



# *The* Atlas *of* ReUrbanism

## Buildings and blocks in American cities

NOVEMBER 2016



National Trust *for* Historic Preservation  
**Preservation Green Lab**



# Introducing the Atlas

**The Atlas of ReUrbanism uses data about cities to connect the character of the built environment to positive outcomes.**

For the first time in generations, urban areas in all corners of the country are experiencing job growth and net population gains. People of diverse ages and backgrounds are beginning to notice—and value—the qualities of older neighborhoods and commercial corridors: walkable streets alive with cultural vitality; distinct blocks of architectural diversity; and flexible, adaptable buildings offering space for local entrepreneurs. The contributions of older buildings and blocks are not merely nice-to-have neighborhood amenities. They are increasingly seen as essential to the success of American cities.

With this report, the National Trust for Historic Preservation launches a new resource for city leaders and urban advocates to deepen understanding of the cities they love. Developed by the Preservation Green Lab, the Atlas of ReUrbanism uses increasingly accessible data about cities to explore the connections between the physical character of urban development and a range of economic, social, and environmental outcomes. Whether you're a mayor, planner, developer, or advocate, the Atlas of ReUrbanism offers detailed information about buildings and blocks in American cities and the people, businesses, and vitality they support.

## A New Resource for City Leaders

The Atlas of ReUrbanism adds to the growing toolbox of resources for “smart city” urban management and strategic decision-making. Armed with more comprehensive information, urban leaders and advocates can better understand older buildings as assets to be carefully managed, much in the same way that cities currently steward public open space. The data in the Atlas can be leveraged to address critical needs and support key goals, including:





### **Attracting new businesses and skilled workers.**

Increasingly, businesses are choosing to locate in communities where they can attract workers with a preference for dense, socially diverse, architecturally rich, and transit connected neighborhoods. Many companies and workers are seeking out flexible, interesting older buildings that can be adapted to new and changing needs. The Atlas can help identify where corporate investment is occurring and point to opportunities for new businesses.

### **Supporting sustainable, inclusive urban development.**

There is a growing affordability crisis in thriving urban centers, with shrinking housing options for low and moderate income households and increasing rents for small businesses owners. The Atlas of ReUrbanism allows users to understand where local enterprise and diverse populations are thriving and identify areas where

### **Louisville, Kentucky.**

Preservation Green Lab research aims to understand how the character of buildings and blocks affects a range of urban performance measures, such as walkability, entrepreneurship, local businesses, women and minority-owned businesses, housing affordability, and demographic diversity.

PHOTO: ANDY SNOW







underused buildings or vacant lots could be better utilized.

**Improving public policies and programs.** Many cities struggle with tight budgets and growing needs. The Atlas of ReUrbanism can inform and support community discussions and sharpen decision-making about public investments, neighborhood planning, land use regulations, financial assistance, and technical assistance programs.

**Center City, Philadelphia.**

Blocks with mixed-age, fine-grained buildings are places where development has occurred incrementally, over many decades, resulting in a texture, richness, and distinctiveness that we call character.

**PHOTO:** NATIONAL TRUST FOR HISTORIC PRESERVATION

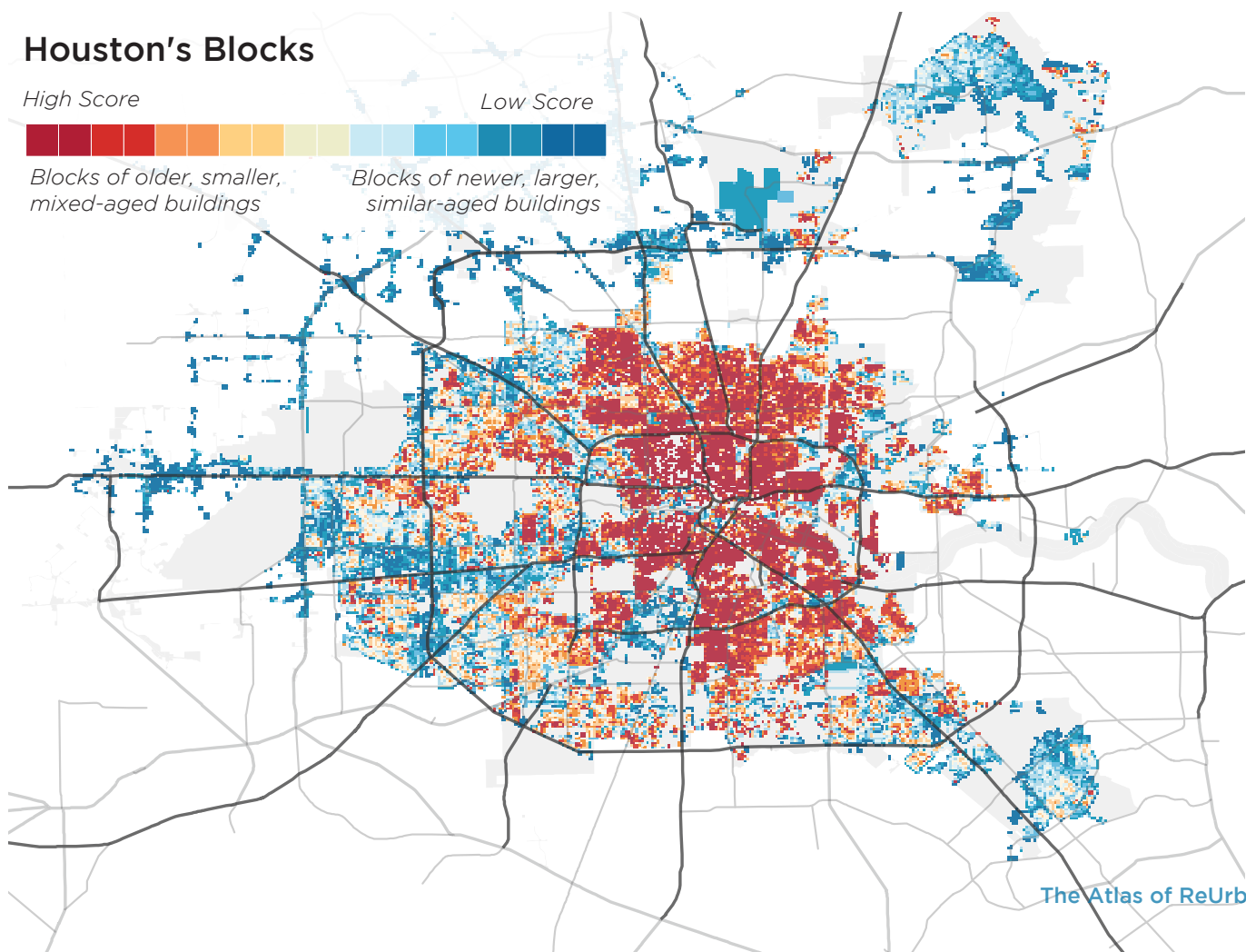
This summary report introduces the Atlas of ReUrbanism, offering baseline building and block information for 50 cities across the country, as well as interactive maps for the five largest: New York, Los Angeles, Chicago, Houston, and Philadelphia. Interactive maps for all 50 cities will be released in thematic groups during 2017. Further research and additional cities will be added to the Atlas in coming years. The following pages include highlights from the Atlas.



# Measuring Urban Character

The Atlas of ReUrbanism analysis of the buildings and blocks of cities uses a metric called the Character Score to understand where older fabric exists and to measure its impact. Developed for our research study *Older, Smaller, Better: Measuring how the character of buildings and blocks influences urban vitality*, the Character Score combines three measures with equal weight: the median age of buildings drawn from county assessor records, the diversity of the age of buildings, and the size of buildings and parcels. Red squares show the highest Character Score areas: places with the oldest, smallest buildings mixed together with new development. Blue squares show areas with the newest, largest buildings of similar age.

**Valuable assets for smart cities.** In this map of Houston, the squares highlighted in red and orange point to the diverse, dense, and distinctive fabric of high Character Score areas.





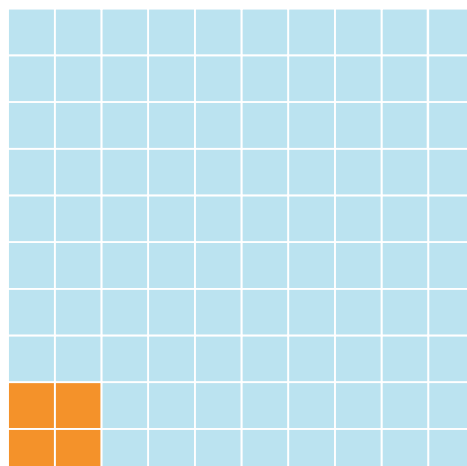
# The American City

The National Trust's ReUrbanism initiative helps city leaders and advocates manage change in ways that benefit new and long-time residents alike and supports more sustainable, equitable urban development. The Atlas of ReUrbanism provides baseline information about one of the most visible and valuable group of urban assets: the buildings and blocks that house residents and businesses and give each city its distinctive character and identity. The Atlas establishes several key metrics about buildings in American cities: their number, age, size, and use. For example, the data collected in the Atlas shows that a large percentage of buildings in American cities are more than 50 years old. In eastern and Midwestern cities, a majority of existing buildings date from before World War II.

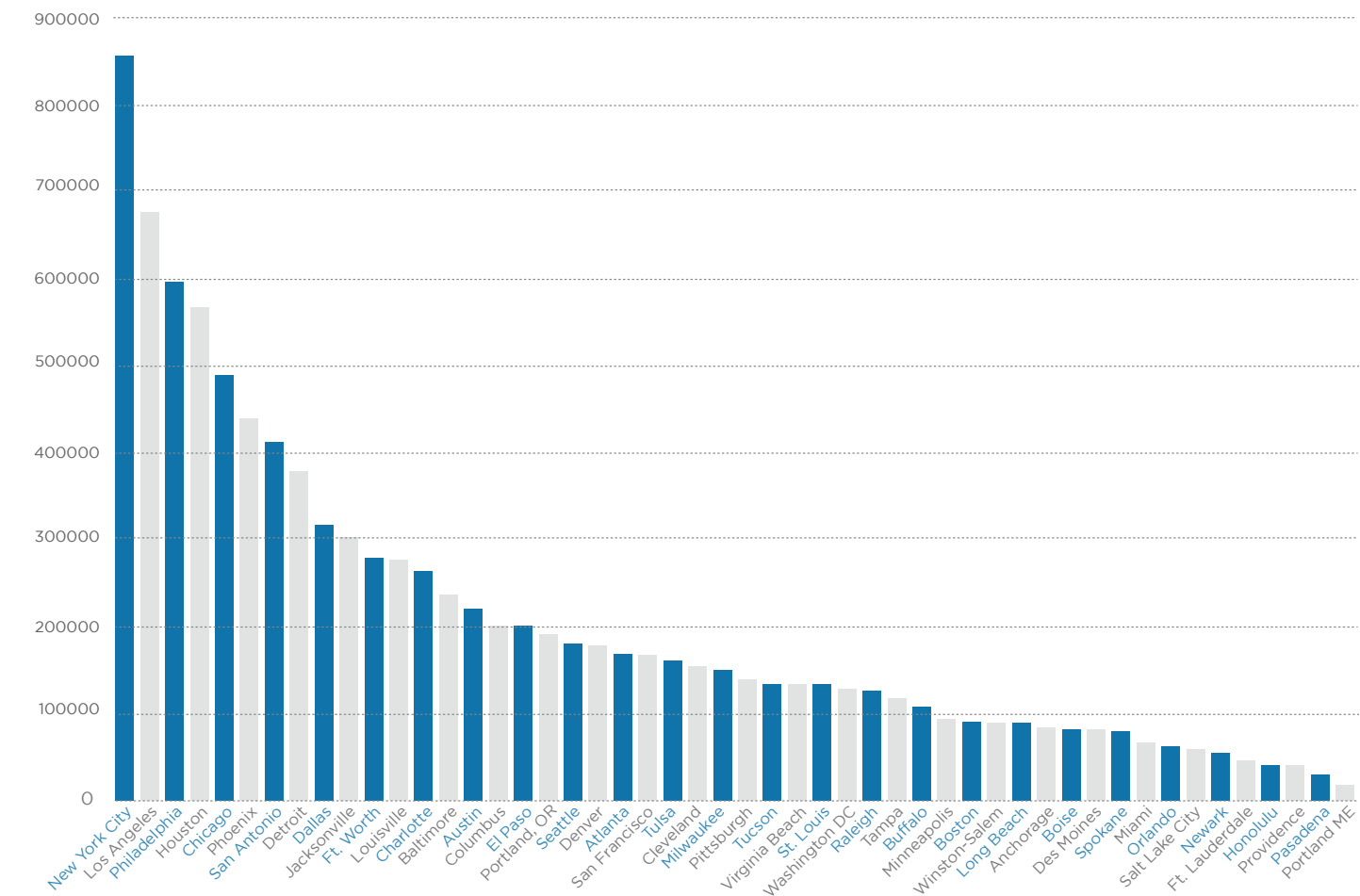
For decades, preservation advocates have worked with city leaders and community organizations to promote the conservation and reuse of older buildings as a key urban revitalization strategy. The impact of these efforts, often spurred by financial incentive programs such as the federal historic tax credit, can be seen in the downtowns of cities ranging from Cleveland to Tucson. Since the first ordinance was established in Charleston, South Carolina in 1931, local landmark designation programs have been adopted in most major cities across the

country. The Atlas findings show that these programs protect, on average, just over four percent of existing buildings in American cities.

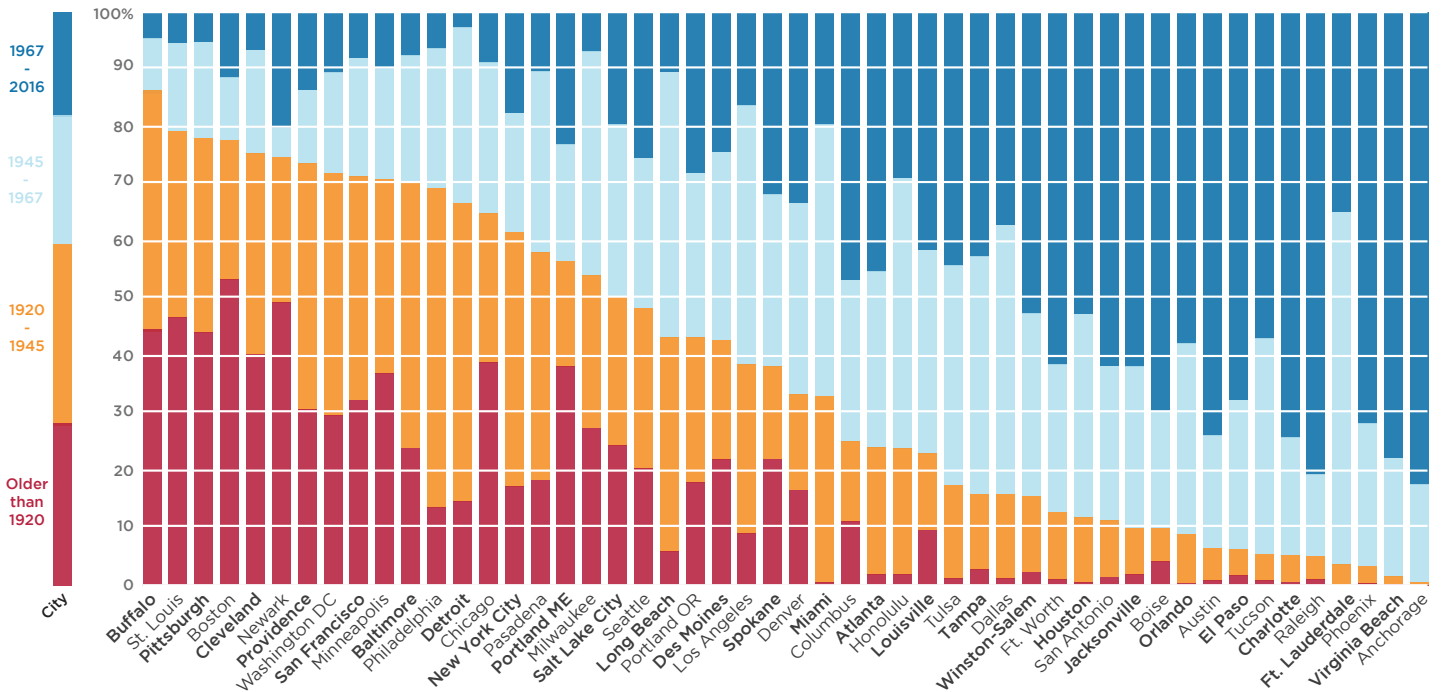
**4.3%**  
of all  
buildings  
are locally  
landmarked



# Number of Buildings Atlas Cities



# Building Age by Era of Construction Atlas Cities







# Key Takeaways

The Atlas of ReUrbanism contains a massive amount of data about the buildings and blocks of American cities, presented at high resolution. In each of the 50 cities included in the Atlas, we computed and mapped more than 150 metrics at a fine-grained, 200-meter-by-200-meter grid—equivalent to about one-and-a-half square blocks or a distance that can be walked in less than ten minutes. The grid allows us to merge data from a variety of geographies and sources into a single, readily comparable, and easily comprehensible map. The data includes building and parcel information from cities and counties, historic designation information from cities and states, jobs and demographic information from the U.S. Census Bureau, and business characteristics from Dun & Bradstreet.

Using these maps and the underlying Atlas database, we compare characteristics of the built environment with a variety of social, economic, and cultural vitality metrics. In the pages ahead, we explore the 50 cities in the Atlas along three important dimensions:

- **Economic vitality**, including jobs in new businesses and small businesses
- **Inclusiveness**, including housing affordability and business ownership
- **Density and diversity**, including counts and characteristics of people, housing, and jobs



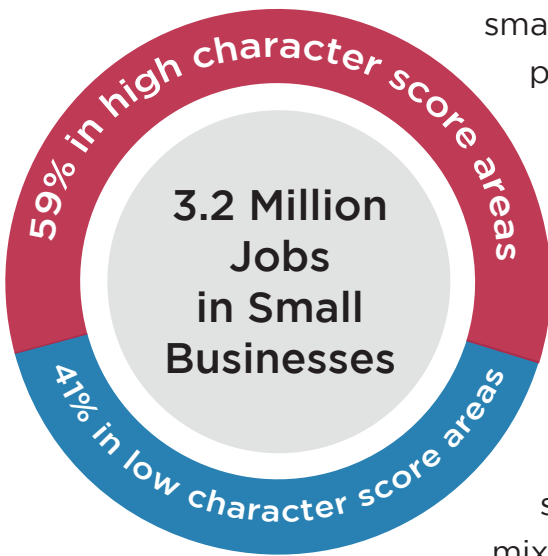
**The Atlas  
compares 50  
cities in terms  
of economic  
vitality,  
inclusiveness,  
density, and  
diversity.**





# Supporting a resilient local economy

## **Number of Small Businesses** *Atlas Cities*



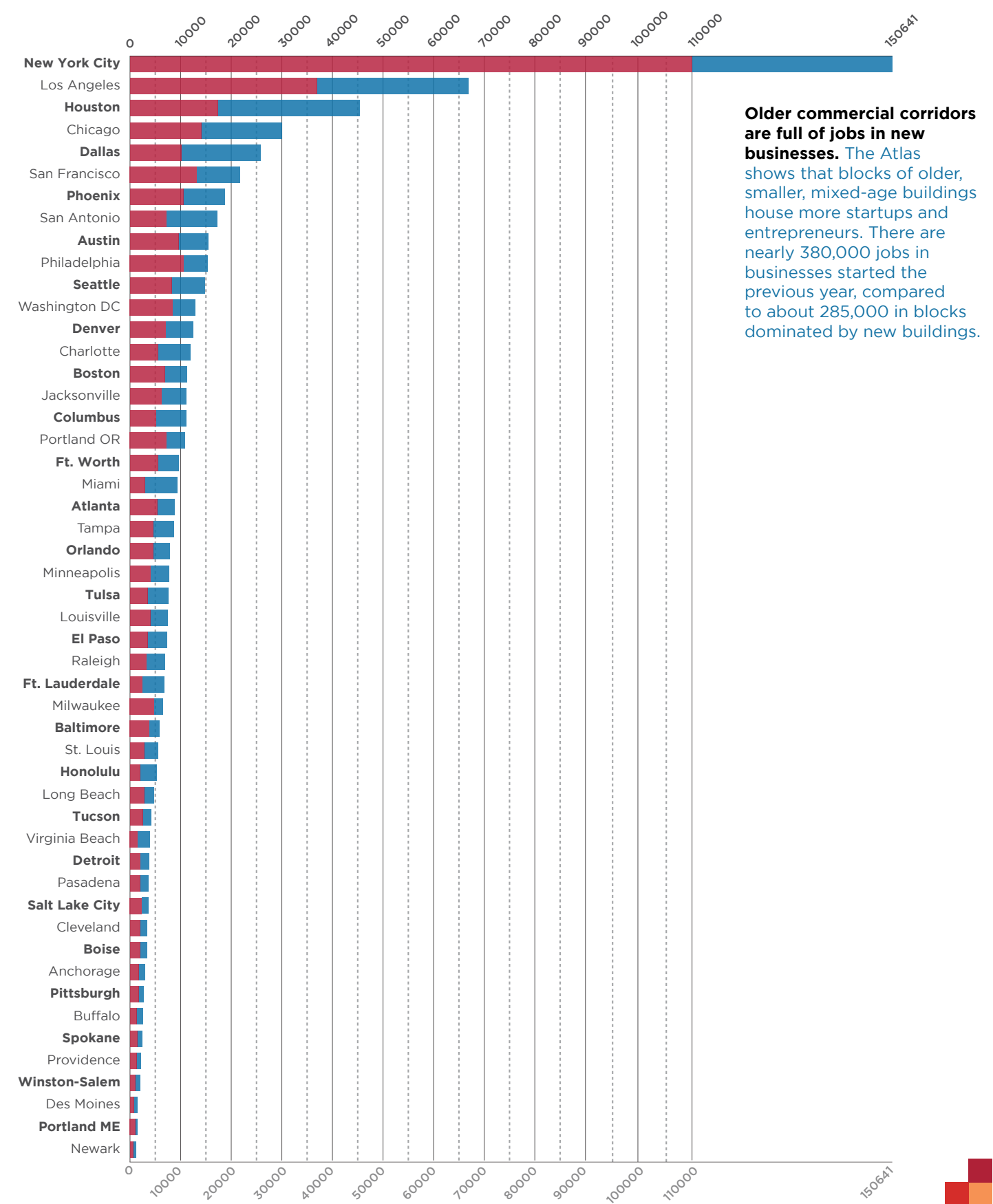
**Small businesses are the backbone of the American economy.** Across the 50 cities in the Atlas of ReUrbanism, there are a total of 3.2 million jobs in businesses with fewer than 20 employees. Nearly 1.9 million of those jobs are in high Character Score areas, compared to 1.3 million jobs in areas with mostly large, new buildings.

Blocks of older, smaller, mixed-age buildings add character and charm to cities, but these areas are far more than quaint relics. High Character Score areas provide a foundation for strong local businesses, innovative startups, and mom-and-pop small businesses. Whereas large, new buildings sometimes provide space for major employers, older blocks with more modest, unassuming buildings contain economic development engines of their own. For example, every Starbucks, Boeing, or Microsoft had to start somewhere, and in each of these cases, older, smaller buildings provided the launching ground.

The Atlas of ReUrbanism reveals that there are greater counts and greater proportions of jobs in small businesses and jobs in new businesses in older, mixed-use and commercial areas of cities. Across the 50 cities, there are 46 percent more jobs in small businesses and 33 percent more jobs in new businesses in areas with high Character Score, compared to areas with large, new buildings. In major cities like New York and Philadelphia, there are more than double the number of jobs in small businesses and new businesses in these areas. In all 50 cities explored in the Atlas, there are higher percentages of small businesses in high Character Score areas.

Economic development offices work hard to attract and retain major employers, and cities often negotiate with these large companies to relocate and remain in their jurisdiction. While this practice is well established and rooted in the need for major employment sectors, the incubators of the next big businesses—the older commercial districts receiving scant public assistance—must not be forgotten or overlooked.

Number of new jobs, high versus low character score areas



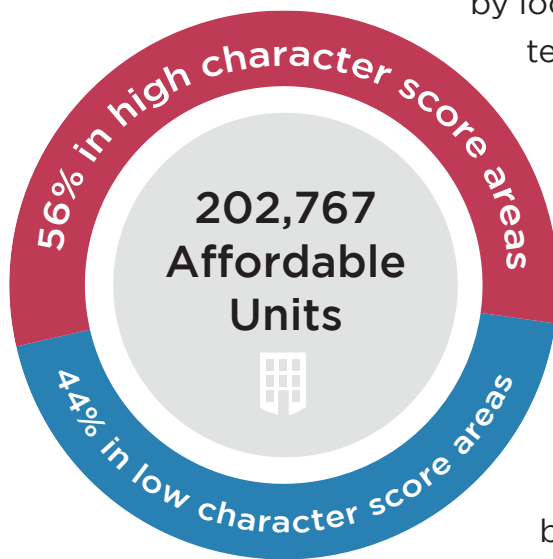
**Older commercial corridors are full of jobs in new businesses.** The Atlas shows that blocks of older, smaller, mixed-age buildings house more startups and entrepreneurs. There are nearly 380,000 jobs in businesses started the previous year, compared to about 285,000 in blocks dominated by new buildings.





# Cities that work for everyone

## **Affordable Units** *Atlas Cities*



**Old buildings provide a reservoir of affordable housing.** There are more units of affordable rental housing on blocks of older, smaller, mixed-age buildings, which is a critical untapped asset as housing prices mount in cities across the country.

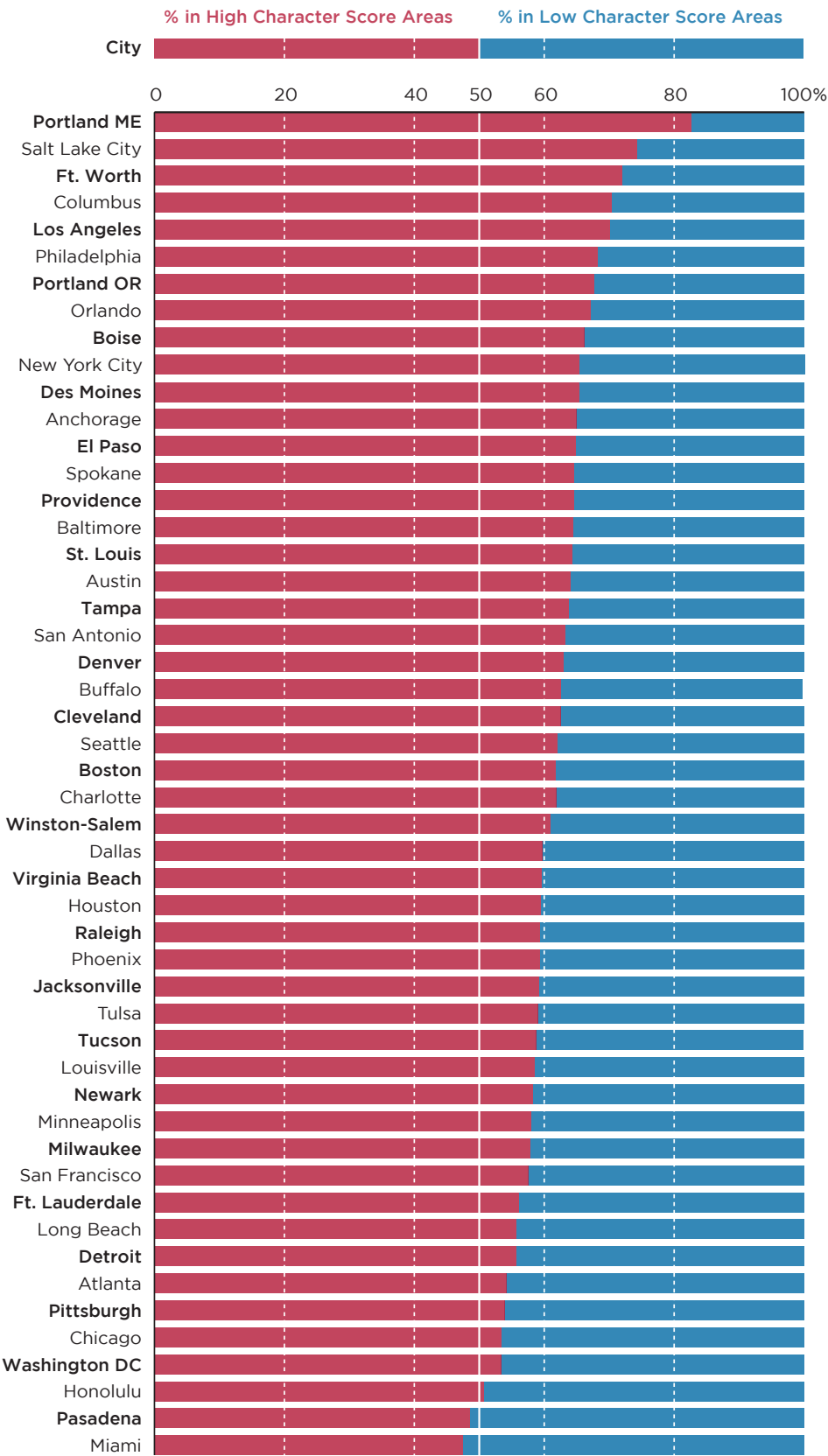
The Atlas of ReUrbanism clearly demonstrates the powerful role that older buildings and blocks play in providing affordable space for women and minority-owned businesses and for low and moderate income residents. These blocks are often owned by local property owners who have relationships with tenants. Qualifications for signing a lease can be fulfilled without substantial cash reserves or long lines of credit.

We find that there are about 108,000 women and minority-owned businesses on blocks with older, smaller, mixed-age buildings—40,000 more than the number found in areas characterized by large, new buildings. In cities from Fort Lauderdale to Boise, there are higher percentages of these businesses on older commercial corridors.

High Character Score neighborhoods also have higher percentages and counts of affordable units of rental housing. In many cities in the Atlas, there is twice the number of affordable housing units on blocks with older, smaller, mixed-age buildings. Economists and housing experts refer to a process of filtering, in which older stock serves as unsubsidized, “naturally” affordable housing. This report shows clear evidence of just how important older housing is.

**Older buildings and blocks play a powerful role in providing access to affordable commercial space and housing options for residents of every income.**

# Percent of women and minority owned enterprises, high versus low character score areas



**High Character Score areas support business owners of all backgrounds.** There are 60 percent more women and minority-owned businesses on blocks with older, smaller, mixed-age buildings. In many cities in the Atlas, the number is twice as high compared to areas with larger, newer developments.





# Hidden density, real diversity

## *People of Color Atlas Cities*



**Communities of color reside on blocks of older, smaller, mixed-age buildings.** 24.3 million Americans of color live in the 50 cities in the Atlas of ReUrbanism. 15.5 million of those Americans live in high Character Score areas—nearly 75 percent more than in areas with large, new buildings.

Density means more than just how many people live on a city block. In hot market cities, density is related to housing affordability, which has reached crisis levels in many cities and neighborhoods. In the 50 cities in the Atlas of ReUrbanism, there is greater population density and greater density of housing units on blocks with older, smaller, mixed-age buildings.

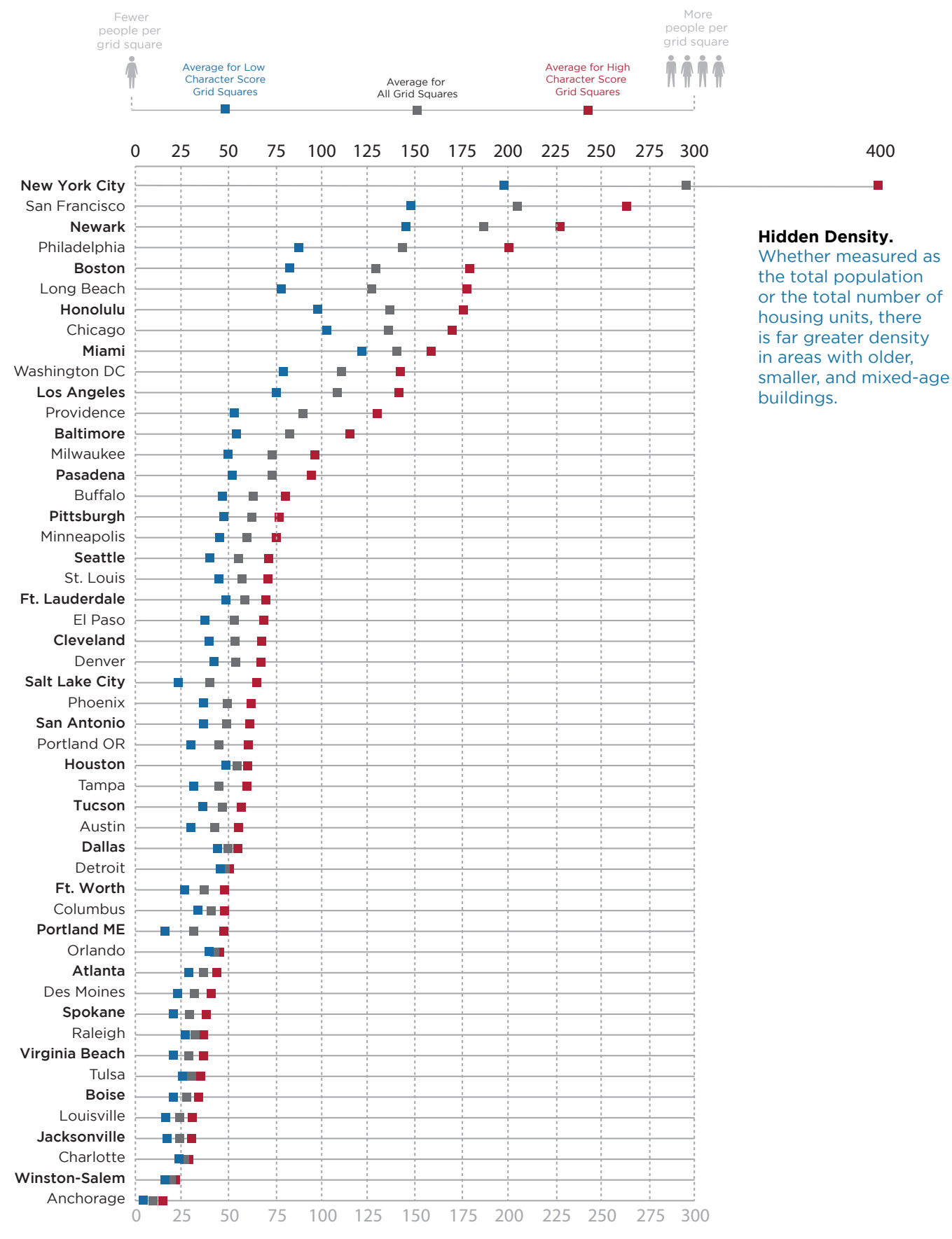
But density of people should be measured by more than simply where they live. Older buildings and blocks also house greater density of jobs in small businesses and jobs in new businesses. The adaptability of older and historic buildings supports diverse uses and attracts people through the day and night. Co-working spaces sit next door to new restaurants and longtime retailers.

Blocks of older, smaller, mixed-age buildings are also home to people of all backgrounds. Across the 50 cities in the Atlas, there are nearly 75 percent more people of color in these areas. Older neighborhoods are home to greater density and greater proportions of immigrants, people new to the city from other parts of the country, and same sex households.

**Older buildings, blocks, and neighborhoods provide space and opportunity for a diversity of residents and enterprises.**



# Population per grid square, high versus low character score areas





# Implications for Cities: Character Counts

The findings in this report point to the value of older buildings, blocks, and neighborhoods within the urban landscape. These are places where development has occurred incrementally, over many decades, resulting in a texture, richness, and distinctiveness that we call character. Blocks in high Character Score neighborhoods are lined with smaller, mixed-aged buildings with many older structures still in use. This variety of building vintages and types provides space for a diverse and dense mix of residents and uses. Local businesses thrive in these neighborhoods and the streets are full of activity, day and night.

**Lower East Side, New York**  
Made up of many small parts, these neighborhoods and blocks are more resilient and adaptable to changes in the economy or climate.

**PHOTO:** NATIONAL TRUST FOR HISTORIC PRESERVATION

There was a time when blocks like these were defined as blighted and even targeted for demolition through urban renewal. The Atlas of ReUrbanism provides the data to show



that we can now, finally, rewrite the formulas about what makes a successful city. Instead of fodder for the bulldozer, these blocks of older, smaller buildings should be seen as valuable assets and stewarded carefully. As urban leaders, policy makers, and advocates consider future directions for their cities, the Atlas of ReUrbanism suggests some key implications to consider in guiding changes to urban buildings and blocks.


### **Diversity: a foundation for more inclusive cities**

The Atlas of ReUrbanism shows strong correlations between the physical diversity of urban neighborhoods and the social, economic, and cultural diversity that these areas support. As Jane Jacobs famously observed in *The Death and Life of Great American Cities*, cities need old buildings, in part because they are generally more affordable for residents and businesses. The data in this report regarding affordability, small businesses, new businesses, and women and minority-owned businesses backs up Jacobs' assertion. Investments in smaller, older buildings require less initial capital, which makes it easier for new ideas and enterprises to get started and grow.

Older neighborhoods offer housing diversity as well. Each city has its own historic mix of housing choices, from row houses and triple-deckers to walk-ups and garden courts. This menu of options makes it possible for households of different sizes, ages, and incomes to make their homes in the same neighborhood. This report shows that these traits of affordability and variety in the building stock also support more ethnically and racially diverse populations. In contrast, zoning rules in many newer areas strictly limit building types and discourage social and economic diversity. As older neighborhoods evolve, managing change in ways that retain and build upon the historic mix of building stock will enhance future social and economic diversity as well.

### **Density: more than tall buildings**

The connections between density and sustainable development are well understood. Too often, however, density is associated only with building size and height. While some cities have areas



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## The Atlas of ReUrbanism connects the physical diversity of urban neighborhoods and the social, economic, and cultural diversity that these areas support.

where lots of people live in tall buildings, the densest neighborhoods overall are almost always characterized by blocks of older, smaller, low-rise buildings. Developed before the automobile claimed so much of our urban landscape, these areas have a hidden density that is clearly revealed by the data summarized in this report.

Not only are residential densities higher in areas with a mix of older, smaller buildings—so are jobs per square foot. There is a density of use in these areas that points to smarter ways to think about the physical assets of our cities. How can we use buildings in a more active way, day and night, seven days a week? How can we create a density of human activity that is the true hallmark of sustainable, vibrant cities? As the technology-enabled sharing economy grows, older neighborhoods provide examples and inspiration for how to get the most from our buildings and blocks.

### **Distinctiveness: a market advantage**

Much of the renewed interest in living and working in cities is focused on older and historic places. Dense, walkable, active, and architecturally rich neighborhoods are attracting new residents and investment. Older buildings with layers of history and flexible floorplans are attracting companies large and small. The ability of cities to attract and retain talented young workers is closely tied to the presence of character-rich places. The value of these areas points to the benefits of preservation advocacy and policies that support good design.

### **Adaptability: resilience in older neighborhoods**

Successful cities are constantly changing and the physical character of urban neighborhoods must change as well. But this can be an evolution, not a revolution. Our older neighborhoods show how buildings, blocks, and neighborhoods can absorb change gradually and incrementally. Made up of many similar, small parts, these neighborhoods can absorb economic or climate shocks and come back again, piece by piece. Adaptability is key to sustainable cities.

Around the country, cities are looking at ways to modernize codes, incentives, and planning policies to support adaptive use and strengthen older neighborhoods and commercial corridors. The Preservation Green Lab has worked with the Urban Land Institute to identify barriers to building reuse in Los Angeles, Philadelphia, Baltimore, Chicago, and Detroit, and to develop solutions that leverage the strengths of old buildings and blocks. In 2017, the National Trust will release reports on national best practices in supporting building reuse, bolstering density without demolition, and spotlighting opportunities for growth within existing buildings.

### **The Atlas of ReUrbanism: A resource for smart cities**

The Atlas of ReUrbanism is an accessible, comprehensive source for data and analysis about buildings in cities. It will be regularly updated and improved as new information becomes available. Currently, the Atlas contains information on 50 cities, including many of the nation's largest, with a geographic reach that extends from Anchorage to Miami and Honolulu to Portland, Maine. In the coming months, additional cities will be added, with a 2018 goal of including most municipalities with a population of 100,000 or more.

The Atlas will also be flexed to study important new questions. How many older and historic buildings across the country are threatened by climate change? How much vacant space is located within older buildings and how can we ensure that those buildings are leveraged for more new businesses, more affordable housing, and more of all the things that make cities great? How much additional development capacity could be realized if surface parking lots were replaced by housing, office space, and retail? How do older buildings support public health and how could they be leveraged further to support walkability, aging in place, and healthy living conditions? The Atlas database and mapping will be utilized to engage these questions and more.





# About the Atlas

## Project Leadership

- Stephanie K. Meeks, President and CEO
- David J. Brown, Executive Vice President and Chief Preservation Officer
- James Lindberg, Senior Director, Preservation Green Lab

## Atlas Project Team

- Michael Powe, Ph.D., Director of Research
- Margaret O'Neal, Senior Manager
- Reina Murray, GIS Analyst
- Carson Dietz Hartmann, Research Analyst
- Amy Qin, City Data Intern (2016)
- Samuel Zacher, City Data Intern (2015)

## Acknowledgements

The Atlas of ReUrbanism was assembled by an incredible team representing the full breadth of the National Trust. Priya Chhaya developed the Atlas website and patiently edited blog posts and web copy. Barb Pahl, Anthony Veerkamp, Sheri Freemuth, Kevin Sanada, Jeana Wiser, and Seri Worden conducted outreach with city officials and preservation partners in the five largest American cities and provided insights into the preservation forces at work in these municipalities. Sharee Williamson, Will Cook, Kevin Mu, and Todd Hirsch gave legal guidance and shared thoughts on the diversity of policies that touch preservation and building reuse. Germonique Ulmer, Virgil McDill, and Andy Grabel helped think through public affairs questions, and Shaw Sprague and Renée Kuhlman kept the team on track in delivering a tool that made sense from an advocacy perspective. The Preservation Green Lab benefitted enormously from the work of two exceptional City Data Interns from the University of Chicago: Samuel Zacher and Amy Qin.



We are grateful for their efforts.

Of course, the Atlas of ReUrbanism would not have been possible without data. The Atlas Project Team is grateful for the work and support from State Historic Preservation Officers and city officials across the country in tracking down historic designation data. Dun & Bradstreet very generously provided women and minority-owned business information. This project mined open data portals, census information, and detailed property characteristics. We will never know the names of the multitudes of people who work in these arenas, but this project leaned on their labor. Their efforts need to be acknowledged as such.

The Atlas of ReUrbanism was supported through the generous financial contributions of the Jessie Ball duPont Fund, The Kresge Foundation, and the Richard H. Driehaus Foundation.



## Notes on Methodology

To examine the relationship between the physical fabric of American cities and the performance of their buildings and blocks, the Preservation Green Lab developed a methodology that leverages GIS mapping and statistical analysis of publicly-available data. This methodology has been expanded upon and validated through the Partnership for Building Reuse reports with the Urban Land Institute, a 2016 research manuscript in the *Journal of the American Planning Association*, and a forthcoming report focused on the value of older, smaller buildings and mixed-vintage blocks in Tucson, Arizona.

The Atlas of ReUrbanism mapping employs a 200-meter-by-200-meter lattice grid overlaid over the geography of 50 U.S. cities. The grid allows the merging of data from varying geographies: parcel and building information from the local municipality and county; census block and tract information from the U.S. Census Bureau; and point-based data representing businesses, building permits, and other address-based data. Preservation Green Lab researchers apportion the various data points to “fit” the data to the grid and then map the entire city at the grid square-level of analysis. The grid square enables simplified statistical modeling across large geographies and easy visualization of spatial trends agnostic of the city’s unique geography and street network.

While many geographers, planners, and researchers often focus on the metropolitan areas surrounding cities, the Atlas of ReUrbanism focuses on the cities themselves. The maps and statistics displayed in this report and in the related maps online are drawn only to the city limits. This is appropriate as the municipal policies and historic development patterns of cities are our central interest.

## **About the National Trust for Historic Preservation**

The National Trust for Historic Preservation is a privately-funded nonprofit organization that works to save America's historic places for the next generation. We are committed to protecting America's rich cultural legacy and to helping build vibrant, sustainable communities that reflect our nation's diversity. We take direct action to save the places that matter while bringing the voices of the preservation movement to the forefront nationally.

## **About the Preservation Green Lab**

A department of the National Trust for Historic Preservation, the Preservation Green Lab strengthens the connections between historic preservation and sustainability. Founded in Seattle and now with additional staff in Denver, New York, and Washington, DC, the Preservation Green Lab conducts research and promotes policy innovation to support more diverse, equitable, and resilient communities across the country.



**National Trust *for***  
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The Watergate Office Building  
2600 Virginia Avenue NW Suite 1000  
Washington, DC 20037

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