: none"> Mallach, A., and L. Brachman (2013). "Regenerating America's Legacy Cities." Lincoln Institute of Land Policy, https://www.lincolnst.edu/publications/policy-focus-reports/regenerating-americas-legacy-cities.
	* Diversity of resident tenure			<ul style="list-style-type: none"> Greer, M. M. (2009). "Modes, Means and Measures: Adapting Sustainability Indicators to Assess Preservation Activity's Impact on Community Equity." Master's thesis: 277.
	Percent of civic and cultural facilities located downtown			<ul style="list-style-type: none"> Burayidi, M. A. <i>Resilient Downtowns: A New Approach to Revitalizing Small- and Medium-City Downtowns</i>. Routledge, London, 2013. Filion, P., H. Hoernig, T. Bunting and G. Sands (2004). "The Successful Few: Healthy Downtowns of Small Metropolitan Regions." <i>Journal of the American Planning Association</i> 70(3): 328–43.
	Percentage of city's historic property located downtown (threshold: 20%)			<ul style="list-style-type: none"> Burayidi, M. A. <i>Resilient Downtowns: A New Approach to Revitalizing Small- and Medium-City Downtowns</i>. Routledge, London, 2013. Filion, P., H. Hoernig, T. Bunting and G. Sands (2004). "The Successful Few: Healthy Downtowns of Small Metropolitan Regions." <i>Journal of the American Planning Association</i> 70(3): 328–43.
	Existence of a gathering place or point of arrival			<ul style="list-style-type: none"> Burayidi, M. A. <i>Resilient Downtowns: A New Approach to Revitalizing Small- and Medium-City Downtowns</i>. Routledge, London, 2013. Brooks, R. (2013). "The 20 Ingredients of an Outstanding Downtown." Destination Development International, http://mainstreetmomence.com/Documents/20%20Ingredients%20of%20an%20Outstanding%20Downtown%20(1).pdf.
	Vacancy rates (commercial, residential, etc.) and vacant lots			<ul style="list-style-type: none"> Balsas, C. J. (2004). "Measuring the Livability of an Urban Centre: An Exploratory Study of Key Performance Indicators." <i>Planning, Practice and Research</i> 19(1): 101–10. Burayidi, M. A. <i>Resilient Downtowns: A New Approach to Revitalizing Small- and Medium-City Downtowns</i>. Routledge, London, 2013. "Bringing Back Main Street: A Guide to Downtown Revitalization for Local Governments." Houston-Galveston Area Council, https://www.h-gac.com/bringing-back-main-street/documents/Bringing-Back-Main-Street-May-2015.pdf (2015). "Measuring the Civic Commons." Reimagining the Civic Commons, http://civic-commons.us/app/uploads/2018/01/Measuring-the-Civic-Commons.pdf. Seasons, M. (2003). "Indicators and Core Area Planning: Applications in Canada's Mid-sized Cities." <i>Planning Practice and Research</i> 18(1): 63–80.
	Diverse mix of uses (e.g., commercial, residential or civic uses of buildings and spaces)			<ul style="list-style-type: none"> Burayidi, M. A. (2018). "Downtown Revitalization in Small and Midsized Cities." American Planning Association. Kures, M. E., and W. F. Ryan (2012). "Challenges of an Organizational Approach to Applied Downtown Market Analysis." <i>Applied Geography</i> 32(1): 80–87. Mullin, J., and Z. Kotval (2003). "Measuring the Effectiveness of Downtown Revitalization Strategies." <i>Landscape Architecture and Regional Planning Faculty Publication Series</i> 1:23. Walzer, N., M. Evans and M. Aquino (2017). "Downtown Development Strategies in Illinois: Assessing the Priorities of Municipal Leaders in Illinois." <i>Illinois Municipal Policy Journal</i> 2(1): 69–84.

REVITALIZATION STRATEGY	METRIC	TYPE	STRENGTH OF EVIDENCE	CITATION
Attract and keep businesses downtown	Percent of retail businesses in city located downtown (threshold: 8%)			<ul style="list-style-type: none"> Burayidi, M. A. <i>Resilient Downtowns: A New Approach to Revitalizing Small- and Medium-City Downtowns</i>. Routledge, London, 2013. Burayidi, M. A. (2018). "Downtown Revitalization in Small and Midsized Cities." American Planning Association. Grunwell, S. (2014). "Estimating the Economic Benefits a Business Improvement District Would Provide for a Downtown Central Business District." <i>Journal of Economics and Economic Education Research</i> 15(3): 89. Walzer, N., M. Evans and M. Aquino (2017). "Downtown Development Strategies in Illinois: Assessing the Priorities of Municipal Leaders in Illinois." <i>Illinois Municipal Policy Journal</i> 2(1): 69–84.
	Diverse business mix/store types	 		<ul style="list-style-type: none"> Balsas, C. J. (2004). "Measuring the Livability of an Urban Centre: An Exploratory Study of Key Performance Indicators." <i>Planning, Practice and Research</i> 19(1): 101–10. Kures, M. E., and W. F. Ryan (2012). "Challenges of an Organizational Approach to Applied Downtown Market Analysis." <i>Applied Geography</i> 32(1): 80–87. Sneed, C. T., R. Runyan, J. L. Swinney and H. J. Lim (2011). "Brand, Business Mix, Sense of Place: Do They Matter Downtown?" <i>Journal of Place Management and Development</i> 4(2): 121–34.
	Storefront occupancy rate (threshold: 97%)			<ul style="list-style-type: none"> Brooks, R. (2013). "The 20 Ingredients of an Outstanding Downtown." Destination Development International, http://mainstreetmomece.com/Documents/20%20Ingredients%20of%20an%20Outstanding%20Downtown%20(1).pdf. Edwards, M., M. Singh and K. Brown (2014). "Downtown Success Indicators: A Review of the Literature." Department of Urban and Regional Planning, University of Illinois at Urbana–Champaign in cooperation with University of Illinois Extension, https://fyi.extension.wisc.edu/resilientdowntowns/files/2016/06/59491.pdf. "Measuring the Civic Commons." Reimagining the Civic Commons, http://civic-commons.us/app/uploads/2018/01/Measuring-the-Civic-Commons.pdf.
	Business turnover per year (threshold: <5%)	 		<ul style="list-style-type: none"> Brooks, R. (2013). "The 20 Ingredients of an Outstanding Downtown." Destination Development International, http://mainstreetmomece.com/Documents/20%20Ingredients%20of%20an%20Outstanding%20Downtown%20(1).pdf. Grunwell, S. (2014). "Estimating the Economic Benefits a Business Improvement District Would Provide for a Downtown Central Business District." <i>Journal of Economics and Economic Education Research</i> 15(3): 89.
	Growth in retail sales			<ul style="list-style-type: none"> Grunwell, S. (2014). "Estimating the Economic Benefits a Business Improvement District Would Provide for a Downtown Central Business District." <i>Journal of Economics and Economic Education Research</i> 15(3): 89. Runyan, R. C., and P. Huddleston (2006). "Getting Customers Downtown: The Role of Branding in Achieving Success for Central Business Districts." <i>Journal of Product and Brand Management</i> 15(1): 48–61.
Expand employment opportunities downtown or in city center (disaggregate employment measures by race and ethnicity)	* Percentage of city residents working in the city			<ul style="list-style-type: none"> Hollingsworth, T., and A. Goebel (2017). "Revitalizing America's Smaller Legacy Cities: Strategies for Postindustrial Success from Gary to Lowell." Lincoln Institute of Land Policy.



Economic



Placemaking



Sector: Housing














Sector: Business



Built Environment



Demographics

REVITALIZATION STRATEGY	METRIC	TYPE	STRENGTH OF EVIDENCE	CITATION
	Unemployment rate	 		<ul style="list-style-type: none"> Furdell, K., H. Wolman and E. W. Hill (2005). "Did Central Cities Come Back? Which Ones, How Far, and Why?" <i>Journal of Urban Affairs</i> 27(3): 283–305. Hollingsworth, T., and A. Goebel (2017). "Revitalizing America's Smaller Legacy Cities: Strategies for Postindustrial Success from Gary to Lowell." Lincoln Institute of Land Policy. Mallach, A., and L. Brachman (2013). "Regenerating America's Legacy Cities." Lincoln Institute of Land Policy, https://www.lincolnst.edu/publications/policy-focus-reports/regenerating-americas-legacy-cities. "Measuring the Civic Commons." Reimagining the Civic Commons, http://civic-commons.us/app/uploads/2018/01/Measuring-the-Civic-Commons.pdf. Seasons, M. (2003). "Indicators and Core Area Planning: Applications in Canada's Mid-sized Cities." <i>Planning Practice and Research</i> 18(1): 63–80.
	Labor force participation rate	 		<ul style="list-style-type: none"> Benner, C., and M. Pastor (2012). "Just Growth: Inclusion and Prosperity in America's Metropolitan Regions." <i>Berkeley Planning Journal</i> 25(1). Mallach, A., and L. Brachman (2013). "Regenerating America's Legacy Cities." Lincoln Institute of Land Policy, https://www.lincolnst.edu/publications/policy-focus-reports/regenerating-americas-legacy-cities. Hollingsworth, T., and A. Goebel (2017). "Revitalizing America's Smaller Legacy Cities: Strategies for Postindustrial Success from Gary to Lowell." Lincoln Institute of Land Policy. Mallach, A., and L. Brachman (2013). "Regenerating America's Legacy Cities." Lincoln Institute of Land Policy, https://www.lincolnst.edu/publications/policy-focus-reports/regenerating-americas-legacy-cities.
	Net new jobs	 		<ul style="list-style-type: none"> Berube, A., and C. Murray (2018). "Renewing America's Economic Promise Through Older Industrial Cities." Metropolitan Policy Program at the Brookings Institution, https://www.brookings.edu/research/older-industrial-cities/#01073. Lund, S., J. Manyika, L. H. Segel, A. Dua, B. Hancock, S. Rutherford and B. Macon (2019). "The Future of Work in America: People and Places, Today and Tomorrow." McKinsey Global Institute.
	Median household income			<ul style="list-style-type: none"> Benner, C., and M. Pastor (2012). "Just Growth: Inclusion and Prosperity in America's Metropolitan Regions." <i>Berkeley Planning Journal</i> 25(1). Berube, A., and C. Murray (2018). "Renewing America's Economic Promise Through Older Industrial Cities." Metropolitan Policy Program at the Brookings Institution, https://www.brookings.edu/research/older-industrial-cities/#01073. Furdell, K., H. Wolman and E. W. Hill (2005). "Did Central Cities Come Back? Which Ones, How Far, and Why?" <i>Journal of Urban Affairs</i> 27(3): 283–305. Hollingsworth, T., and A. Goebel (2017). "Revitalizing America's Smaller Legacy Cities: Strategies for Postindustrial Success from Gary to Lowell." Lincoln Institute of Land Policy. Mallach, A., and L. Brachman (2013). "Regenerating America's Legacy Cities." Lincoln Institute of Land Policy, https://www.lincolnst.edu/publications/policy-focus-reports/regenerating-americas-legacy-cities. Morley, E. (2014). "The Validating Arts and Livability Indicators (VALI) Study: Results and Recommendations." Urban Institute (for the National Endowment for the Arts). "Measuring the Civic Commons." Reimagining the Civic Commons, http://civic-commons.us/app/uploads/2018/01/Measuring-the-Civic-Commons.pdf.



Economic



Placemaking



Sector: Housing















Sector: Business



Built Environment



Demographics

REVITALIZATION STRATEGY	METRIC	TYPE	STRENGTH OF EVIDENCE	CITATION
	Poverty rate			<ul style="list-style-type: none"> • Benner, C., and M. Pastor (2012). "Just Growth: Inclusion and Prosperity in America's Metropolitan Regions." <i>Berkeley Planning Journal</i> 25(1). • Furdell, K., H. Wolman and E. W. Hill (2005). "Did Central Cities Come Back? Which Ones, How Far, and Why?" <i>Journal of Urban Affairs</i> 27(3): 283–305. • Hollingsworth, T., and A. Goebel (2017). "Revitalizing America's Smaller Legacy Cities: Strategies for Postindustrial Success from Gary to Lowell." Lincoln Institute of Land Policy. • "Measuring the Civic Commons." Reimagining the Civic Commons, http://civic-commons.us/app/uploads/2018/01/Measuring-the-Civic-Commons.pdf.
	College degree attainment			<ul style="list-style-type: none"> • Hollingsworth, T., and A. Goebel (2017). "Revitalizing America's Smaller Legacy Cities: Strategies for Postindustrial Success from Gary to Lowell." Lincoln Institute of Land Policy. • Mallach, A., and L. Brachman (2013). "Regenerating America's Legacy Cities." Lincoln Institute of Land Policy, https://www.lincolnst.edu/publications/policy-focus-reports/regenerating-americas-legacy-cities.
	Foreign-born population			<ul style="list-style-type: none"> • Benner, C., and M. Pastor (2012). "Just Growth: Inclusion and Prosperity in America's Metropolitan Regions." <i>Berkeley Planning Journal</i> 25(1). • Burayidi, M. A. <i>Resilient Downtowns: A New Approach to Revitalizing Small- and Medium-City Downtowns</i>. Routledge, London, 2013. • Hollingsworth, T., and A. Goebel (2017). "Revitalizing America's Smaller Legacy Cities: Strategies for Postindustrial Success from Gary to Lowell." Lincoln Institute of Land Policy. • Mallach, A., and L. Brachman (2013). "Regenerating America's Legacy Cities." Lincoln Institute of Land Policy, https://www.lincolnst.edu/publications/policy-focus-reports/regenerating-americas-legacy-cities.
	Proportion of jobs in finance, insurance and real estate (FIRE), healthcare and/or education industries			<ul style="list-style-type: none"> • Berube, A., and C. Murray (2018). "Renewing America's Economic Promise Through Older Industrial Cities." Metropolitan Policy Program at the Brookings Institution, https://www.brookings.edu/research/older-industrial-cities/#01073. • Burnette, C. (2017). "Predicting Revitalization: A Descriptive Narrative and Predictive Analysis of Neighborhood Revitalization in Atlanta, Georgia." Georgia Institute of Technology. • Furdell, K., H. Wolman and E. W. Hill (2005). "Did Central Cities Come Back? Which Ones, How Far, and Why?" <i>Journal of Urban Affairs</i> 27(3): 283–305.
Implement tax credit programs and incentives	Amount of private investment leveraged as a result of public funding			<ul style="list-style-type: none"> • "Bringing Back Main Street: A Guide to Downtown Revitalization for Local Governments." Houston-Galveston Area Council, https://www.h-gac.com/bringing-back-main-street/documents/Bringing-Back-Main-Street-May-2015.pdf (2015). • Filion, P., H. Hoernig, T. Bunting and G. Sands (2004). "The Successful Few: Healthy Downtowns of Small Metropolitan Regions." <i>Journal of the American Planning Association</i> 70(3): 328–43.
	Amount of redevelopment funds invested to enhance downtown's public spaces/ attractiveness			<ul style="list-style-type: none"> • Birch, E. L. (2006). "Changing Place in the New Downtown." In <i>New Downtowns: The Future of Urban Centers</i>, ed. J. Oakman. Woodrow Wilson School of Public and International Affairs, Princeton, NJ: 53.

Appendix C: Detailed Qualities of Public Spaces

In the Strength of Evidence column, green represents metrics that were validated and share consistent findings across two or more studies and yellow indicates metrics that were validated but have fewer corroborating pieces of evidence.

METRIC	MEASURES	STRENGTH OF EVIDENCE	CITATION
Inclusiveness	<ul style="list-style-type: none"> • Presence of people of diverse ages, genders, classes, races, physical abilities and family size and type • Opening hours of the space • Control of entrance to the public space • Reactions to the presence of cameras and security • Sense of freedom to behave without fear of judgment 	•	<ul style="list-style-type: none"> • Mehta, V. (2014). "Evaluating Public Space." <i>Journal of Urban Design</i> 19(1): 53–88. • Zamanifard, H., T. Alizadeh, C. Bosman and E. Coiacetto (2019). "Measuring Experiential Qualities of Urban Public Spaces: Users' Perspective." <i>Journal of Urban Design</i> 24(3): 340–64. • Németh, J., and S. Schmidt. "Publicly Accessible Space and Quality of Life: A Tool for Measuring the Openness of Urban Spaces." In M. Budruk and R. Phillips, eds., <i>Quality-of-Life Community Indicators for Parks, Recreation and Tourism Management</i>. Springer, Dordrecht, Netherlands: 41–66. • "Measuring the Civic Commons." Reimagining the Civic Commons, http://civiccommons.us/app/uploads/2018/01/Measuring-the-Civic-Commons.pdf.
Pleasurability	<ul style="list-style-type: none"> • Quality and variety of architecture • Presence of art installation • Density of elements (e.g., sidewalks and streets) • Perceived attractiveness of the space • Presence of advertising in the space (less is better) 	•	<ul style="list-style-type: none"> • Mehta, V. (2014). "Evaluating Public Space." <i>Journal of Urban Design</i> 19(1): 53–88. • Zamanifard, H., T. Alizadeh, C. Bosman and E. Coiacetto (2019). "Measuring Experiential Qualities of Urban Public Spaces: Users' Perspective." <i>Journal of Urban Design</i> 24(3): 340–64. • Németh, J., and S. Schmidt. "Publicly Accessible Space and Quality of Life: A Tool for Measuring the Openness of Urban Spaces." In M. Budruk and R. Phillips, eds., <i>Quality-of-Life Community Indicators for Parks, Recreation and Tourism Management</i>. Springer, Dordrecht, Netherlands: 41–66.
Meaningful activities	<ul style="list-style-type: none"> • Presence of community gathering "third" places (i.e., social surroundings that are not a home or a workplace) • Range of activities and behaviors in space • Availability of food, retail and other amenities • Variety of reasons or motivations to use or be in the space • Likelihood of interactions with other people • Proportion of employees working in arts- and entertainment-related establishments 	•	<ul style="list-style-type: none"> • Mehta, V. (2014). "Evaluating Public Space." <i>Journal of Urban Design</i> 19(1): 53–88. • Zamanifard, H., T. Alizadeh, C. Bosman and E. Coiacetto (2019). "Measuring Experiential Qualities of Urban Public Spaces: Users' Perspective." <i>Journal of Urban Design</i> 24(3): 340–64. • Morley, E. (2014). "The Validating Arts and Livability Indicators (VALI) Study: Results and Recommendations." Urban Institute (for the National Endowment for the Arts). • "Measuring the Civic Commons." Reimagining the Civic Commons, http://civiccommons.us/app/uploads/2018/01/Measuring-the-Civic-Commons.pdf.
Safety	<ul style="list-style-type: none"> • Level of connection to adjacent streets or spaces • Lighting quality after dark • Presence of surveillance cameras, security guards or similar patrol units • Perceived safety from traffic • Sense of safety during the day and/or night 	•	<ul style="list-style-type: none"> • Mehta, V. (2014). "Evaluating Public Space." <i>Journal of Urban Design</i> 19(1): 53–88. • Zamanifard, H., T. Alizadeh, C. Bosman and E. Coiacetto (2019). "Measuring Experiential Qualities of Urban Public Spaces: Users' Perspective." <i>Journal of Urban Design</i> 24(3): 340–64.

METRIC	MEASURES	STRENGTH OF EVIDENCE	CITATION
Comfort	<ul style="list-style-type: none"> • Presence of free places to sit • Presence of shade or shelter against weather • Presence of nuisance noise (e.g., traffic) • Presence of design elements that discourage use of the space • Ease and safety of walking in and around the space • Availability of restrooms (gender neutral or gendered) 	•	<ul style="list-style-type: none"> • Mehta, V. (2014). "Evaluating Public Space." <i>Journal of Urban Design</i> 19(1): 53–88. • Zamanifard, H., T. Alizadeh, C. Bosman and E. Coiacetto (2019). "Measuring Experiential Qualities of Urban Public Spaces: Users' Perspective." <i>Journal of Urban Design</i> 24(3): 340–64. • Németh, J., and S. Schmidt. "Publicly Accessible Space and Quality of Life: A Tool for Measuring the Openness of Urban Spaces." In M. Budruk and R. Phillips, eds., <i>Quality-of-Life Community Indicators for Parks, Recreation and Tourism Management</i>. Springer, Dordrecht, Netherlands: 41–66. • "Measuring the Civic Commons." Reimagining the Civic Commons, http://civiccommons.us/app/uploads/2018
Likability	<ul style="list-style-type: none"> • Feelings toward the space (e.g., unique or generic, exciting or boring, pleasant or distasteful, welcoming or intimidating, comforting or distressing) • Variety and number of reasons for liking or not liking the place 	•	<ul style="list-style-type: none"> • Zamanifard, H., T. Alizadeh, C. Bosman and E. Coiacetto (2019). "Measuring Experiential Qualities of Urban Public Spaces: Users' Perspective." <i>Journal of Urban Design</i> 24(3): 340–64.
Health of cultural sector via Cultural Assets Index	<ul style="list-style-type: none"> • Geolocating the number of cultural participants, nonprofit cultural providers, commercial cultural firms and residents artists • Type of municipal involvement in cultural facilities and activities in the last ten years • Variety of cultural activities, programs and facilities annually funded from public funds • Percent of public funding for cultural activities, programs and facilities annually 	•	<ul style="list-style-type: none"> • Stern, M. J., and Seifert, S. C. (2010). "Cultural Clusters: The Implications of Cultural Assets Agglomeration for Neighborhood Revitalization." <i>Journal of Planning Education and Research</i> 29(3): 262–79. • Grodach, C., and A. Loukaitou Sideris (2007). "Cultural Development Strategies and Urban Revitalization: A Survey of US Cities." <i>International Journal of Cultural Policy</i> 13(4): 349–70. • "Measuring the Civic Commons." Reimagining the Civic Commons, http://civiccommons.us/app/uploads/2018/01/Measuring-the-Civic-Commons.pdf.
Business mix	<ul style="list-style-type: none"> • Perception that "enough different businesses are downtown" • Perception that "the mix of business in downtown is optimal for attracting consumers" • Perception that "downtown has a very diverse mix of businesses" • Perception that "downtown business owners welcome new businesses" 	•	<ul style="list-style-type: none"> • Runyan, R. C., and P. Huddleston (2006). "Getting Customers Downtown: The Role of Branding in Achieving Success for Central Business Districts." <i>Journal of Product and Brand Management</i> 15(1): 48–61. • Sneed, C. T., R. Runyan, J. L. Swinney and H. J. Lim (2011). "Brand, Business Mix, Sense of Place: Do They Matter Downtown?" <i>Journal of Place Management and Development</i> 4(2): 121–34.
Use of public space	<ul style="list-style-type: none"> • Pedestrian counts in key locations (including demographic characteristics of who is using the space) • Use of space over a 24-hour period (including demographic characteristics of who is using the space) • Number of new residential units in designated area(s) • Percent of commercial and/or residential vacancies in designated area(s) • Number of tourists frequenting the city or downtown area (including demographic characteristics of who is visiting the space) 	•	<ul style="list-style-type: none"> • Birch, E. L. (2006). "Changing Place in the New Downtown." In <i>New Downtowns: The Future of Urban Centers</i>, ed. J. Oakman. Woodrow Wilson School of Public and International Affairs, Princeton, NJ: 53. • Fillion, P., H. Hoernig, T. Bunting and G. Sands (2004). "The Successful Few: Healthy Downtowns of Small Metropolitan Regions." <i>Journal of the American Planning Association</i> 70(3): 328–43. • Balsas, C. J. (2004). "Measuring the Livability of an Urban Centre: An Exploratory Study of Key Performance Indicators." <i>Planning, Practice and Research</i> 19(1): 101–10. • "Bringing Back Main Street: A Guide to Downtown Revitalization for Local Governments." Houston-Galveston Area Council, https://www.h-gac.com/bringing-back-main-street/documents/Bringing-Back-Main-Street-May-2015.pdf (2015). • Grodach, C., and A. Loukaitou Sideris (2007). "Cultural Development Strategies and Urban Revitalization: A Survey of US Cities." <i>International Journal of Cultural Policy</i> 13(4): 349–70. • "Measuring the Civic Commons." Reimagining the Civic Commons, http://civiccommons.us/app/uploads/2018/01/Measuring-the-Civic-Commons.pdf.

Appendix D: Details for Measuring Place Attachment and Brand

In the Strength of Evidence column, green represents metrics that are validated and share consistent findings across two or more studies and yellow indicates metrics that are validated but have fewer corroborating pieces of evidence.

PATHWAY ELEMENT	METRIC	MEASURE	STRENGTH OF EVIDENCE	CITATION
Place attachment*	Place identity	<p>Place identity</p> <ul style="list-style-type: none"> I feel this place is part of who I am (self-extension) If this place no longer existed, I would feel I had lost a part of myself (self-extension) I feel this is the place where I fit (environmental fit) This place allows me to “connect with myself” (environmental fit) This place reflects the type of person I am (place-self congruity) This place reflects my personal values (place-self congruity) <p>Place identity</p> <ul style="list-style-type: none"> I feel this place is a part of me This place is very special to me I identify strongly with this place I am very attached to this place Visiting this place says a lot about who I am This place means a lot to me <p>Place dependence</p> <ul style="list-style-type: none"> This place is the best place for what I like to do No other place can compare to this place I get more satisfaction out of visiting this place than any other Doing what I do at this place is more important to me than doing it in any other place I wouldn't substitute any other area for doing the types of things I do at this place 	●	<ul style="list-style-type: none"> Droseltis, O., and V. L. Vignoles (2010). “Towards an Integrative Model of Place Identification: Dimensionality and Predictors of Intrapersonal-level Place Preferences.” <i>Journal of Environmental Psychology</i> 30(1): 23–34. Williams, D. R., and J. J. Vaske (2003). “The Measurement of Place Attachment: Validity and Generalizability of a Psychometric Approach.” <i>Forest Science</i> 49(6): 830–40.
	Length of residence	<ul style="list-style-type: none"> Time spent in the place (years) Length of residence (median length) Proportion of housing units occupied Proportion of housing units owner-occupied 	●	<ul style="list-style-type: none"> Morley, E. (2014). “The Validating Arts and Livability Indicators (VALI) Study: Results and Recommendations.” Urban Institute (for the National Endowment for the Arts).

PATHWAY ELEMENT	METRIC	MEASURE	STRENGTH OF EVIDENCE	CITATION
	Ties to place	<ul style="list-style-type: none"> • This place makes me feel positively about myself (self-esteem) • This place gives me a sense of “meaning” in my life (meaning) • This place has spiritual significance to me (spiritual significance) • My origins are in this place (genealogical links) • There is a sense of “loss” when I think of this place (sense of loss/dislocation) 	●	<ul style="list-style-type: none"> • Droseltis, O., and V. L. Vignoles (2010). “Towards an Integrative Model of Place Identification: Dimensionality and Predictors of Intrapersonal-level Place Preferences.” <i>Journal of Environmental Psychology</i> 30(1): 23–34. • Williams, D. R., and J. J. Vaske (2003). “The Measurement of Place Attachment: Validity and Generalizability of a Psychometric Approach.” <i>Forest Science</i> 49(6): 830–40.
	Sense of belonging	<ul style="list-style-type: none"> • This place gives me a sense of continuity between past, present and future in my life (continuity) • This place makes me feel close to, or accepted by, other people (belongingness) • This place gives me a sense of security (security) 	●	<ul style="list-style-type: none"> • Droseltis, O., and V. L. Vignoles (2010). “Towards an Integrative Model of Place Identification: Dimensionality and Predictors of Intrapersonal-level Place Preferences.” <i>Journal of Environmental Psychology</i> 30(1): 23–34.
	Trust of others	<ul style="list-style-type: none"> • Would you say that most people can be trusted or that you can’t be too careful in dealing with people? • How much do you trust people in your neighborhood? • How about white people? (same as neighborhood) • What about African Americans or Black people? (same as neighborhood) • What about Asian people? (same as neighborhood) • How about Hispanics or Latinos? (same as neighborhood) 	●	<ul style="list-style-type: none"> • Rahimi, S., M. J. Martin, E. Obeysekere, D. Hellmann, X. Liu and C. Andris (2017). “A Geographic Information System (GIS)-based Analysis of Social Capital Data: Landscape Factors that Correlate with Trust.” <i>Sustainability</i> 9(3): 365. • “Measuring the Civic Commons.” Reimagining the Civic Commons, http://civiccommons.us/app/uploads/2018/01/Measuring-the-Civic-Commons.pdf.
Place attachment outcomes*	Quality of life	The ability of residents to access necessary amenities: <ul style="list-style-type: none"> • Adequate housing • Healthcare • Child care • Education • Public safety • Violent crime rate • Property crime rate • Median commute time • Retail and service establishments (per 1,000) • Net migration 	●	<ul style="list-style-type: none"> • Kline, E. (2001). “Indicators for Sustainable Development In Urban Areas.” <i>Sustainability Assessment and the Management of Urban Environments</i>: 275–97. • Morley, E. (2014). “The Validating Arts and Livability Indicators (VALI) Study: Results and Recommendations.” Urban Institute (for the National Endowment for the Arts).

PATHWAY ELEMENT	METRIC	MEASURE	STRENGTH OF EVIDENCE	CITATION
	Civic engagement	<ul style="list-style-type: none"> Election turnout rate Civic engagement establishments (per 1,000) 	●	<ul style="list-style-type: none"> Morley, E. (2014). "The Validating Arts and Livability Indicators (VALI) Study: Results and Recommendations." Urban Institute (for the National Endowment for the Arts). "Measuring the Civic Commons." Reimagining the Civic Commons, http://civiccommons.us/app/uploads/2018/01/Measuring-the-Civic-Commons.pdf.
Brand	Image valence	<p>Physical appearance</p> <ul style="list-style-type: none"> I find this place beautiful (aesthetic satisfaction) <p>Perceived image</p> <ul style="list-style-type: none"> Our downtown has a negative image Our downtown has an established image Our downtown has a positive image Downtown business owners and local government present a consistent image of the downtown Downtown business owners have a consistent view of the downtown's image 	●	<ul style="list-style-type: none"> Droseltis, O., and V. L. Vignoles (2010). "Towards an Integrative Model of Place Identification: Dimensionality and Predictors of Intrapersonal-level Place Preferences." <i>Journal of Environmental Psychology</i> 30(1): 23–34. Runyan, R. C., and P. Huddleston (2006). "Getting Customers Downtown: The Role of Branding in Achieving Success for Central Business Districts." <i>Journal of Product and Brand Management</i> 15(1): 48–61. Sneed, C. T., R. Runyan, J. L. Swinney and H. J. Lim (2011). "Brand, Business Mix, Sense of Place: Do They Matter Downtown?" <i>Journal of Place Management and Development</i> 4(2): 121–34. "Measuring the Civic Commons." Reimagining the Civic Commons, http://civiccommons.us/app/uploads/2018/01/Measuring-the-Civic-Commons.pdf.
	Uniqueness	<ul style="list-style-type: none"> Being linked to this place distinguishes me from other people (distinctiveness) Our downtown has a symbol or symbols readily recognized by consumers Our symbol or symbols are distinct from other downtowns that are our competitors Our symbol or symbols are enclosed and supported by downtown business owners Downtown business owners and local government endorse and support the same symbol(s) 	●	<ul style="list-style-type: none"> Droseltis, O., and V. L. Vignoles (2010). "Towards an Integrative Model of Place Identification: Dimensionality and Predictors of Intrapersonal-level Place Preferences." <i>Journal of Environmental Psychology</i> 30(1): 23–34. Runyan, R. C., and P. Huddleston (2006). "Getting Customers Downtown: The Role of Branding in Achieving Success for Central Business Districts." <i>Journal of Product and Brand Management</i> 15(1): 48–61.

* Line spaces between sets of items in the place attachment measures column denote items are from the respective citation as ordered.

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