

**COMPREHENSIVE ECONOMIC
DEVELOPMENT STRATEGY
(CEDs) FOR BROOKLYN**

THE NEXT 100 YEARS

As the sole organization focused on employers and economic development across all of Brooklyn’s diverse neighborhoods, we have built upon a century of advocating for Brooklyn’s economic vibrancy to craft a strategy that we hope will spark dialogue and collaboration so that we, as a community, can thoughtfully plan for the future of this vibrant and unique city. This strategy should be seen as a living document that should inspire more ideas, proposals, and refinement in the years to come. As we celebrate our centennial year, it is important not only to celebrate our many accomplishments over the past 100 years, but also to plan a groundbreaking agenda for the next 100 years that supports Brooklyn’s continued economic growth and ensures future growth is equitable, sustainable, and resilient.

We are excited to share this vision for the future with you. Brooklyn will continue to evolve into one of the country’s most dynamic urban economies, where employers, people, and neighborhoods thrive. Brooklyn will continue to grow in terms of population and economic expansion, emphasizing inclusive growth that creates new employment opportunities; better connects residents to economic opportunity at a diversity of entry points; and fosters vibrant and equitable neighborhoods that attract and retain the next generation of workers and residents. Brooklyn’s neighborhoods and economy will be prepared to withstand and bounce back resiliently from disruption to industry and environmental threats associated with climate change. Technology and innovation will continue to play an important role in Brooklyn’s growth, building upon a historic New York City legacy of leveraging technology to create economic opportunity, attract investment, improve quality of life, and connect people with economic opportunity.

To achieve this vision, this strategy establishes three central goals to guide Brooklyn’s future growth and serve Brooklyn’s employers, people, and neighborhoods—the foundation of our borough’s economy—for the next 100 years:

- Retain, attract, and futureproof Brooklyn based employers.
- Equip Brooklyn residents with the skills and resources to perform the jobs of the future.
- Enhance neighborhood vitality across the borough.

THE BROOKLYN RENAISSANCE

In recent years, Brooklyn has experienced an unprecedented period of growth with increases in private sector employment,

population growth that has outpaced the city, and record setting low levels of unemployment. Manufacturing, technology, hospitality, retail, and healthcare employment is growing and has helped to drive expansion. The Brooklyn hotel and restaurant scene is booming, attracting investment and visitor spending. Investments in major projects have created iconic open spaces and neighborhoods that have made Brooklyn one of the most recognizable and vibrant cities in the world.

CHALLENGES AHEAD: A CALL TO ACTION

While the rebirth of Brooklyn has been incredible, there are signs that growth is decelerating. Since 2014, net population growth has slowed. Although still increasing, rates of job growth are declining, and the cost of living is one of the highest in the nation. While the share of households with higher incomes has grown, nearly a quarter of Brooklyn residents live in entrenched geographical poverty and have not benefitted from Brooklyn’s renaissance. Despite significant jobs openings, a gap exists between employment opportunities and Brooklyn residents with the skills to fill them. Investment has largely been concentrated in a few centers instead of distributed across the borough, and both employers and residents are vulnerable to climate uncertainty and face serious resiliency challenges.

PAST SUCCESS IS NO PREDICTOR OF FUTURE SUCCESS: THINK BIG

Our current success owes a great deal to visionary leadership that thought beyond a year or two into the future. This strategy builds upon a legacy of CEDS documents that identified catalytic projects that define Brooklyn and its growth today. In particular, this publication looks to the CEDS that Borough President Howard Golden released in 1984 as a benchmark, which produced seminal projects that today contribute to Brooklyn’s vibrancy, including Metrotech Center, Atlantic Center Mall, Brooklyn Army Terminal revitalization, and the BAM Cultural Arts District. The investments and planning that took place in the early 80s set the stage for major, far-reaching developments like the Navy Yard, East New York Industrial Business Improvement District, and more. These projects were a result of innovative leadership, requiring a collective effort, and long-term planning. While we are still reaping the rewards of past work today, we must plan for and execute on the next wave of seminal projects that will futureproof the borough’s economy, deepen the equitable gains of economic growth into neighborhoods that have

entrenched poverty, and maintain Brooklyn’s status as a hub of innovation and modern employment.



To leverage these strengths and mitigate challenges and achieve our vision for future growth that is equitable, sustainable, and resilient, this strategy identifies strategic initiatives to achieve goals around employers, people, and neighborhoods. Together, they comprise four areas of strategic focus.

- **Employer Attraction and Retention:** By preparing existing employers for the future and attracting dynamic new employers, Brooklyn can usher in further prosperity, catalyze neighborhood investment, futureproof the borough’s economy, and provide more economic opportunity for Brooklyn residents.
- **Workforce Development:** By providing better workforce development, Brooklyn can futureproof its workers for the 21st century, connecting people with the employment opportunities that allow them to invest in themselves and their communities, while ensuring that employers can hire the skilled workers they need to thrive.
- **Infrastructure:** By building new infrastructure to increase mobility and connectivity, such as the BQX light rail line, employers and customers can tap into new services and markets. People can access jobs, schools, hospitals, and each other more rapidly and efficiently. New, resilient infrastructure can also help reduce vulnerability.
- **Housing and Neighborhood Vitality:** Increasing housing supply can help alleviate housing stresses on new and existing residents, ensuring that the borough continues to grow and remains accessible for existing residents. Investments in neighborhood vitality—like open space, cultural assets, retail amenities, and improved public services—can help improve quality of life, ensuring that Brooklyn attracts and retains the workers, residents, and employers of the future.

The Brooklyn Chamber was awarded a federal grant from the United States Economic Development Administration to

produce this strategy, which assesses the current economic state of the borough, identifies opportunities for growth, cites challenges that could constrain this great borough’s ability to leverage its full potential, and recommends strategies to ensure the borough’s continued and equitable growth to enable all of its residents and employers to thrive through the next century. These recommendations will serve as a framework for federal funding, as well as an important guidepost for conversations about the future of Brooklyn.

This plan was created with the input of hundreds of participants from both the public and private sectors. We would like to thank our many community partners, without whom, this report would not have been possible. These include our Brooklyn elected officials at the city, state and federal levels; city officials; government agencies; local employers; educational institutions; non-profit organizations; community development organizations; and members of the community. A detailed list of these thoughtful contributors can be found in the body of this strategy.

Sincerely,


ANDREW HOAN
President and CEO
THE BROOKLYN CHAMBER OF COMMERCE


DENISE ARBESU
Board Chair
THE BROOKLYN CHAMBER OF COMMERCE



Brooklyn Botanic Garden

ACKNOWLEDGEMENTS

This Comprehensive Economic Development Strategy (CEDS) has been developed by the Brooklyn Chamber of Commerce and its affiliates in accordance with requirements of the US Economic Development Administration. It was developed with the input of hundreds of key stakeholders and community representatives to identify key regional priorities and needs.

PREPARERS OF THE STRATEGY



Founded in 1918, the Brooklyn Chamber of Commerce promotes economic development across the borough and serves as an advocate for its member businesses. The Brooklyn Alliance, the economic development affiliate of the Chamber was awarded funds from the EDA to create this 2017 CEDS. Branded under the Chamber banner, the Brooklyn Alliance's programs are designed to leverage the Chamber's resources in order to promote economic, community, business, and workforce development. In 2017, Brooklyn Alliance Capital was incorporated as a 501(c)3 organization, the third affiliate of the Brooklyn Chamber and Brooklyn Alliance. Brooklyn Alliance Capital is a lending institution and provides loans to small businesses (specifically immigrant and minority owned). Brooklyn Alliance Capital is anticipated to become a certified Community Development Financial Institution in 2018. Together, activities of the Brooklyn Chamber, Brooklyn Alliance, and Brooklyn Alliance Capital work to promote Brooklyn to develop and sustain a strong business economy. In this strategy, all three organizations will be referred to henceforth as "the Chamber."



A Brooklyn CEDS Strategy Committee Meeting

COMMUNITY CONSULTATION

A diverse range of hundreds of key stakeholders and community representatives were consulted to solicit input on regional priorities and needs. This engagement included consultation with a Strategy Committee, comprised of government, private industry, educational, and community advocacy representatives; a Community Development Committee, comprised of business improvement districts and community and local development corporations; presentations to the public at the Borough Board and 18 Community Boards; consultation with the Brooklyn Chamber and Brooklyn Alliance Boards, representing Brooklyn interests from across the borough, and interviews and conversations with key stakeholders including elected representatives at the Borough, City, and State levels.

Strategy Committee

- Aaron Shiffman, Executive Director, Brooklyn Workforce Innovations
Alexandra Silversmith, Executive Director, Alliance for Coney Island
Andrew Kimball, President & CEO, Industry City
Ashley Cotton, Executive Vice President and Chief of Staff, Forest City Ratner Partners.
Bryan Grimaldi, Chief Operating Officer and General Counsel & **Dena Libner**, Senior Director, External Affairs & Public Partnerships, NYC & Co
Colvin Grannum, President, Bedford- Stuyvesant Restoration Corporation
Dave Lombino, Managing Director, External Affairs, Two Trees
David Ehrenberg, President & CEO, Brooklyn Navy Yard
David Woloch, Executive Vice President for External Affairs & **Brynna Tucker**, BKLYN Incubator Manager, Brooklyn Public Library
Eric Landau, President, Brooklyn Bridge Park Development Corporation
Denise Arbesu, Senior Vice President, Citi Commercial Bank
Gina Argento, President, Broadway Stages
Jessica Schumer, Interim Executive Director & **Ya-Ting Liu**, Executive Director, Friends of the BQX
Joni Yoswein, President, Yoswein NY
Karina Totah, Senior Advisor to the Chair, NYCHA
Lyle Sinclair, Downstate Economic Development Representative, National Grid
Lynn Kelly, Executive Director, New Yorkers for Parks
Marla Simpson, Executive Director, Brooklyn Community Services
Michelle Anderson, President & Steven Schechter, Executive Director, Government and External Affairs , CUNY Brooklyn College
Peter Ebright, Executive Vice President, New York Water Taxi
Regina Myer, President & CEO, Downtown Brooklyn Partnership
Reza Fakhari, Vice President for Continuing Education, Workforce Development & Strategic Community Partnerships, Kingsborough Community College
Richard Windram, Director of External and Government Affairs, Verizon
Sam Schwartz, Sam Schwartz Associates
Sayar Lonial, Executive Director, Marketing & Communications, NYU Tandon
Sid Davidoff, President & **Charles Capetanakis**, Partner, Davidoff, Hutter & Citron
Toby Moskovitz, President, Heritage Equity Partners
Winston Von Engel, Director, Brooklyn Office, Department of City Planning

Community Development Committee

- Ben Margolis, Southwest Brooklyn Industrial Development Corporation
Bill Wilkens, East Brooklyn BID & ENY LDC
Charlotte Laffler, MetroTech BID
Daniel Murphy, Pitkin Avenue BID
Evelyn Ortiz, Opportunities for a Better Tomorrow
Homer Hill & **Natalie Mendell**, Grand Street BID
Kenneth Mbonu, Flatbush-Nostrand Junction Bid
Leah Archibald, Evergreen
Meredith Phillips Almeida, Myrtle Avenue Brooklyn Partnership BID
Nat Rubin, Atlantic Avenue BID

Elected and Appointed Officials

FEDERAL

- Edward Hummel, Economic Development Representative for NY & NJ, US Economic Development Administration
Beth Goldberg, District Director of the US Small Business Administration's New York District Office
Office of US Senator Charles Schumer
Office of US Senator Kirsten Gillibrand,
Office of Congresswoman Nydia Velazquez, US House of Representatives, 7th District
Office of Congressman Hakeem Jeffries, US House of Representatives, 8th District
Office of Congressman Yvette Clark, US House of Representatives, 9th District
Office of Congressman Jerrold Nadler, US House of Representatives, 10th District
Office of Congressman Daniel Donovan, US House of Representatives, 11th District
Office of Congresswoman Carolyn Maloney, US House of Representatives, 12th District

NEW YORK STATE

- Office of Governor, Andrew Cuomo
Office of Attorney General, Eric Schneiderman
Office of Comptroller, Thomas P. DiNapoli
Empire State Development, Regional Office New York City
Office of New York State Senator:
Simcha Felder, 17th District
Martin Malave Dilan, 18th District
Roxanne Persaud, 19th District
Jesse Hamilton, 20th District
Kevin S. Parker, 21st District
Martin Golden, 22nd District
Diane Savino, 23rd District
Valmanette Montgomery, 25th District
Brian Kavanaugh, 26th District

Office of New York State Assembly Member:

- Helene Weinstein, 41st District
Rodneyse Bichotte, 42nd District
Diana Richardson, 43rd District
Robert Carroll, 44th District
Steven Cymbrowitz, 45th District
Pamela Harris, 46th District
William Colton, 47th District
Dov Hikind, 48th District
Peter Abbate, 49th District
Joseph Lentol, 50th District
Felix Ortiz, 51st District
Jo Anne Simon, 52nd District
Maritza Davila, 53rd District
Erik Dilan, 54th District
Latrice Walker, 55th District
Tremaine Wright, 56th District
Walter T. Mosley, 57th District
N. Nick Perry, 58th District
Jaime Williams, 59th District
Charles Barron 60th District
Nicole Malliotakis, 64th District

NEW YORK CITY

- Deputy Mayor of Economic Development & Housing Alicia Glen
Office of Public Advocate Letitia James
Office of Comptroller Scott Stringer
Office of Small Business Services
Commissioner Gregg Bishop
Office of Economic Development Corporation President James Patchett
Office of Brooklyn Borough President Eric Adams
Office of New York City Councilmember:
Stephen Levin, 33rd District
Antonio Reynoso, 34th District
Laurie Cumbo, 35th District
Robert Cornegy, 36th District
Rafael Espinal, 37th District
Carlos Menchaca, 38th District
Brad Lander, 39th District
Mathieu Eugene, 40th District
Darlene Mealy, 41st District

- Inez Barron, 42nd District
Vincent Gentile, 43rd District
David Greenfield, 44th District
Jumaane Williams, 45th District
Alan Maisel, 46th District
Mark Treyger, 47th District
Chaim Deutsch, 48th District
Brooklyn Community Board:
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18.

We would like to express gratitude to all of the elected representatives who represent Brooklyn and continue to contribute to Brooklyn's economic future, but were not able to participate in this study.

Brooklyn Chamber of Commerce, Inc. Board of Directors

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President: Andrew Hoan, Brooklyn Chamber of Commerce
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Secretary: Susan Doban, Doban Architecture

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Elizabeth Segal, AT&T
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Dominick Stanzione, Brookdale Hospital and Medical Center
Kevin M. Thompson, ExxonMobil
Jed Walentas, Two Trees Management Co.
Richard Windram, Verizon Communications
Anthony E. Woods, Empire BlueCross BlueShield Amerigroup

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Louie Liu, Brooklyn Community Improvement Association
Juan Perez, Highbrid Media

Joseph Pellegrino, TD Bank
Craig J. Ratigan, Investors Bank
Andrew Walcott, Fusion East Restaurant



The Williamsburg Bridge

Consultant Team

HR&A ADVISORS is a top real estate and economic development consulting firm. The firm has provided strategic advisory services for clients in the public, private, and non-profit sectors to solve some of the most complex challenges of urban development. HR&A cares about improving the quality of urban life, and the firm is increasingly focused on the challenges of inclusivity, infrastructure, and technological innovation in cities as it advances public-private development projects that improve economic, environmental, and social outcomes. HR&A's consultants include former public servants, real estate developers, urban planners, city officials, activists, and economists. The firm approaches assignments from diverse perspectives, enabling critical analyses that result in projects that meet our clients' economic and policy objectives. HR&A worked closely with the Brooklyn Chamber of Commerce to research, develop, and produce this strategy.

Visualization support was provided by **Bjarke Ingels Group**, led by Emily Bauer. For this strategy, BIG studied urban design and created a series of maps illustrating existing conditions and potential strategy application areas.



EXECUTIVE SUMMARY

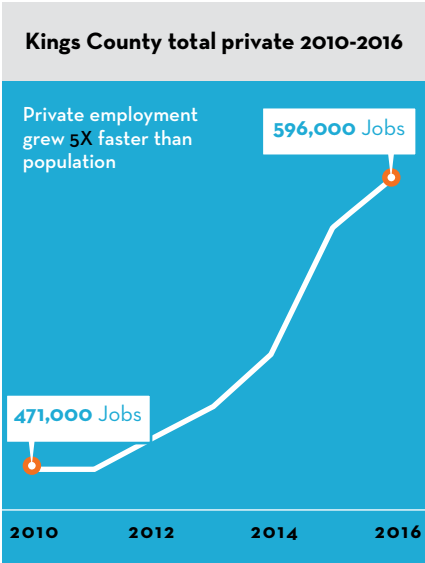
This Comprehensive Economic Development Strategy identifies strategic initiatives that can achieve a vision for a future Brooklyn where continued economic growth is equitable, sustainable, and resilient.

OPPORTUNITIES & CHALLENGES

Despite Brooklyn’s many strengths, the borough faces some challenges to future growth and prosperity. Brooklyn has benefited from overall growth and is poised for continued growth. However, disparities across the borough are constraining Brooklyn’s potential for equitable, sustainable, and resilient economic growth for all business and residents and could constrain future expansion.

These strengths and weaknesses suggest that a series of opportune interventions could create new economic opportunity for Brooklyn, as well as mitigate challenges to ensure long-term economic health that is equitable for all residents.

Brooklyn’s current economic status and dynamism can be assessed by evaluating current trends across the three key components of a growing, inclusive economy: [Employers, People, and Neighborhoods](#):



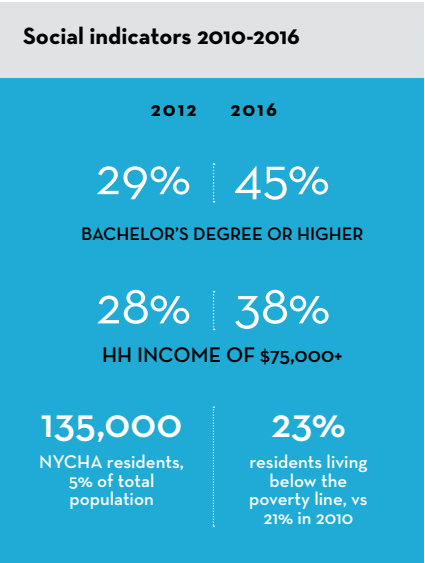
Source: EMSI Data, 2010-2016

EMPLOYERS | Brooklyn has experienced private industry growth that is outpacing population growth, but this new activity is concentrated in a few centers and faces an onslaught of challenges. Despite this recent growth, much of it has been in low-wage, unskilled jobs that do not provide families with wages high enough for long-term prosperity and may not withstand future disruption.



Source: American Community Survey

PEOPLE | Brooklyn has experienced tremendous population growth that has been a driver of economic growth, but this growth is slowing. While the share of households with higher incomes has grown, poverty has remained constant and is concentrated geographically. Despite significant jobs openings, a large gap exists between skills and openings, preventing Brooklyn residents from acquiring higher wage jobs.



Source: American Community Survey

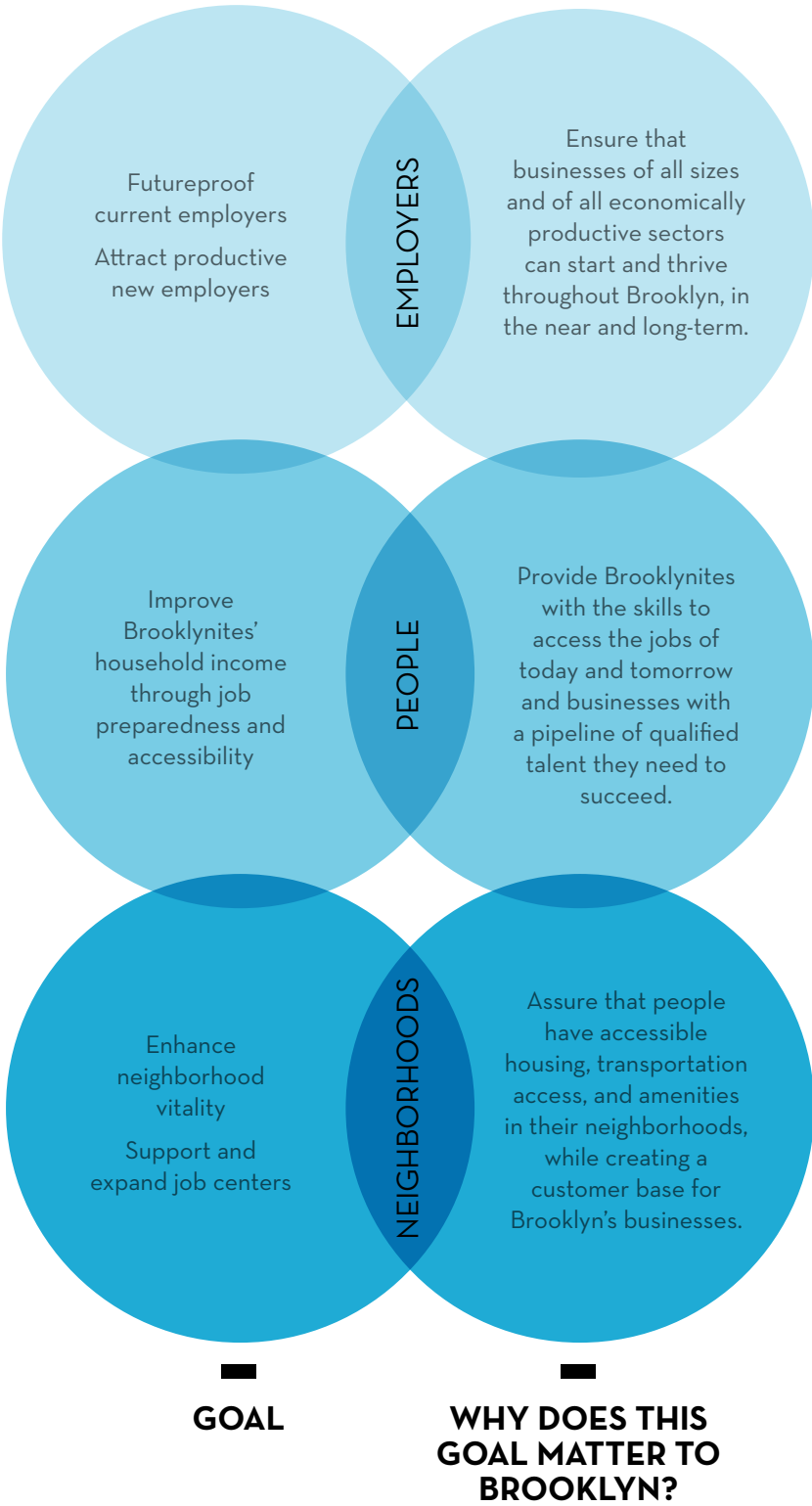
NEIGHBORHOODS | Long commute times, lack of connectivity, and challenging real estate conditions are also constraining equitable growth, constraining Brooklyn’s ability to attract and retain the workers of the future. Brooklyn’s infrastructure needs to be futureproofed to ensure continued growth amidst environmental, technological, and societal change.

VISION

What is the vision for Brooklyn’s future? Brooklyn will continue to evolve into one of the country’s most dynamic urban economies, where employers, people, and neighborhoods thrive. Brooklyn will continue to grow in terms of population and economic expansion, emphasizing inclusive growth that creates new employment opportunities; better connects residents to economic opportunity at a diversity of entry points; and fosters vibrant and equitable neighborhoods that attract and retain the next generation of workers and residents. Brooklyn’s neighborhoods and economy will be prepared to withstand and bounce back resiliently from disruption to industry and environmental threats associated with climate change.

GOALS

In order to achieve this vision, this Strategy identifies goals consistent with the key challenges outlined in the Diagnosis of Opportunities and Challenges section. Each goal is multifaceted, addressing challenges that benefit Brooklyn’s employers, people, and neighborhoods, and will guide the implementation of proposed investments and initiatives in the following section.



STRATEGIC INITIATIVES
AND TACTICS

This CEDS outlines a variety of actions and investments to advance these strategic goals. A combination of targeted investments, policy changes, and new programs can lay the foundation for both economic growth in the short term as well as build the economic resilience of Brooklyn for the long term.

Employer Attraction and Retention

- Attract and retain employers that provide Brooklyn residents with employment opportunities and contribute to regional economic growth.
- + Unlock new commercial development and office space.
 - + Leverage public assets to support new commercial development
 - + Reduce costs of doing business with new tools

Workforce Development

- Match residents’ skill sets with the industries of the future to increase the number of Brooklyn residents with quality jobs.
- + Create higher education and workforce development programs that match resident skill sets with the industries of the future and jobs with diverse entry points
 - + Expand educational infrastructure

Infrastructure

- Build upon existing system strengths with targeted infrastructure investments to create new opportunity areas for growth and serve the job centers of the future.
- + Implement smart transportation technology to improve connectivity around the borough
 - + Expand transit infrastructure to connect Brooklyn talent with economic opportunity and move goods
 - + Leverage connectivity to expand economic opportunity to all.
 - + Strengthen investments and assets by ensuring resiliency to climate-related events

Housing and Neighborhood Quality

- Enhance neighborhood vitality and quality of life to retain existing residents and workers and attract the residents and workers of tomorrow.
- + Improve delivery of municipal services through the deployment of place-based “smart city” technology
 - + Increase density to create new housing opportunities
 - + Preserve and strengthen retail corridors
 - + Create new open space in underserved neighborhoods
 - + Foster cultural innovation across Brooklyn

PROJECT CLUSTERS

Where could strategic initiatives and projects identified by this CEDS be realized? Strategic initiatives can be realized boroughwide or focused in areas where they are likely to create maximum impact, strengthening or catalyzing existing or future nodes of activity and vibrancy.

Potential project clusters that could be illustrative of future states for Brooklyn are centered around three key networks that help to define movement through the borough and serve as its key landmarks:

ENHANCED FABRIC: BOROUGH-WIDE

Envisioning a Future Brooklyn Strategic recommendations are applied boroughwide to enhance the economic, physical, and community fabric of the borough and support growth and vitality everywhere.

EXPANDED COMMERCIAL CENTERS

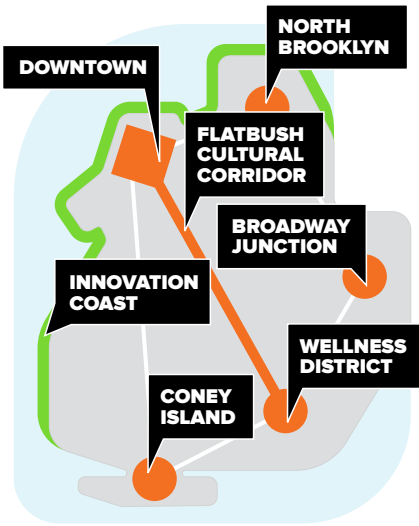
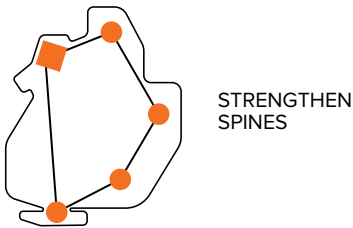
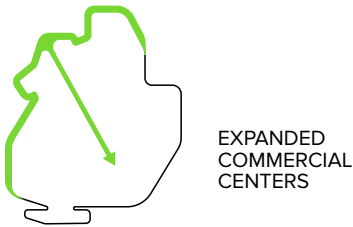
Envisioning the Future of Brooklyn’s Commercial Centers A network of expanded commercial centers forms a ring around Downtown Brooklyn, expanding activity and creating new economic opportunity for residents and neighborhood across the borough.

Downtown Brooklyn: Brooklyn’s primary commercial center is strengthened and sustained through the expansion of the downtown core and creation of more office space. ● **Central Brooklyn Wellness District:** A wellness district that leverages Central Brooklyn’s existing concentration of hospitals and educational facilities can serve as a precedent for new healthcare delivery approaches and create accessible new employment opportunities. ● **North Brooklyn:** Unlocking new commercial space in North Brooklyn’s industrial zones can attract new investment and support the creation of more integrated neighborhoods to expand quality of life and access to economic opportunity. ● **Broadway Junction:** Broadway Junction is repositioned towards mixed education and mixed commercial uses to create new workforce delivery systems and a commercial center that foster economic opportunity for all. ● **Coney Island:** New hospitality/tourism and retail anchors on open development sites in south Brooklyn could foster additional entertainment and tourism growth that establishes Coney Island as a hospitality and entertainment destination.

STRENGTHENED SPINES

Envisioning the Future of Brooklyn’s historic spines. Brooklyn’s spines are reinforced, creating circulation and integrating the neighborhoods they touch.

The Innovation Coast: Brooklyn’s East River waterfront from Greenpoint to Fort Hamilton is a home for innovation, strengthened with new commercial space and integrated with the surrounding neighborhoods by a new linear park under and over the BQE. ● **The Flatbush Cultural Corridor:** Investments in a Flatbush Avenue corridor that extends from a strengthened Downtown Brooklyn, through the BAM Cultural District, and to Brooklyn College creates a network of commercial and

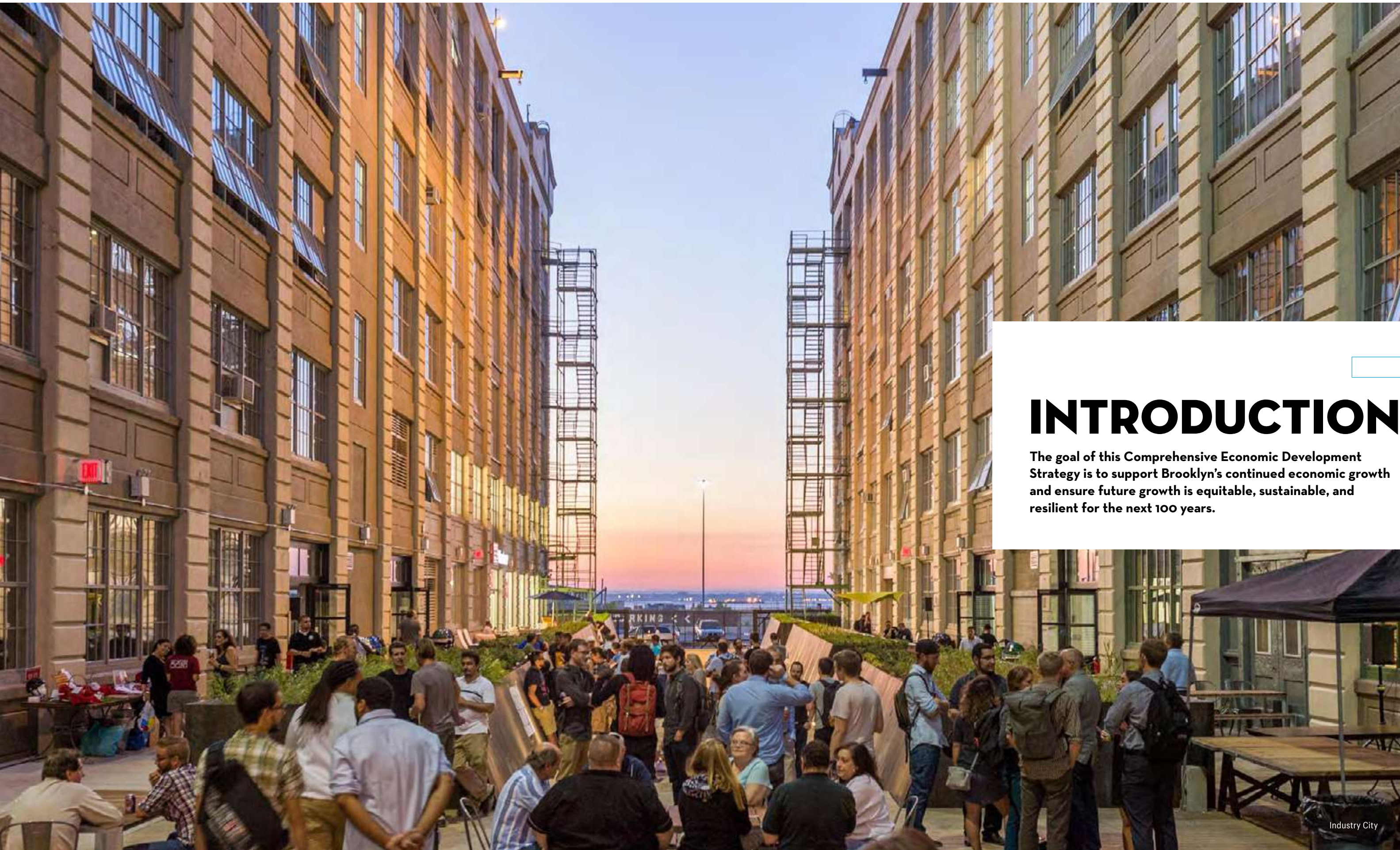




Broadway Junction

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INTRODUCTION

The goal of this Comprehensive Economic Development Strategy is to support Brooklyn’s continued economic growth and ensure future growth is equitable, sustainable, and resilient for the next 100 years.

CEDS PROCESS

A Comprehensive Economic Development Strategy (CEDS) is the result of a regionally-owned planning process designed to build capacity and guide the economic prosperity and resiliency of an area or region. It is a key component in establishing and maintaining a robust economic ecosystem by helping to build regional capacity (through hard and soft infrastructure) that contributes to individual, firm, and community success. The CEDS provides a vehicle for individuals, organizations, local governments, institutes of learning, and private industry to engage in a meaningful conversation and debate about what capacity building efforts would best serve economic development in the region.

This strategy is structured to satisfy the US Economic Development Administration (EDA)’s requirement for a Comprehensive Economic Development Strategy (CEDS) for Kings County, New York (“Brooklyn”). It builds on prior CEDS developed by the Brooklyn Economic Development Corporation in 1984 and 1999, as well as updates in 2001, 2002, and 2006. This 2017 CEDS shall serve as a framework the EDA can use to select Brooklyn-based economic development projects for federal funding.

This CEDS employed a six-month economic development planning process. This CEDS began with a vision of a growing, sustainable, and equitable Brooklyn. In the preparation of this strategy, framing questions were employed to guide the research into the key challenges and opportunities facing Brooklyn’s businesses, workers, and neighborhoods. Through data collection, secondary research, interviews, and engagement with numerous stakeholders, the CEDS identified several goals, as well as strategies and tactics that can be used to achieve them.

Past CEDS have highlighted projects that have proven transformative for Brooklyn, including the creation of commercial centers in Downtown Brooklyn and Metrotech Center, and critical manufacturing and industrial infrastructure in East New York and along the Brooklyn Waterfront. Similarly, this CEDS looks toward the future, and identifies aspirational strategic goals and initiatives grounded in pragmatic analysis and stakeholder input to build upon Brooklyn’s strengths and ensure that economic growth is felt throughout the borough.

BROOKLYN OVERVIEW

Our Vision

The goal of this CEDS is to support Brooklyn's continued economic growth and ensure future growth is equitable, sustainable, and resilient for the next 100 years. With a series of targeted programmatic and capital investments, Brooklyn can attract and retain the next generation of businesses and talent and ensure that all residents and neighborhoods partake in the borough's growth.

To achieve this vision, this strategy identifies the following goals for Brooklyn's future growth:

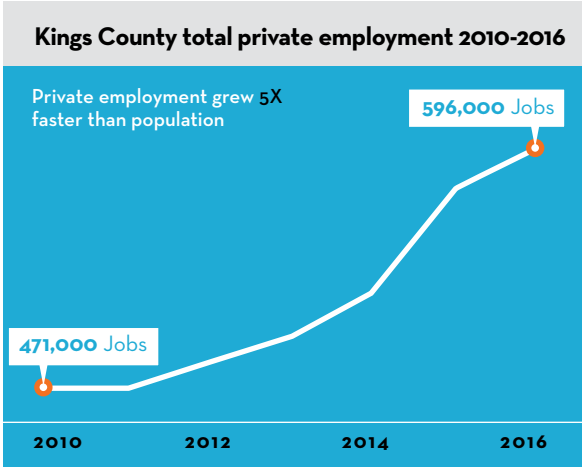
- Attract, retain and futureproof Brooklyn based employers
- Equip Brooklyn residents with the skills and resources to perform the jobs of today and tomorrow.
- Enhance neighborhood vitality across the borough

This will be accomplished through strategic initiatives centered on employer attraction and retention, workforce development, infrastructure investments, and housing and neighborhood vibrancy.

Futureproofed investments in its infrastructure, workforce, and built environment will allow Brooklyn to be well prepared to address future shocks and stresses that result from climate, technological, and other changes.

How can Brooklyn futureproof its key industries and be home to new and growing industries?

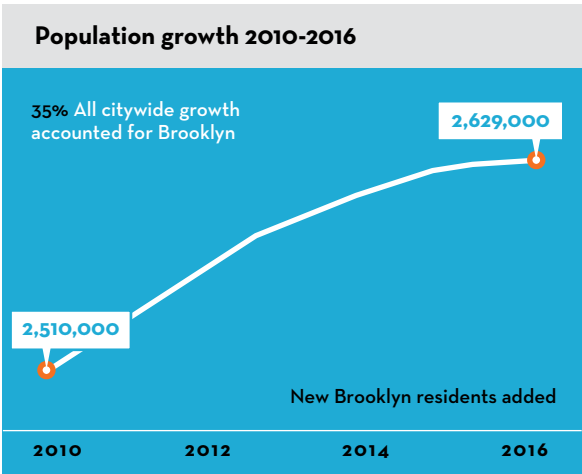
Source: EMSI Data, 2010-2016



Brooklyn has benefited from significant economic growth since 2010, with private industry employment growing five times faster than the population. The rate of this growth is higher than citywide growth, including in high quality job sectors such as the information, education, and healthcare industries. Other industries, such as food manufacturing, and technology startups are also exhibiting high growth. Nonetheless slowing growth in large industries such as healthcare and retail, persistent high costs of doing business, and declining inventories of commercial space could preclude continued growth. Preserving existing high-paying industries and attracting businesses that offer high-quality jobs for residents will allow Brooklyn to continue growing given current macroeconomic and technological trends.

How can Brooklyn attract and retain its future workers and residents?

Source: American Community Survey



Brooklyn's residential population has grown steadily since 2010, growing at a faster rate than citywide growth and accounting for over one third of the city's entire population growth during that time. However, growth is slowing amidst soaring housing costs and limited supply of affordable housing across the borough. Further, existing Brooklyn residents may not be fully equipped for the jobs of the 21st century. Despite the borough's wealth of higher education resources that foster innovation and critical thinking alongside workforce training programs, a large gap of almost 60,000 job openings remains unmet by Brooklyn residents. For Brooklyn to continue to grow and attract the workers of the future, the Borough must address neighborhood quality and make housing more affordable, while grooming existing residents with the skills they need to access high-wage jobs.

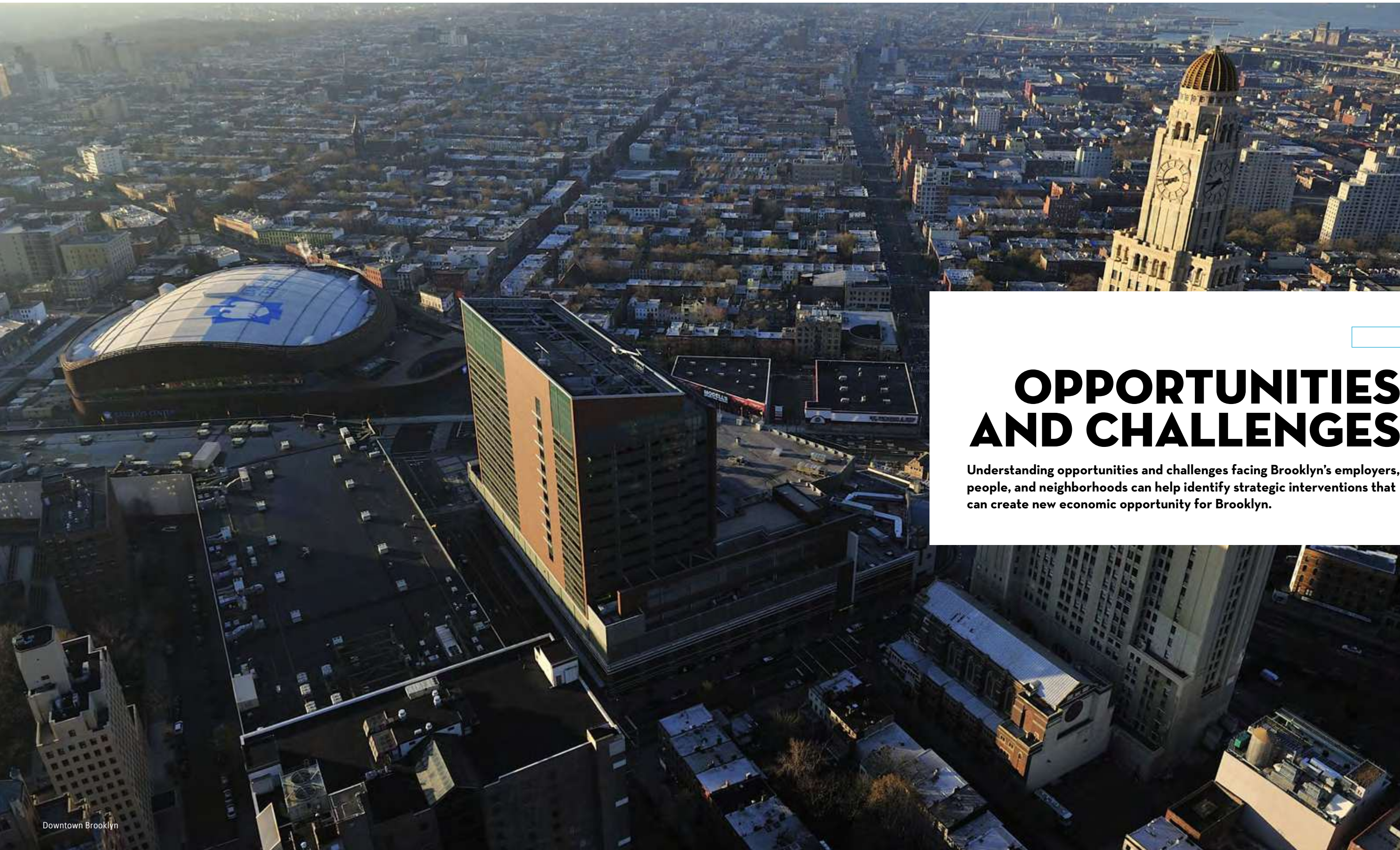
How can equitable, sustainable, and resilient economic growth be ensured for Brooklyn's next 100 years?

How can Brooklyn's economic growth extend across the borough?

Source: American Community Survey



Brooklynites are becoming wealthier and better educated, but this growth has not occurred evenly. Poverty levels have remained constant, and many living in poor neighborhoods have inadequate access to higher paying jobs. Large swaths of Brooklyn neighborhoods are underserved by public transit, and major employment centers are clustered by transit hubs. Broadband connectivity is distributed unevenly across the borough limiting location options for business and access to information for households. To realize Brooklyn's vast potential, initiatives to retain and attract businesses, train workers, or increase connectivity and mobility must be spread throughout the borough's neighborhoods. New investments must also be built to withstand climate related shocks, given Brooklyn's current vulnerabilities.



Downtown Brooklyn

OPPORTUNITIES AND CHALLENGES

Understanding opportunities and challenges facing Brooklyn’s employers, people, and neighborhoods can help identify strategic interventions that can create new economic opportunity for Brooklyn.

BROOKLYN AND ITS NEIGHBORHOODS

Source: Department of City Planning



BROOKLYN’S ECONOMY

Despite Brooklyn’s many strengths, the borough faces challenges to future growth and prosperity. Brooklyn has benefited from overall growth and is poised for continued growth. However, disparities across the borough are constraining Brooklyn’s potential for equitable, sustainable, and resilient economic growth for all business and residents and could constrain future growth.

These strengths and weaknesses suggest a series of opportune interventions that could create new economic opportunity for Brooklyn, as well as mitigate challenges to ensure long-term economic health that is equitable for all residents.

Brooklyn’s current economic status and dynamism can be assessed by evaluating current trends across the three key components of a growing, inclusive economy:

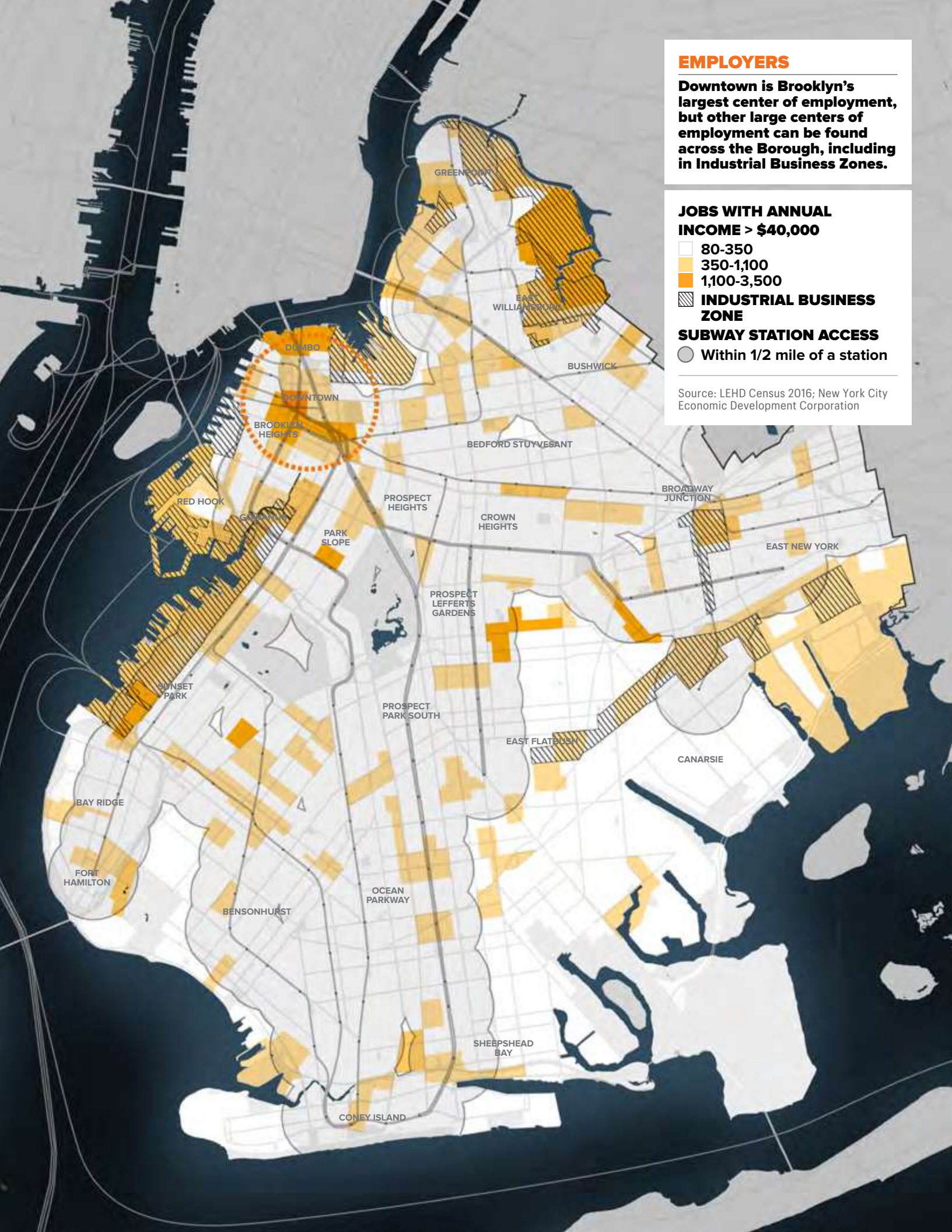
EMPLOYERS | Brooklyn has experienced private industry growth that is outpacing population growth, but this new activity is concentrated in a few centers and faces an onslaught of challenges. Despite the opportunity, only 34% of Brooklyn residents also work in Brooklyn—a share of residents more akin to the share of residents working locally in more residential Queens (28%) and Staten Island (25%) than to the share of Manhattan residents living and working in Manhattan (73%). Much of the borough’s recent employment growth has been in low-wage, unskilled jobs that do not provide families with wages high enough for long-term prosperity and may not withstand future disruption.

PEOPLE | Brooklyn has experienced tremendous population growth that has been a driver of economic growth, but this growth is slowing. While the share of households with higher incomes has grown, poverty has remained constant and is concentrated geographically. Despite significant jobs openings, a large gap exists between skills and openings, preventing Brooklyn residents from acquiring higher wage jobs.

NEIGHBORHOODS | Long commute times, lack of connectivity, and challenging real estate conditions are also constraining equitable growth, constraining Brooklyn’s ability to attract and retain the workers of the future. Brooklyn’s infrastructure needs to be futureproofed to ensure continued growth amidst environmental, technological, and societal change.



EMPLOYERS



EMPLOYERS

Downtown is Brooklyn's largest center of employment, but other large centers of employment can be found across the Borough, including in Industrial Business Zones.

JOB'S WITH ANNUAL INCOME > \$40,000

- 80-350
- 350-1,100
- 1,100-3,500
- INDUSTRIAL BUSINESS ZONE

SUBWAY STATION ACCESS

- Within 1/2 mile of a station

Source: LEHD Census 2016; New York City Economic Development Corporation

EMPLOYERS: STRENGTHS

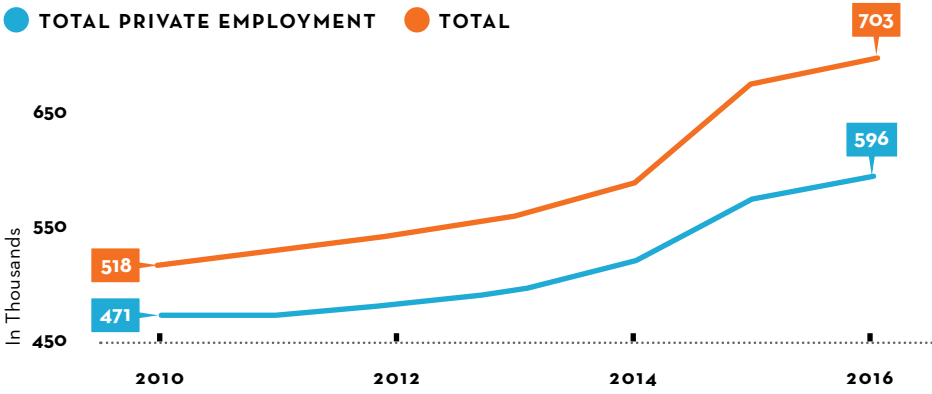
Private sector jobs in Brooklyn have grown five times faster than its population since 2010. This growth has diversified Brooklyn's economy and demonstrated Brooklyn's economic competitiveness citywide. As a result of continued job growth, Brooklyn has grown in importance as a job center. Brooklyn employment has returned to pre-Great Recession levels, accompanied by a diversification of the job base, and a rate of job growth that is higher in Brooklyn than citywide.

Brooklyn employment is dominated by healthcare, government, retail, and accommodation, with a small but growing share of knowledge industry jobs. Growth in these industries has been strong, growing at a faster rate than citywide. The health care and social assistance industry, retail trade, and accommodation and food services comprise the largest shares of the borough's private employment, while the tech and knowledge industries and new forms of manufacturing comprise smaller but important, expanding, and relatively high wage growth.

HEALTHCARE

Across the borough healthcare and social services employ almost 200,000 people, providing stable jobs at all levels of educational attainment. The health care and social assistance industry grew by 23% and 36,000 jobs between 2010 and 2016. These jobs offer a diversity of entry points, with over 75% of employment in the industry not requiring a bachelor's degree.

KINGS COUNTY EMPLOYMENT TOTAL EMPLOYMENT 2010-2016



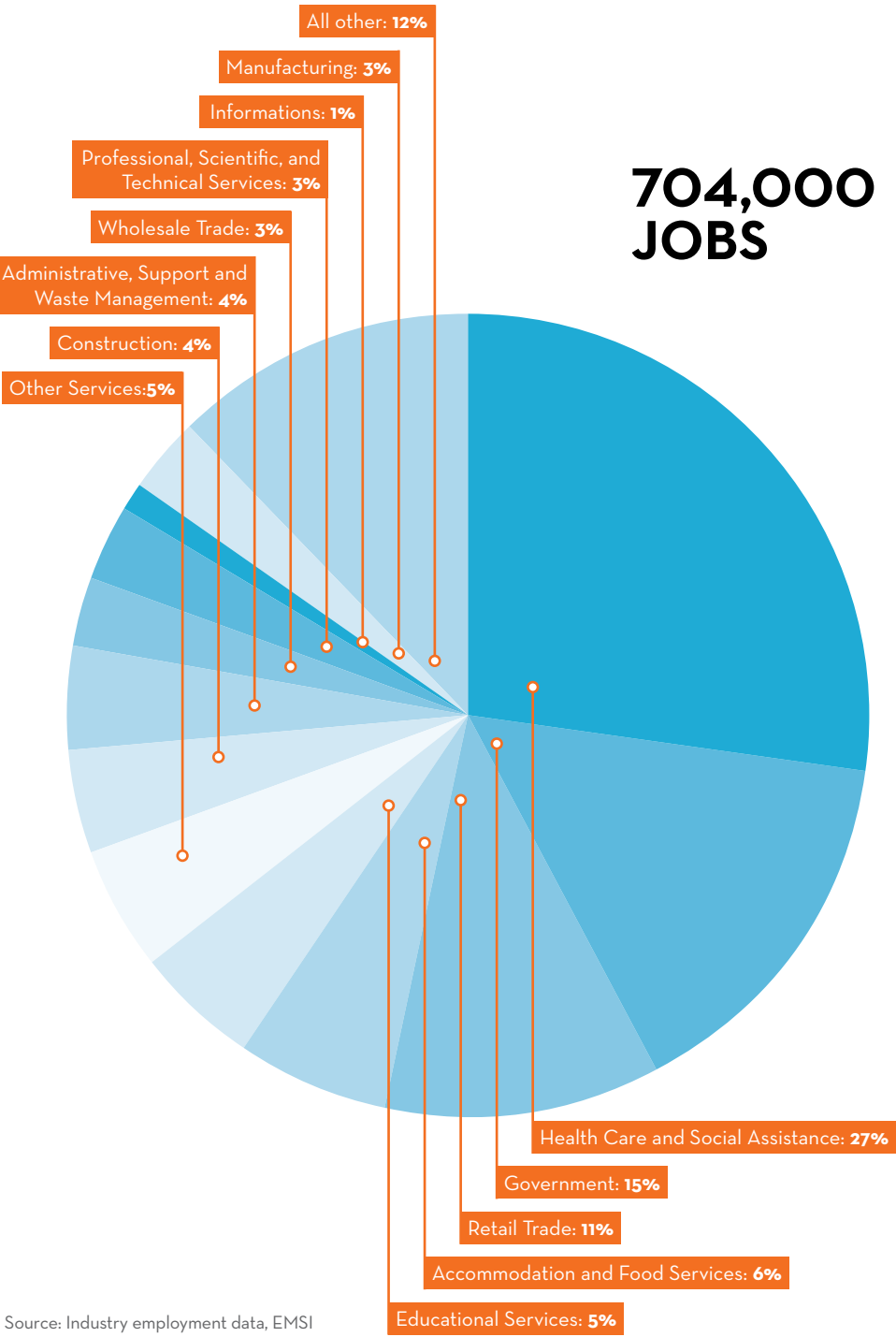
Source: Industry employment data, EMSI

A report by the Brooklyn Chamber of Commerce found that the growth in health care jobs follows recent local and national trends aided by passage of the Patient Protection and Affordable Care Act (ACA) as national legislation and the New York State Design System Reform Incentive Program (DSRIP). Both ACA and DSRIP are incentivizing the creation of community-based health care alternatives as lower cost options to hospital or institutional care, driving large hiring increases in the ambulatory care sector, which includes home care. Similarly, in the past few years, the number of walk-in clinics in Brooklyn has grown exponentially. According to a February 2015 report by the United Hospital Fund, there are 103 urgent care centers in New York City, including CityMD, Brooklyn Urgent Care of Boro Park, Quality First Urgent Care, and Statcare Urgent & Walk-in Medical Care, all of which have locations in Brooklyn, and another 55 that are planned to open in the future. The Mayor’s New York Works plan has also identified healthcare and the life sciences as a key growth area, and has pledged to grow the sector by an additional 15,000 jobs, including through the investment of \$8.5 million towards community health centers that could serve Brooklyn’s underserved communities.

RETAIL

Retail is a critical industry employing 74,000 people, attracting new spending and providing amenities to residents across the borough. The retail trade added 15,200 jobs between 2010 – 2016, growing by 26% across the borough. Retail industry

BROOKLYN EMPLOYMENT 2016



WHAT ARE THE JOBS IN BROOKLYN'S KEY INDUSTRIES?

Industry and Average Earnings	Key Occupations Employed in this Industry
Healthcare and Social Assistance \$49,000	Nursing, psychiatric, and home health aides (28%) Personal care aides (16%) Registered nurses (7%) Healthcare support operations (3%) Physicians and surgeons (3%)
Government \$95,500	Teachers (18%) Other education and training (8%) Postsecondary Teachers (2%) Health practitioners (5%) Military (4%)
Retail Trade \$37,000	Retail salespersons (30%) Cashiers (18%) Stock clerks and order fillers (10%) Sales workers supervisors (6%) Laborers and material movers (3%)
Accommodation and Food Services \$27,500	Fast food and counter workers (22%) Waiters and waitresses (19%) Cooks (15%) Food prep and serving supervisors (8%) Food prep workers (6%) Bartenders (5%)
Professional, Scientific, & Technical Services \$73,000	Accountants and auditors (10%) Lawyers and clerks (9%) Administrative staff (7%) Software developers and programmers (5%) Designers (4%)
Information \$100,000	Computer occupations (15%) Electronic and equipment installers and repairers (15%) Sales representative (7%) Entertainment and performance workers (6%) Media and communications workers (6%)
Manufacturing \$52,500	Production workers (i.e. fabrication & assembly workers) (46%) Administrative support operations (12%) Transportation and material moving workers (8%) Managers (7%) Sales workers (7%)
All Other \$56,000	All other occupations

Source: Industry and occupational data, EMSI

activity generated over \$3.2 billion in spending in 2016 alone. Some of this growth may be attributed to densification associated with population growth and an influx of new residential development, with retail growing to meet new demand. As a reflection of this, employment at grocery stores alone drove one quarter of all new retail employment between 2010 and 2016, adding 3,900 new jobs, while health and personal care stores and other general merchandise accounted for almost one fifth of all growth, adding 2,800 jobs during the same period. Pipeline development suggests further growth. Downtown Brooklyn is expected to add 5,000 apartments by 2022, and the Greenpoint neighborhood is expected add 10,000 new apartments before the end of 2019. Significant new retail development at the Gateway Center in East New York has also illustrated demand for big-box shopping centers in the absence of new residential product. The 900,000 square foot ShopRite at the Center added 350 jobs alone, when it opened in 2014.

While the Brooklyn market is experiencing overall leakage, a retail gap analysis indicates potential opportunities for future growth. Brooklyn is experiencing leakage in the categories of general merchandise and car dealerships. The success of new projects such as Gateway Center suggests that there are opportunities to meet such demand. In addition, a retail gap analysis of the Brooklyn market also confirms that Brooklyn has also been established as a retail destination for non-residents in specific categories, drawing sales from outside the area in

the retail categories of clothing and clothing accessories, and health and personal care. Preserving existing local retail or creating new opportunities for neighborhood-focused retail that feels local in character could capitalize on Brooklyn's establishment as a shopping destination for such non-residents.

FOOD AND ACCOMMODATIONS INDUSTRY

The Food and Accommodations industry employs 45,000 people and has been supported by new hotel development, attracting new spending across the borough. Brooklyn's rising cultural cachet has also driven significant growth. Accommodation and Food Services grew by 73% between 2010 – 2016, adding 19,200 jobs and generating approximately \$2 billion in spending in 2016.

A retail gap analysis of the Brooklyn market confirms that Brooklyn is a culinary destination, drawing sales from outside the area in food services and drinking places. Brooklyn's establishment as a culinary destination, with some homegrown restaurants such as Junior's becoming global brands, has driven restaurant creation and employment in new restaurants. Neighborhoods such as Crown Heights, Williamsburg, Greenpoint, Sunset Park and Bushwick saw many new "locavore" movement driven restaurants emerge, while traditional immigrant neighborhoods have long been destinations including Middle Eastern grocers along Atlantic Avenue, Russian and Ukrainian food in Brighton Beach, Polish food in Greenpoint, Pakistani food along Coney Island Avenue, Caribbean food in Flatbush



and Prospect Lefferts Gardens, Panamanian food in Crown Heights, and Chinese food in Sunset Park, Bensonhurst, and Gravesend.

New hotels in North Brooklyn and Downtown Brooklyn have similarly capitalized on Brooklyn's appeal as a destination. There are over 50 hotels in Brooklyn, totaling 4,700 rooms available. Between 2010 – 2016, 1,500 new hotel rooms were added to the borough, creating new employment opportunities. 23 new hotels are projected to open by the end of 2018, and in 2017 homesharing also generated \$159 million in direct spending. Growing tourism spending citywide suggests additional opportunities to drive hospitality investment and spending in Brooklyn. Citywide, tourism spending increased by over \$10 billion since 2010, totaling \$43 billion.

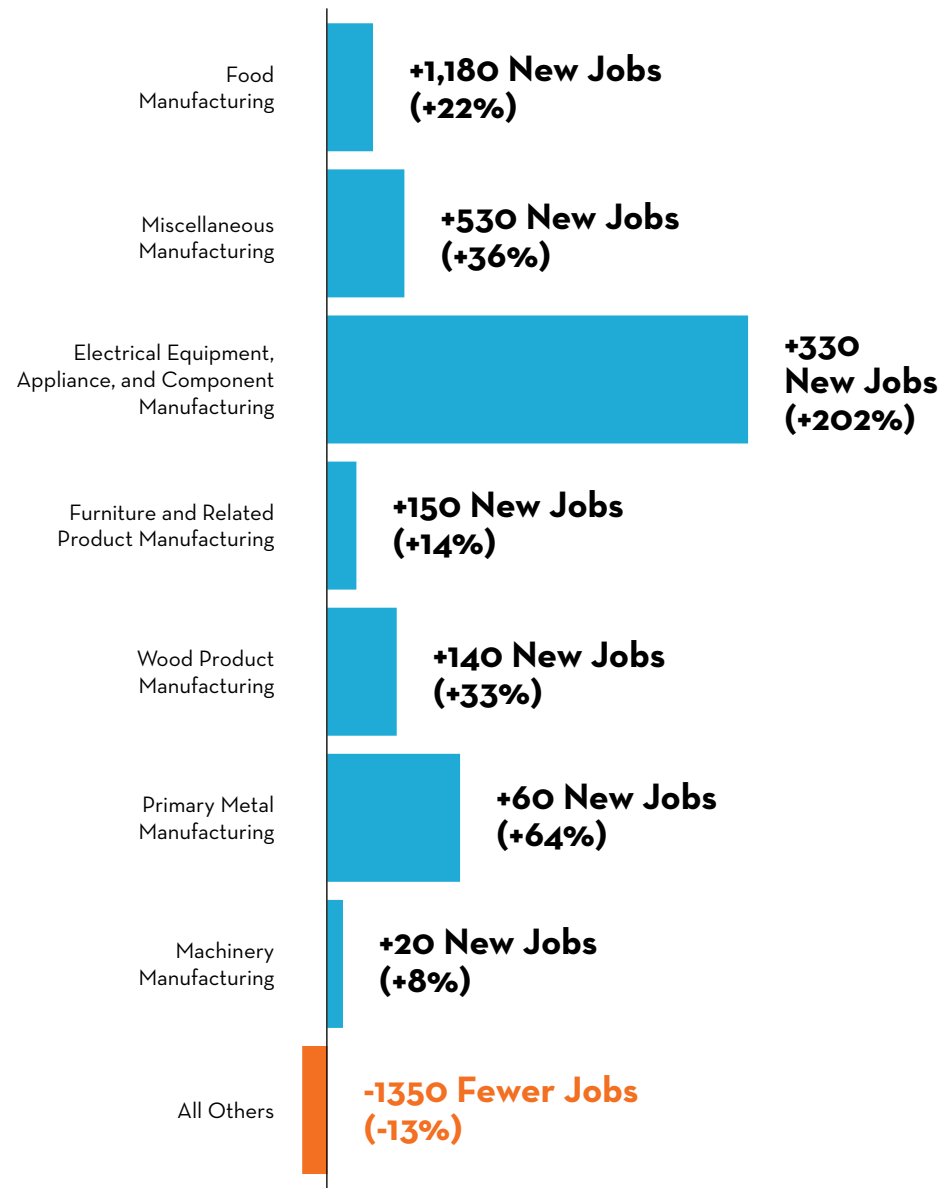
Business visitor spending accounts for one third of this spending and is also growing, suggesting additional opportunity. Javits Center, the city's largest convention center and the nation's most busy, is busier than ever; between 2013 and 2014 alone, its economic activity increased by 18%. The Downtown Brooklyn Marriott provides important meeting space for similar events in Brooklyn and has recently been complemented by 60,000 square feet of convention space in Greenpoint at the Brooklyn Expo Center, but further convention or meeting space in conjunction with existing space could help Brooklyn capture more business visitation spending, helping to drive spending into more areas of the borough.

MANUFACTURING

Historically, manufacturing has been an important industry. At only 20,500 jobs manufacturing constitutes a small fraction of boroughwide employment but offers potential for growth in new segments of manufacturing. Overall between 2010 and 2016, manufacturing grew by 5% in Brooklyn, compared to 4% citywide. Brooklyn continues to be a key component of the city’s manufacturing sector, with 37% of all New York City manufacturing establishments located in Brooklyn. With average wages of \$52,000, manufacturing industry jobs provide wages above the city- and boroughwide averages with low barriers to entry for workers without high educational attainment, including many first generation immigrants who have not had the opportunity to engage in higher education.

Targeted investments in creating advanced and food manufacturing facilities have supported this growth, including at Brooklyn Army Terminal and the Brooklyn Navy Yard as well as other areas across the borough. For example, the Navy Yard today is home to over 7,000 manufacturing jobs, including over 350 “innovative” manufacturing jobs with tenants such as Honeybee and New Lab that produce goods such as electronics and high-tech prototypes. These jobs flourish along with food production tenants such as Mast Brothers and Kings County Distillery and other production tenants including home goods and furniture producers such as Situ and Urban Homecraft.

BROOKLYN MANUFACTURING INDUSTRY EMPLOYMENT 2010-2016



Source: Industry employment data, EMSI

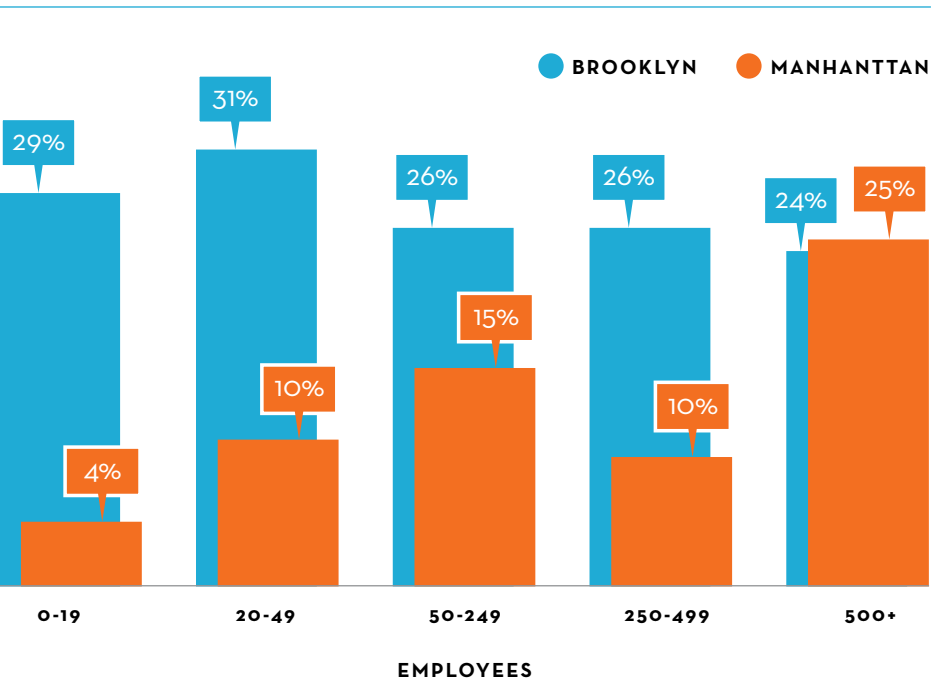
Brooklyn is an emerging home for innovation.

TECH & KNOWLEDGE INDUSTRY GROWTH 2016

Industry	Brooklyn Employment (2016 jobs)	Total Industry Growth (2010-2016 jobs)	
		Brooklyn	New York City
Information	10,000	+3,400 (+50%)	+25,000 (+17%)
Professional, Scientific, & Technical Services	21,000	+6,300 (+42%)	+79,800 (+26%)

Source: Industry employment data, EMSI

BROOKLYN & MANHATTAN EMPLOYMENT GROWTH BY FIRM SIZE 2010-2016



Source: Bureau of Labor Statistics

TECH AND KNOWLEDGE INDUSTRIES

Brooklyn is an emerging home for innovation. The tech and knowledge economy industries employ only 30,000 people but are growing fast and pay high wages of over \$145,000 on average. Since 2010, Brooklyn has experienced higher growth in the tech and innovation economies than the city overall. The Information industry grew by 50% between 2010 – 2016, adding 3,400 jobs, while Professional, Scientific, and Technical Services grew by 42%, adding 6,300 jobs. This growth has been higher than that citywide, which saw 17% growth for Information and 26% growth for Professional, Scientific, and Technical Services during the same period.

While information and science do not comprise the largest shares of the Brooklyn economy, the borough shows signs of continuing to be a magnet for innovation and technology. The borough benefits from a strong presence of institutions of higher education, and is home to 22 universities, colleges, and community colleges that advance educational attainment and innovation across Brooklyn. Recent investments stand to amplify these benefits; NYU’s new Tandon School of Engineering in Brooklyn recently opened a bioengineering facility in partnership with the medical and dental schools, and has invested in a graduate cybersecurity program. Since 2004, the number of patents filed per 100,000 residents in Brooklyn has kept pace with the City overall, growing from 29.8 patents per 100,000 residents to 44.2, at a rate of 48% relative to 30% growth



Smorgasburg Food Fair in Prospect Park

for the City and 18% growth for the State during the same period. Programs like the Navy Yard's Barry R. Feirstein Graduate School of Cinema and upcoming VR/AR Lab in partnership with New York University and the City also contribute to ongoing innovation in media, increasingly blurring the boundaries between different forms of media.

ENTREPRENEURSHIP

Brooklyn's entrepreneurial base is growing, with employment at small firms growing faster than in Manhattan. Many innovative companies are small firms in the earliest stages of dramatic growth. While larger firms may be perceived as more stable, with enhanced access to capital or other resources, small firms make critical contributions to the process of innovation, drawing upon their flexibility to serve as creative and dynamic forces. While a large share of Brooklyn's employer base is comprised of large firms having more than 500 employees, Brooklyn's employer environment is also characterized by a large and growing number of small firms. In 2014, 29% of firms in Brooklyn had less than 20 employees and another 10% had less than 50 employees, with a total of 40% of jobs in Brooklyn being provided by firms with under 50 employees. By comparison, small firms account for under 30% of jobs in the city and state. Employment at small firms is growing faster than in Manhattan. 40% of all employment growth between 2010 - 2016 was provided by firms under 50 employees, versus just 8% in Manhattan. This entrepreneurial growth has also been relatively diverse. According to an analysis by Crunchbase, an organization that tracks startups and investments, 28% of startups in Brooklyn that received investment funding between 2009 - 2014 had female founders, the highest share of any city in the nation, outpacing New York City as a whole (21%) and San Francisco (16%).

Freelancing is also on the rise in Brooklyn, supported by new platforms that make it easier for freelancers to connect with employer needs. The proliferation of coworking spaces across Brooklyn has also supported entrepreneurs and freelancers, lowering overhead costs for space and equipment. Flexibility of space and real estate terms are critical to the start-ups that fuel the tech economy, as is co-location with other innovators. Today, there are over 35 coworking spaces in Brooklyn, with some spaces specializing in particular industries. For example, while well-known WeWork emphasizes more traditional office environments, Foodworks, a shared kitchen facility, offers ten full commercial kitchen workstations.

EMPLOYERS: CHALLENGES

Despite local strengths, high costs of doing business across New York City may deter major and small employers alike. Employers in the New York region face real estate and labor costs above the national average. Slowing growth in key industries and changes in technology could also impact long-term growth, limiting access to quality jobs for Brooklyn residents.

REAL ESTATE CHALLENGES

As commercial rents rise across the City, small employers face challenges remaining in place. Major tenants including international professional services companies have coined the term “nearshoring” for shifting services such as accounting, trading, and legal support, and human resources and compliance to lower-cost, medium-size cities across the country. In addition, shifts in industry will require Brooklyn industry to remain flexible and adaptable. Dwindling inventories of commercial space may preclude homegrown enterprise. A diversity of commercial real estate is needed to support all stages of business in Brooklyn, including incubators, step-up space, class B/C space, manufacturing, back operations space, warehousing, and fulfillment centers. However, the borough’s volume of total office space experienced a net decline of 340,000 square feet across the borough between 2010 – 2016, likely reflecting widespread conversions of former commercial space to residential product. While office rents remain significantly lower than in Manhattan, suggesting potential opportunities to compete with Manhattan’s traditional employment centers, as supply has declined demand has risen and office rents have grown by 42% across Brooklyn since 2010 alone. Additional weaknesses associated with infrastructure and access may be compounded by macroeconomic trends to disadvantage Brooklyn’s ability to secure and/or retain major corporate tenants.

CHANGES IN BROOKLYN RENTS AND INVENTORY 2010 – 2016

Real Estate Typology	Change In Brooklyn Rent Prices	Change In Total Brooklyn Inventory
Office	+42%	(-340,000) square feet
Industrial	+70%	(-5.5) million square feet
Retail	+30%	+1.75 million square feet

Source: CoStar real estate data; STR hotel data.



Industrial space has allowed local businesses to thrive, but the supply of suitable space has declined significantly. Above: Lilac Chocolates, located at Industry City; Below: Zieba NY, a knife manufacturer located in Greenpoint.



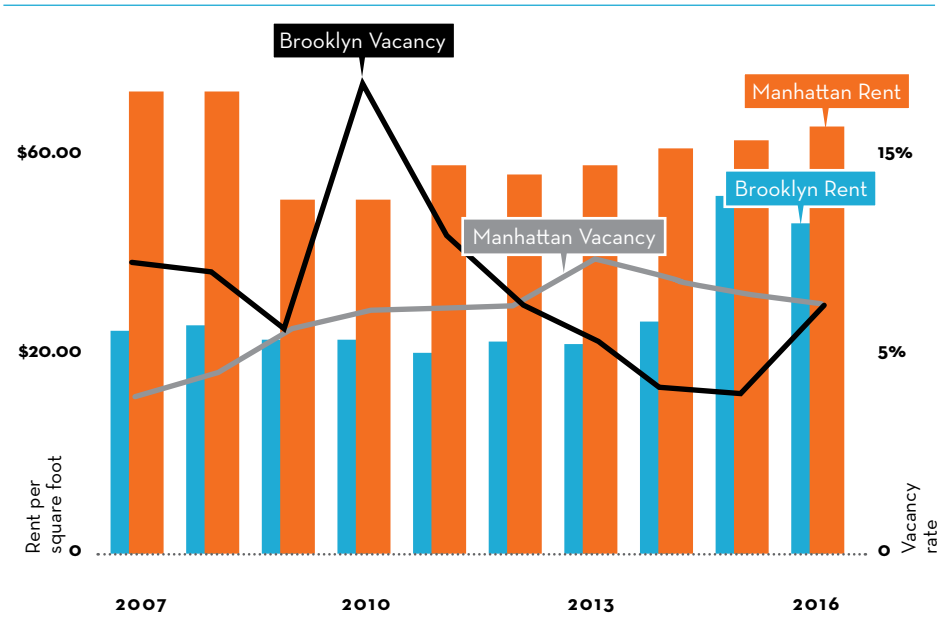
Industrial inventory has experienced the largest shift across real estate typologies, experiencing a decline of 5.5 million square feet across the borough. This decline likely reflects conversion to higher value uses, including residential, with significant impacts on rental prices for what available industrial space remains. While industrial remains as a land use that commands much lower rents than other commercial purposes, the direct rent per square foot has increased by more than 70% since 2010; at the same time, industrial rents in Brooklyn are not significantly cheaper than they are elsewhere in the City.

The detriments of these real estate shifts are clear. In Brooklyn, manufacturing jobs pay almost twice as much as the food service and retail jobs that replace them. Limited space may also impact Brooklyn’s ability to compete with other industrial neighborhoods in Queens and the Bronx for employers that require manufacturing space, including but not limited to high-tech manufacturing and employers that favor open floor plans including tech. In addition, industrial space is the preferred typology of many of the borough’s cultural innovators, including performing and visual artists who have contributed to the borough’s cultural cachet and attracted new investment.

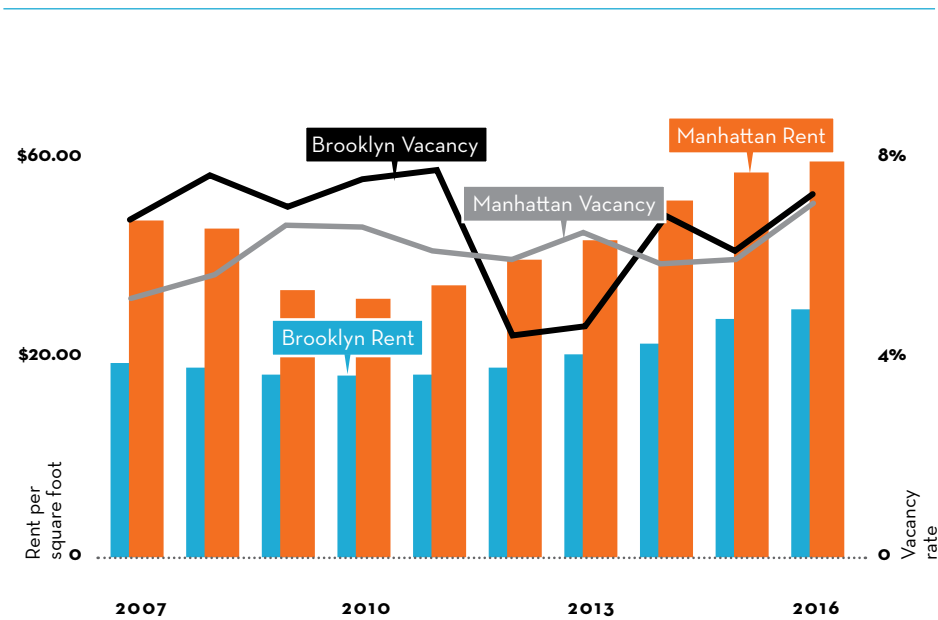
INDUSTRY CHANGES

Innovation and commercialization will be critical to ensuring that the borough’s key economic drivers remain productive. Healthcare, retail and the food and accommodations industries are critical engines of Brooklyn’s

CLASS A OFFICE SPACE 2010-2016



CLASS B OFFICE SPACE 2010-2016



Source: CoStar data

economy, but are sensitive to broader trends. These industries are highly reactive to population trends, to drive demand and, in the case of healthcare, to inform levels of welfare spending.

Despite strong growth in healthcare, changes in the nature of healthcare delivery and policy and broader demographic trends could significantly impact the gains and future growth of the Health Care and Social Services industry in Brooklyn. Growth has largely been driven by an increase of home care employment by 87% since 2010, in response to an aging population placing significant demand on home care, as well as by increased population-driven demand for basic care. In addition, many positions pay low wages, which has brought down overall average earnings industry-wide down to \$49,000. While employment in these jobs is accessible to many without a four-year degree, they may not provide quality employment that will support more equitable growth in the long-term. Diversification of healthcare delivery and an emphasis on new delivery methods and workforce training may provide additional future opportunities that can form the basis of more equitable and future-facing growth that are not as sensitive to broader trends.

In addition, skyrocketing healthcare costs and the lack of sustainable cost structures for healthcare delivery are presenting challenges to public and private medical systems alike. Across the City, public and private hospitals are being challenged in their ability to align revenues and available funding with costs. Rising healthcare costs and recent consolidations create a challenging business environment for smaller centers that primarily serve underserved populations and are dependent on public funding to sustain operations. Privatization and consolidation of the medical sector has resulted in the closure of 16 hospitals citywide since 2003, including four in Brooklyn. Rising costs have been compounded by 2% across-the-board state cuts to Medicaid reimbursement in 2012, primarily impacting hospitals that serve a majority of Medicaid patients. While Brooklyn’s healthcare employment is growing rapidly overall, these closures have coincided with declines in hospital employment of almost 10% across the borough. Reducing burdens on emergency rooms with new methods of service delivery, including new community health centers offering walk up care and telehealth offerings, can ensure that these employers and community assets remain productive and open. A recent announcement from New York State Governor Andrew Cuomo allocating \$700 million in capital investments for One Brooklyn Health, Brookdale University Hospital Medical Center, Interfaith Medical Center and Kingsbrook Jewish Medical Center, will help to address such issues. United under one organization, each of these struggling institutions will pursue clinical specialization and work with community organizations to develop new ambulatory care centers to increase care in underserved communities, as well as install new system wide technology systems to enhance efficiency and level of care.

Retail and hospitality will also be sensitive to disruption by broader trends, including real estate challenges and advancements in technology and automation. Already, rising

Innovation will be critical to ensuring that the borough’s key economic drivers remain productive.

commercial real estate costs are challenging small retailers, displacing many small local businesses along historic corridors across Brooklyn (as is described in further detail in the Neighborhoods section of this chapter). Particularly given Brooklyn's status as a destination for shopping for clothes, specialty items, and personal care, strategies to mitigate rising costs for small retailers specializing in these areas should be a focus.

Online shopping and the gig economy are also transformative forces that will continue to inform industry conditions and create new opportunities. As a reflection of the growth of online shopping, 16% of all retail employment growth between 2010 to 2016 was in electronic shopping and mail order houses, adding 2,400 jobs to the Brooklyn economy. This sector of retail also saw the most new firms established during this period, adding 310 new establishments, more than the 300 new grocery stores established during this time. Receipts filed by nonemployer firms, businesses with no employees that are often used to measure gig economy growth, have also increased dramatically in recent years, demonstrating the impact of new gig economy models such as ridesharing and homesharing. Between 2012 and 2015 alone (years for which nonemployer firm data is available), receipts filed by nonemployer firms in the taxi and limousine industry increased by \$270 million. Continued industry innovation and diversification into productive economic sectors such as these will be critical to the borough's economic future, and may require regulatory changes as new technologies emerge.

ACCESS TO CAPITAL

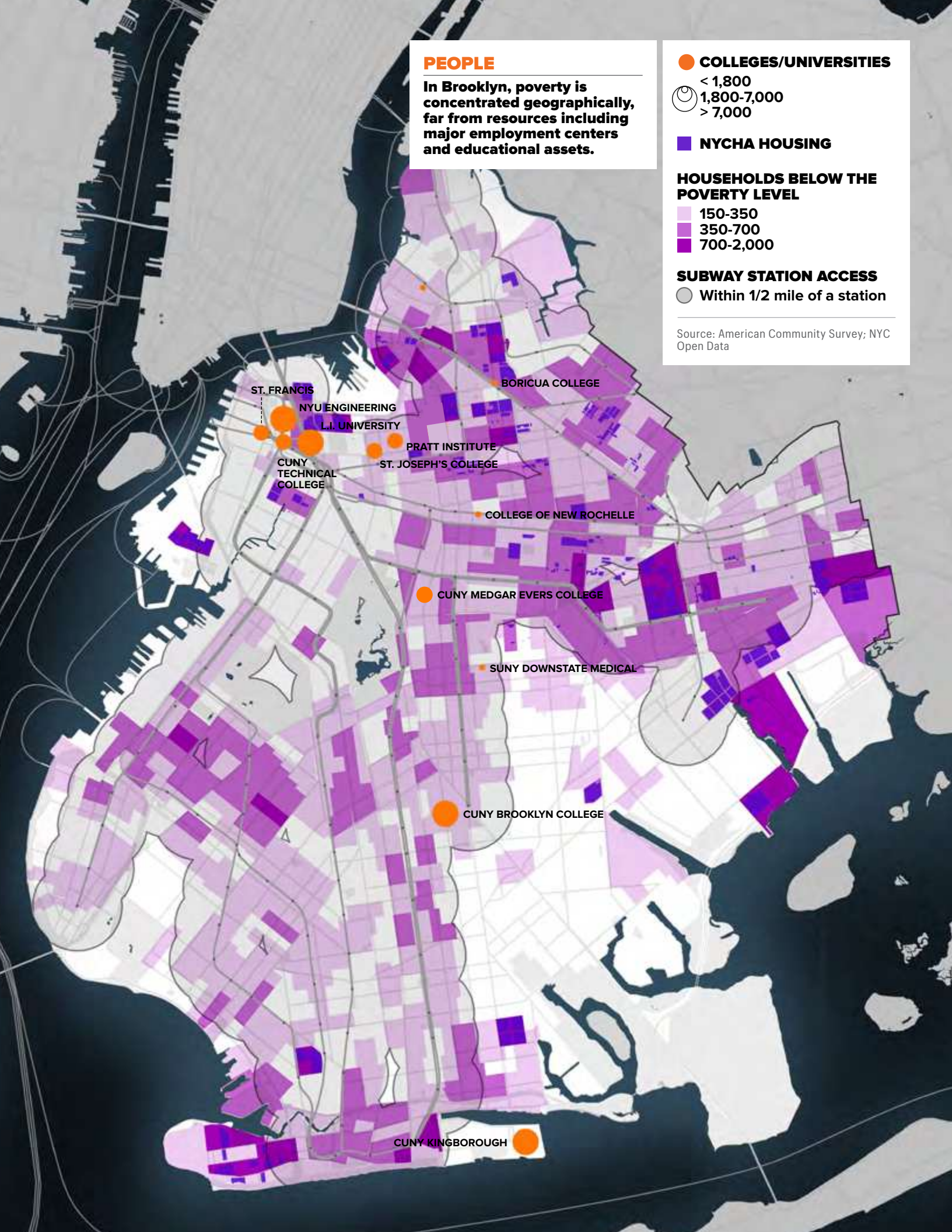
Small employers are vulnerable to additional stresses. Small employers often cite difficulties accessing credit as an impediment to their success and expansion. Often, credit unions do not give loans above \$100,000, while many larger institutions do not give loans for less than \$500,000, leaving many small businesses caught in the middle. In addition, start-ups generally do qualify for lending from banks, which require financial information of least two to three years and positive cash flows. New forms of working capital could better support these businesses.

Funds to support small businesses have been established, but are largely under-capitalized. For example, the Brooklyn Chamber of Commerce, in partnership with the New York Business Development Corporation has created "The Brooklyn Fund" to provide Brooklyn-based small business owners with access to business loans to help promote growth and expansion. Seeded with \$10 million guaranteed by the U.S. government guarantees through the U.S. Small Business Administration's Community Advantage and Small Loan Advantage Programs, the fund is not able to fully meet demand. In 2017, Brooklyn Alliance Capital was incorporated as a 501(c)3 organization, as a lending institution that provides loans to small businesses with a focus on immigrant and minority owned businesses. New forms of funding sources and working capital such as these will need to be developed and supported to continue to support the borough's small employers.



Ribbon cutting ceremony for Fusion East, supported by Brooklyn Alliance Capital, Inc.





PEOPLE: STRENGTHS

Brooklyn's desirability as a place to live is reflected in Brooklyn's steady population growth, diversity, and scale. With 2.6 million residents as of 2015, Brooklyn is the largest borough in New York City in terms of population, comprising 31% of the City's population and eclipsing Manhattan by one million residents. It is also diverse; almost one-third all the entire city's foreign-born population lives in Brooklyn, comprising 38% of total Brooklyn population (992,000 residents).

Between 2010 and 2015, Brooklyn was also the fastest growing borough in both percentage and absolute terms, adding more than 126,000 new residents and growing by 5% relative to the City's 4%. This growth accounted for more than 35% of total population growth in New York City during this period. Brooklyn's population growth since 2010 has been driven by prime-age workers, with residents aged 25 - 44 years old accounting for 62% of the borough's entire growth. Brooklyn added prime-age workers at a faster rate than the City overall, adding residents aged 25 to 34 years old at a rate of 12.4% relative to the City's 8.5% and residents aged 35 to 44 years at a rate of 4.5% relative to the City's decline of 0.2%. Examined by race/ethnic composition, whites and Asians accounted for 80% of the borough's population growth, while the number of net new African Americans has declined.

Population growth 2010-2016

35% All Citywide Growth accounted for by Brooklyn

2,510,000

2,629,000

New Brooklyn Residents Added

2010

2012

2014

2016

BROOKLYN EDUCATIONAL PROGRAM COMPLETIONS BY DEGREE LEVEL 2016

Award Level	Completions (2016)	Share of Total Completions
Bachelor's degree	8,500	42%
Associates degree	5,600	28%
Master's degree	3,200	16%
Award of at least 1 but less than 2 academic years	1,200	6%
Doctors degree	900	4%
Other	600	4%

Source: EMSI data

WORKFORCE DEVELOPMENT

As a whole, the borough's residents have higher educational attainment rates and household incomes than they did in 2010. Between 2010 and 2015, the share of Brooklyn adults over age 25 with bachelor's degrees or higher increased from 28% to 38%, while the share of households with income above \$75,000 increased from 28% to 38%.

Brooklyn's workforce has access to a wealth of educational and workforce training assets spanning from advanced degree higher education programs to training certificates that foster innovation and critical thinking, as well as help to provide residents with the critical skills they need to access good-paying jobs. Brooklyn's 14 universities, colleges, and community colleges are the workforce development backbone of the borough, while another 40 regional institutions also offer training and certificates. Together, these

institutions were responsible for 20,000 regional program completions (or educational program degree or certificate awards) in 2016. Of these completions, almost half were bachelor's degrees, but the large majority were for awards of less than two years including associates degrees and continuing education certificate programs. In particular, the borough's CUNY campuses are critical engines of upward mobility. A recent evaluation of upward mobility for students at every college in America found that six out of the ten colleges with the highest mobility rates—transferring students from the bottom quintile to the top quintile of household income—across the country where CUNY colleges, including Brooklyn's Brooklyn College and City Tech campuses.

Public policy and public and institutional investments in workforce development in the borough are supportive of continued growth. Industries that have demonstrated growth in Brooklyn have been the target of major recent policy and investment initiatives. For example, New York Works, the Mayor de Blasio's job creation plan, has targeted the creation of 100,000 quality jobs spanning the tech, healthcare, industrial, and cultural sectors, as well as creating new commercial centers closer to where the City's residents live in Brooklyn and Queens. Vital Brooklyn, Governor Cuomo's initiative to strengthen central Brooklyn, will make \$1.4 billion in investments including workforce development training, healthcare facilities, and educational initiatives, including a \$700 million capital investment in community-based healthcare facilities as part of One Brooklyn Health, a new partnership between Brookdale University Hospital Medical Center, Interfaith Medical Center and Kingsbrook Jewish Medical Center. Educational institution expansions, including NYU's new Tandon School of Engineering in Brooklyn and proposed expansions for SUNY Downstate, Brooklyn College, and Medgar Evers college, will also help to amplify the scale of opportunity



PEOPLE: CHALLENGES

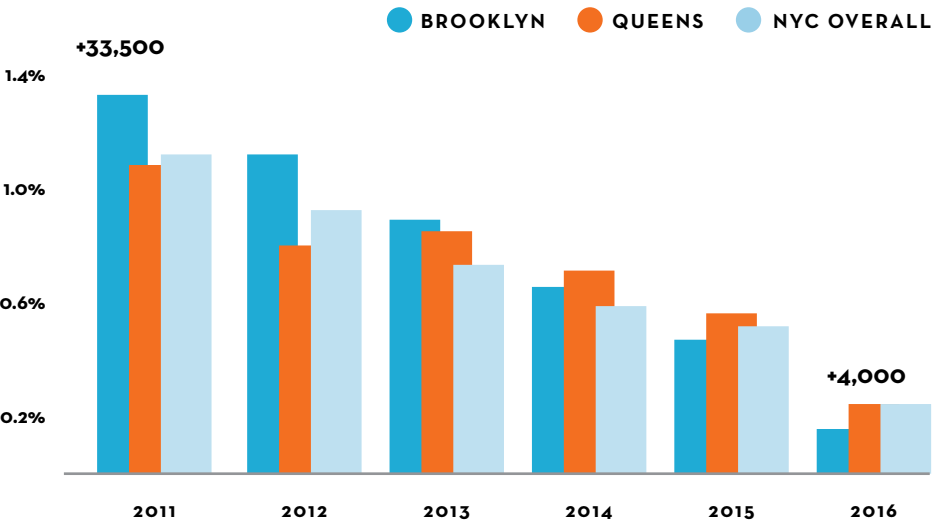
While Brooklynites are becoming wealthier and better educated, social stressors have remained constant or have risen. Brooklyn shares of higher educational attainment and prime working age population are on par with the city, but growing faster; however, while Brooklynites are becoming wealthier and better educated faster than NYC as a whole, poverty levels have remained constant since 2010.

Despite tremendous opportunity that exists in the borough, almost one quarter of all Brooklyn residents live below the poverty line. The number of households living below the poverty line has increased; in 2010 approximately 20% of households lived below the poverty line compared to 23% in 2016. Poverty has remained relatively constant across all racial demographics, despite shifting demographics across the borough and growth among white and Asian populations. Many poor residents live in isolated public housing, reducing their opportunities and access to amenities and jobs. Approximately 5% of Brooklyn's entire population live in New York City Housing Authority (NYCHA) housing. At 135,000 residents, this population is larger than that of the cities of Charleston and New Haven. While some NYCHA campuses, such as Farragut Houses, are located proximate to transit, educational assets, and nodes of commercial activity, large concentrations of NYCHA properties are isolated from neighborhood elements that foster higher qualities of life and access to economic opportunity. For example, A cluster of NYCHA buildings south of Broadway Junction is home to 20,000 residents who are underserved by educational assets, open space, and retail opportunities. Large concentrations of Brooklynites also live NYCHA housing in East New York or Coney Island, and are similarly underserved.

GAPS IN WORKFORCE DEVELOPMENT

Brooklyn's population growth has been a strong driver of economic expansion, but is slowing. While Brooklyn's population growth has been strong since 2010, growth appears to be slowing. Between 2010 and 2014, Brooklyn's population grew at approximately 1.1% per year; between 2014-15, growth slowed to 0.6%. This decline can be attributed to a net loss

POPULATION GROWTH BY BOROUGH 2010-2016



Source: American Community Survey

in domestic migration, with population growth in Brooklyn trailing Queens and the Bronx between 2014 to 2016. . Neighborhoods in these other boroughs, including Long Island City, Astoria, and the South Bronx, offer lower rents and some of the “cool” creative energies previously found in Brooklyn and—prior to then—lower Manhattan.

Limited college completion rates are a major barrier to accessing quality jobs. CUNY is a critical resource for Brooklyn residents, but many students experience challenges completing a degree. While graduation rates have steadily improved over time, from 13% in 2008, only 22% of students who enter CUNY's community colleges earn a diploma in three years. Critically, low completion rates can be attributed to costs and lack of preparation for college-level work. Financial aid only covers tuition, while costs for course materials, transit, and other expenditures associated with attending school are estimated at \$10,000 per student annually. Transit costs are compounded by an uneven distribution of educational assets, with large swathes of the borough underserved by educational assets, requiring students to travel long distances to class, and preventing part-time employment opportunities and internships. In particular, despite being transit-rich, East New York is underserved by educational assets, making it challenging for residents, including a large concentration of NYCHA residents, to access educational opportunities.

While CUNY has put innovative programs in place, such as the Accelerated Study in Associate Programs (ASAP) initiative, these programs expansions have been limited by funding availability at the City and State level and cover less than half of all students.

GAPS BETWEEN JOB OPENINGS AND EDUCATIONAL PROGRAM COMPLETIONS 2016

	Brooklyn	Manhattan	Queens	NYC as a whole
Educational Program Completions 2016	20,000	89,200	19,900	148,000
Job Openings 2016	79,000	213,700	58,600	401,800
Unmet Gap	59,100	124,500	38,700	253,800
Gap as % of total employment	8%	5%	6%	6%

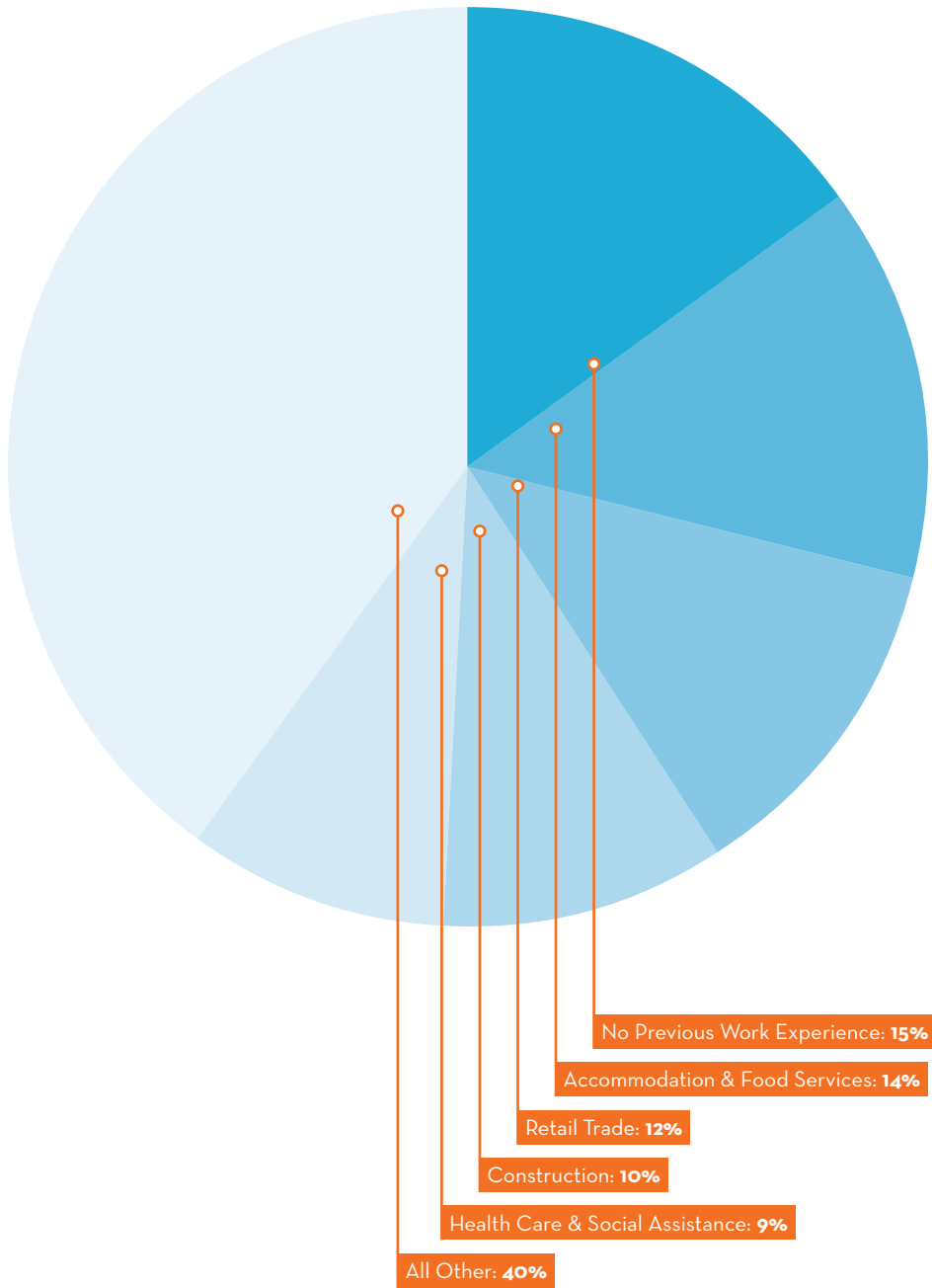
Source: EMSI data

Brooklyn has an unmet gap of almost 60,000 job openings.

Mismatches between jobs and resident skillsets exist, suggesting opportunities to connect more residents with jobs. Brooklyn's workers with lower educational attainment demonstrate the highest employment turnover. Workers with no previous experience and those in low-skill industries comprise the largest shares of unemployment in the borough. The retail and food and accommodation industries, as well as those with no previous work experience, have the highest levels of unemployment in Brooklyn, comprising 12%, 14%, and 15% of total regional unemployment respectively.

There are significant workforce development opportunities to provide people with the required skills for employment. There are significant job openings in Brooklyn that could be filled by Brooklyn residents to expand their economic opportunity and quality of life, which are otherwise being filled by workers from the broader region. In 2010, there were 45,700 job openings in Brooklyn and 19,300 program completions (or educational program degree or certificate awards), indicating an unmet gap of 26,400 job openings. This gap has only grown: in 2016, there were 79,000 job openings and 20,000 completions, indicating an unmet gap of 59,100 jobs, 8% of total Brooklyn employment and a growth in the gap of 32,700 jobs since 2010. This gap is higher than that Manhattan and citywide, where unmet gaps constitute 5% and 6% of total employment respectively. Changes to educational curriculums to ensure alignment with real world job market demands may help to drive completions, as can employer led workforce

BROOKLYN UNEMPLOYMENT BY PREVIOUS EXPERIENCE 2016



Source: EMSI 2016 data

BROOKLYN EDUCATIONAL PROGRAM COMPLETIONS & JOB OPENINGS 2016

Program	Completions (2016)	Job Openings 2016	Gap
Business, Management, Marketing, And Related Support Services	3,000	14,100	11,100
Health Professions and Related Programs	4,700	13,400	8,800
Education	1,700	9,600	7,900
Personal and Culinary Services	200	7,800	7,600
Family and Consumer Sciences/human Sciences	100	4,600	4,500
Agriculture, Agriculture Operations, And Related Sciences	-	3,200	3,200
Public Administration and Social Service Professions	400	2,900	2,500
Homeland Security, Law Enforcement, Firefighting and Related Protective Services	600	3,100	2,500
Construction Trades	-	2,200	1,200
Transportation and Materials Moving	-	1,400	1,400
All Other	9,300	16,800	7,400
TOTAL	20,000	79,100	59,100

Source: Program data, EMSI.

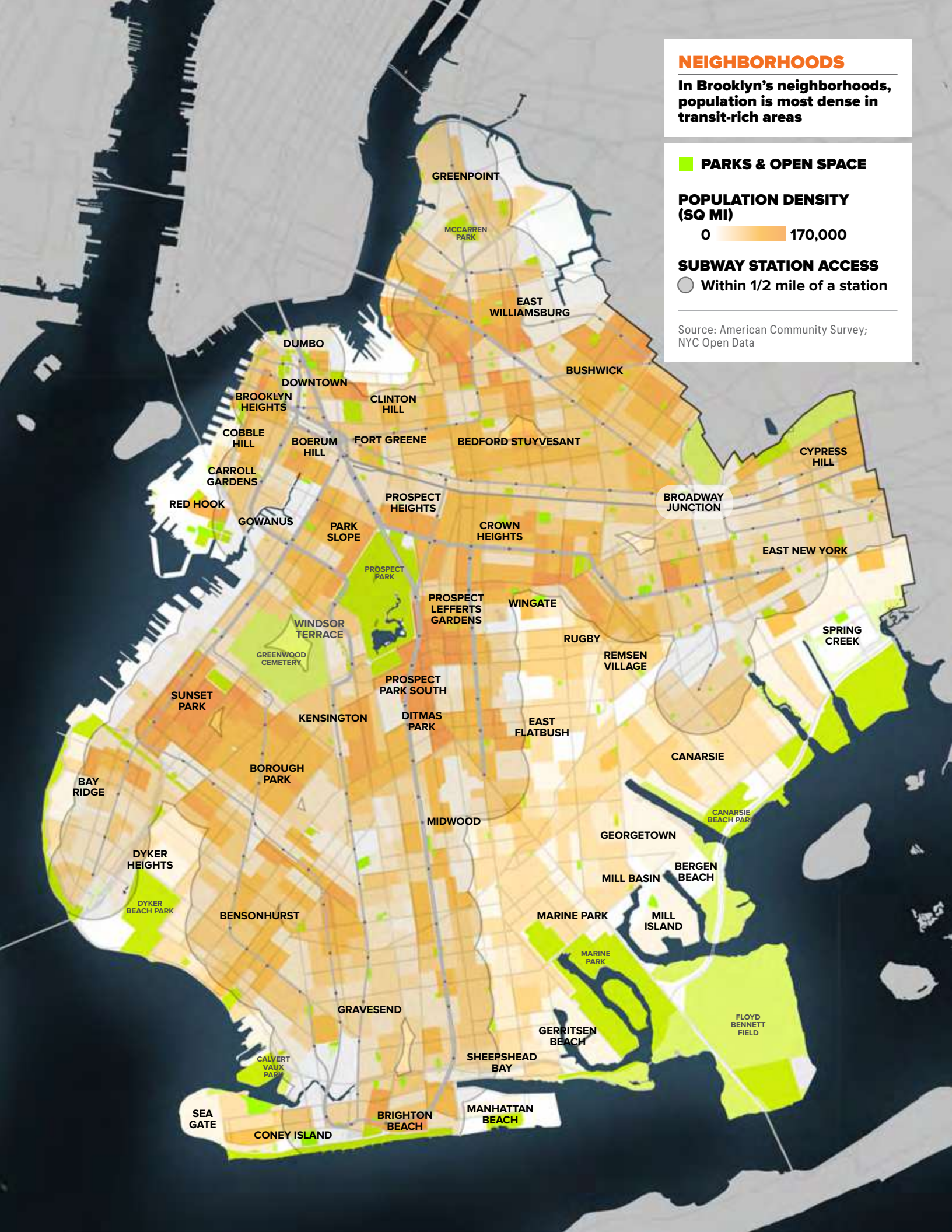
development programs that provide people with real world skills.

As is described in the next chapter, significant unmet gaps also suggest a need to attract and retain new workers to Brooklyn by ensuring that the borough is an attractive place to both work and live.

Workforce development must continually evolve to address future shifts in the workforce. A study by the Center for an Urban Future found that one in ten New York City jobs could be replaced by automation using technology that already exists today. While high-growth employment areas such as healthcare and home aides require a human touch that cannot be replaced by automation, other industries are at risk. Fast growing, low skill occupations that have driven growth are particularly at risk, including fast-food service workers, retail clerks, and dishwashers.

Automation will surely create new employment opportunities as technological advancements in the past have. However, the current educational requirements of the occupations that may grow are higher than those for the jobs displaced by automation. Workers of the future will spend less time on predictable physical activities and on collecting and processing data, requiring more emotional and social intelligence as well as reasoning. Flexible and adaptable workforce development that prepares people to work with automated processes and continues to evolve with shifts in the market can help ensure that Brooklynites develop and maintain the skillsets needed to connect with employment opportunities.





NEIGHBORHOODS: STRENGTHS

Brooklyn has long been recognized for the distinct character and quality of its many neighborhoods.



One factor that is consistent throughout the entire borough is the large quantity of residential property and open space. In the large majority of neighborhoods in Brooklyn, residential and open space/outdoor recreation composes 50% of the land use profile, which stands in stark contrast to neighboring downtown Manhattan, composed largely of commercial and office spaces. Brooklyn is home to iconic major parks including Brooklyn Bridge Park and Prospect Park, which serve as destinations for residents across the borough. Thoughtful programming at these parks ensures they appeal to a wide audience; Brooklyn Bridge Park user surveys have found that the park and its athletic fields attract users from every zip code in Brooklyn. In addition to these parks, a variety of neighborhood scale open spaces dot the borough.

MAJOR INVESTMENTS

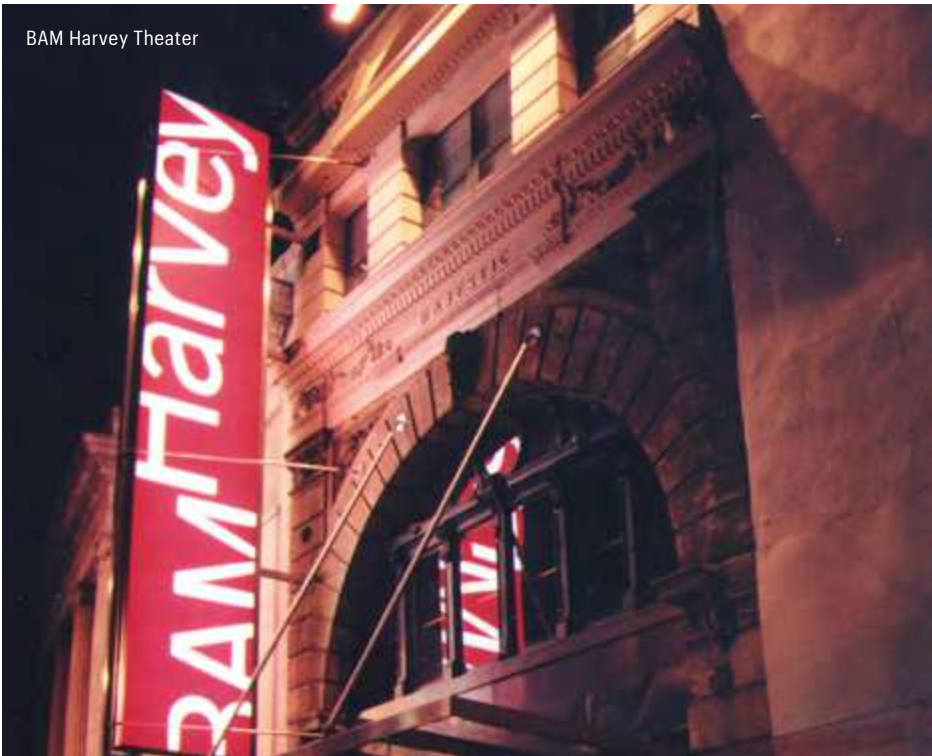
Major investments over the past decade have created attractive commercial districts and neighborhoods, attracting the workers and residents of the future. Public-private developments have catalyzed millions of dollars of private investment, such as the BAM Cultural District, which has created over 600,000 square feet of new cultural and rehearsal space for local cultural organizations as well as new housing opportunities. The Atlantic Yards development has repurposed former railyards to create a new entertainment center at the Barclays Arena that generated \$47 million in gross ticket sales revenue in its first year, positioning it as the top-grossing US venue for concerts and the second globally. The development project will also create at least 2,250 new units of affordable housing by 2025. Pipeline development along the Gowanus Canal and at the former Domino Sugar factory will continue to transform the Brooklyn landscape and create new, mixed-use, and dense.

CULTURAL ASSETS

Brooklyn is home to a wealth of cultural assets that enhance the borough’s vibrancy and provide residents with important life-enriching experiences. Across Brooklyn, the Brooklyn Public Library’s nearly 70 branches provide a strong presence in every neighborhood that offers access to books and media alongside community programming. There are 12 major museums that honor Brooklyn’s heritage, celebrate its culture, and bring important works of art to the borough’s neighborhoods. Brooklyn is also home to a large number of artists, cultural organizations, and galleries that continue to define Brooklyn’s status as a center for culture that is on the cutting edge.

IMPROVEMENT DISTRICTS

Brooklyn’s homegrown employers and communities are also supported across the borough by Business Improvement Districts and Community Development Organizations. Brooklyn is home to 23 Business Improvement Districts (BIDs) and over 10 Community Development Organizations (CDCs) that span industries and specializations from industry and manufacturing to retail corridor development. BIDs help improve conditions for businesses in specific areas through initiatives that attract and retain businesses, generate jobs, and improve quality of life for district users through maintenance, capital improvements, and events that convene the business and public together. These organizations are critical to leveraging existing local knowledge and service delivery mechanisms that can strengthen the economy into the future.



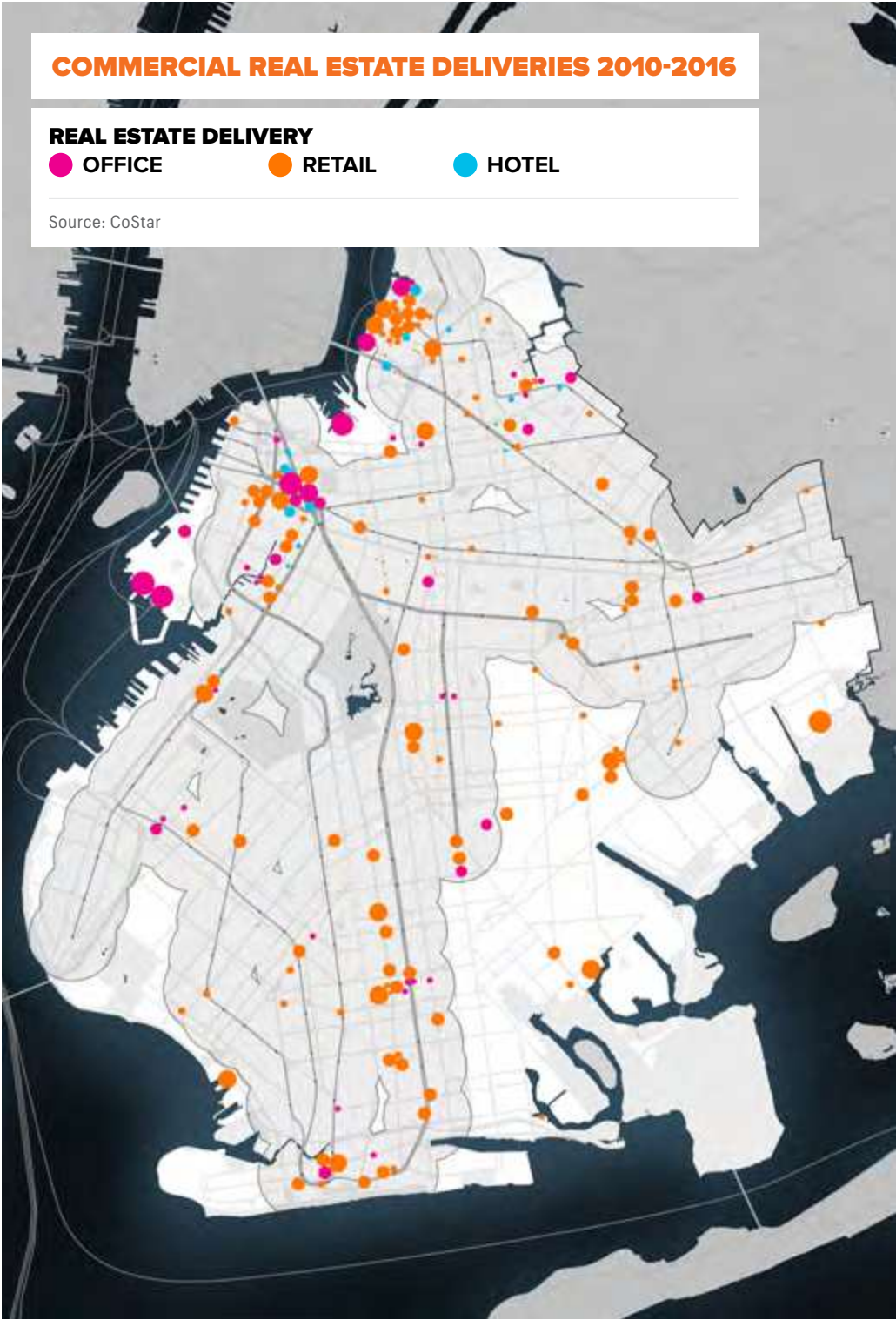
Brooklyn Pubic Library

NEIGHBORHOODS: CHALLENGES

Despite Brooklyn’s iconic places and neighborhoods, urgent challenges are preventing residents from achieving higher quality of life and connecting to economic opportunity where they live.

UNEVEN INVESTMENT

Much of the new investment in Brooklyn has been unevenly distributed in select neighborhoods. New office deliveries in Brooklyn have largely been concentrated along the Brooklyn waterfront and in Downtown Brooklyn, with bold developments like Brooklyn Navy Yard’s 670,000 square foot Dock 72 emerging in the last five years. In addition to major new office developments that offer more than 500,000 square feet in rentable building area in Williamsburg and Downtown Brooklyn, the waterfronts of Red Hook and Fort Greene have seen some of the largest new developments in office space to date in the borough. One notable delivery in Red Hook is the tech-centric, campus-like Norman Foster development at 280 Richards Street known as Red Hoek Point, which will add more than 500,000 square feet of office space upon completion in 2018. New hotel deliveries geographically have tended towards the western waterfront of Brooklyn, reflecting both tourists’



preference for easy access to Manhattan and industrial zoning that permits for hotel uses. Between 2010 to 2016, 1,500 new hotel rooms were delivered, reflecting the 10.7% average yearly increase in hotel demand. However, in the same time period, average daily rate has only increased by an average of 2.1% each year, which denotes the appeal of the Brooklyn hotel market as a lower cost alternative to Manhattan. For example, the William Vale, a full-service, 183-key hotel in Williamsburg completed in 2016, has positioned itself as a luxurious alternative to hotels charging significantly more in Manhattan, which is just a 5-minute subway ride away.

New retail development has been distributed across a more diverse area of Brooklyn than new residential, office, and hotel development. Between 2010 to 2016, 1.75 million square feet of new retail development was delivered across the Borough. While some of this new product was concentrated in areas that have seen significant new residential growth, including downtown Brooklyn and Williamsburg, large new deliveries have materialized in East New York. These include over 100,000 square feet of new retail space added the Gateway Mall in 2014 for the development of a new JCPenney, and the construction of Lowe’s in Mill Basin, also adding just under 100,000 square feet. While new retail development has bolstered employment growth in the Retail Services industry, increases in rental prices across the borough of 30% since 2010 and larger footprints have changed the retail character in some neighborhoods, prompting conversations about gentrification and cultural homogenization. For example, rental prices along Bedford Avenue in Williamsburg are now the most expensive retail rents in the country, behind only Manhattan, displacing many of the Polish and Dominican businesses that once populated its northern and southern ends. In Boerum Hill along Smith Street, national chains including Lululemon and Free People have begun to replace retail long characterized as small local businesses.

Significant residential development since 2010 has occurred, but rising costs and inconsistency of deliveries by geography and typology constrain access to housing opportunities for many. New residential development continues to dominate Brooklyn, with 17,500 new residential units delivered across the borough since 2010. While most areas of Brooklyn have seen new developments with under 300,000 square feet in rentable building area, the areas surrounding two major transit hubs and connectors to Manhattan, downtown Brooklyn and Williamsburg, have seen deliveries that offer close to 1 million square feet of rentable building area. These residential delivery hubs in Downtown Brooklyn, Williamsburg, and Greenpoint are also the areas that command significantly higher actual prices per square foot, as opposed to more moderate prices throughout the rest of the borough.

Low-density zoning has preserved the historic character of many neighborhoods while limiting density, prompting proposals for potential rezoning along subway transit lines that would allow for expanded residential development capacity. For example, the Broadway Junction station experiences ridership of over 3.2 million passengers annually, but the immediate land use within half a mile of the station is comprised

Much of the new investment in Brooklyn has been unevenly distributed in select neighborhoods.

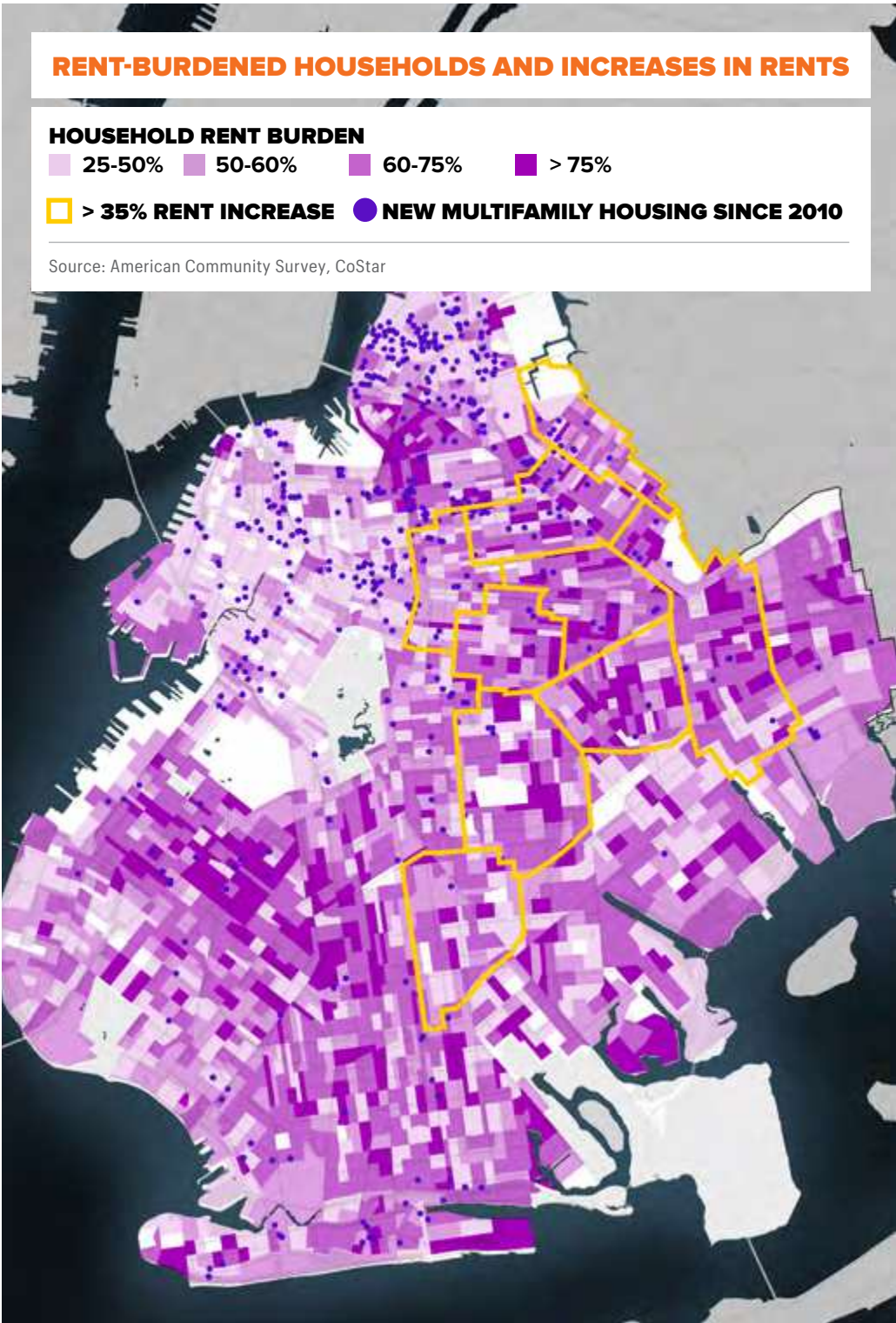
of largely underutilized, low-density manufacturing zones, including a large number of publicly owned parcels. However, such proposals—for example, the East New York rezoning—have sparked dialogues about potential gentrification and displacement. Recent community planning in Brownsville for the redevelopment of publicly-owned parcels could serve as a model for future rezoning and redevelopment; the Brownsville community RFP will require the inclusion of affordable housing and community and economic development assets targeted to benefit the underserved communities that already live in place.

COST OF LIVING

Rising costs of living could displace existing and deter future residents. As a result of population growth and increasing demand as well as the introduction of higher cost product, housing costs across Brooklyn have grown sharply since 2010, growing by 25% versus 17% citywide. While Brooklyn’s housing market has long been more affordable market than Manhattan, that gap has shrunk; as of 2016, the difference in rent per square foot between Brooklyn and Manhattan’s long elevated residential market was only \$0.75. These increases have placed housing pressure on many of the borough’s residents, many of which are rent-burdened. The high-cost of living also deters young talent from staying in the city as they age and want to form families and raise children.

TRANSIT

Brooklyn neighborhoods have access to substantial transit and transportation infrastructure, but that



accessibility is not evenly distributed. Boroughwide infrastructure gaps, including transit and broadband access, constrain the development of new commercial centers and sustain Manhattan’s dominance as an employment center. While residents of northern Brooklyn, Downtown Brooklyn, Brooklyn Heights, and portions of East New York proximate to Broadway Junction benefit from subway access that provides easy connectivity to Manhattan, the remainder of the borough is largely underserved by subway access. Mean commute times to work hover around 40-45 minutes for most neighborhoods in Brooklyn, barring the western and waterfront neighborhoods (Park Slope, Downtown Brooklyn, Williamsburg, Greenpoint) where the mean commute time is closer to 30-35 minutes. While 96.86% of residents in Manhattan live within a mile of a subway station, only 87.23% do in Brooklyn. Further, while Brooklyn Heights, Fort Greene, Sunset Park, and Borough Park have subway stations within a mile of upwards of 95% of residents, this figure drops to 19.25% for Flatlands/Canarsie.

While new subway development outside of Manhattan has been proposed by various advocacy entities over the past decades, the City has been financially and politically constrained in its ability to invest in subway expansions. Past expansions, including the

Rising costs of living could displace existing residents and deter future residents.



Borough-wide infrastructure gaps, including transit and broadband access, constrain the growth of new commercial centers and sustain Manhattan’s dominance as an employment center.

7 Line and Second Avenue Line, have exceeded projected costs and timelines. At the same time, the MTA, which rests under State control, is in a current budgetary state of emergency related to deferred maintenance.

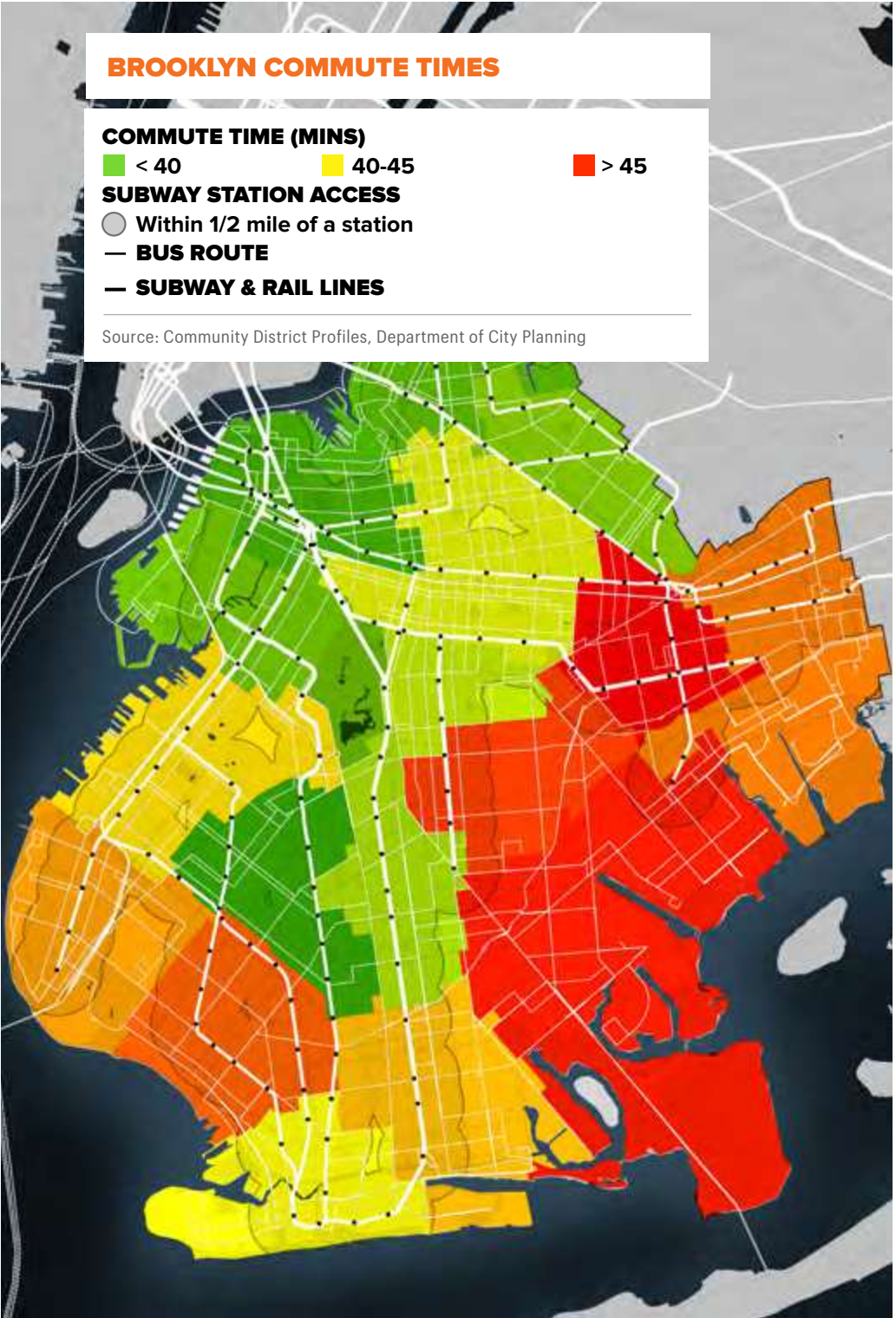
Buses are a more accessible form of transportation in areas of Brooklyn where subway stations are sparse, but bus ridership in Brooklyn is in decline, potentially indicating shortcomings in available service. Since 2010, bus ridership in Brooklyn alone declined by 9%, over 195,000 rides annually, even as the borough’s population grew by almost as many new residents.

Reductions in service could be partially responsible for declines in ridership, in particular the restructuring of multiple routes in Bay Ridge, the 7th Avenue portion of the B67/B69, rerouted service between Ocean Parkway and Sheepshead Bay, and discontinued service on the B71 in Red Hook and multiple lines in East New York. Ridership did not increase after bus service expansion in 2013, which largely focused on restoration of lines in neighborhoods that have experienced significant residential deliveries including those, such as Williamsburg and Downtown Brooklyn, which are better served by other modes of transit. Growing traffic could also explain waning preferences for bus travel; according to the MTA, the average bus speed is roughly 10 mph, and less than 4 mph in commercial districts, making it a difficult form of transportation to rely on for efficient travel .

Bus service is also constrained by a bifurcated management structure and struggles implementing new technologies that could improve the speed and reliability of bus service. Management by the New York City Transit Bus and the MTA Bus Company distributes buses across separate depots, requiring some buses to travel farther from their routes to storage and resulting in an outsize number of “deadhead hours,” or the time buses spend without serving customers, ranking 17th among the largest city bus companies in the US. Relative to other cities, New York has a very low share of dedicated bus lanes along the City’s 6,000 miles of roads—just 104—hampering express service including Select Bus Service.

In the face of uneven subway and bus service in Brooklyn, alternative transit investments have achieved record usership since their implementation across the borough. For instance, the Economic Development Corporation has reported that ridership on the City’s new citywide ferry system reached 1,467,860 trips in its first year of operation, increasing 8% to 1,584,149 in its second year of operation, with 10 stops in Brooklyn. Citibike also reported a record 14 million Citi Bike trips citywide, following expansions in Brooklyn.

Infrastructure challenges extend to the movement of goods as well as people. In New York City, more than 91% of all goods are delivered via trucks. Pickups and deliveries citywide present challenges, contributing to congestion and slowing “last mile” delivery interventions. As the City and borough have grown, competition for space on the road between personal vehicles and freight and shipping vehicles has increased. Capacity is particularly strained in the expressways across the New York Harbor. Freight-related



congestion inconveniences both commuters and businesses who rely on the efficient movement of goods, and imposes high environmental and economic costs on the region. The Port Authority of New York and New Jersey, in coordination with the Federal Highway Authority, is currently studying regional solutions for the safe, efficient, and environmentally sustainable passage of goods across the New York Harbor, including to Manhattan and Brooklyn, evaluating improvements to the existing railcar float bridge operations between Greenville Yard in New Jersey and 65th Street Yard in Brooklyn.

BROADBAND ACCESS

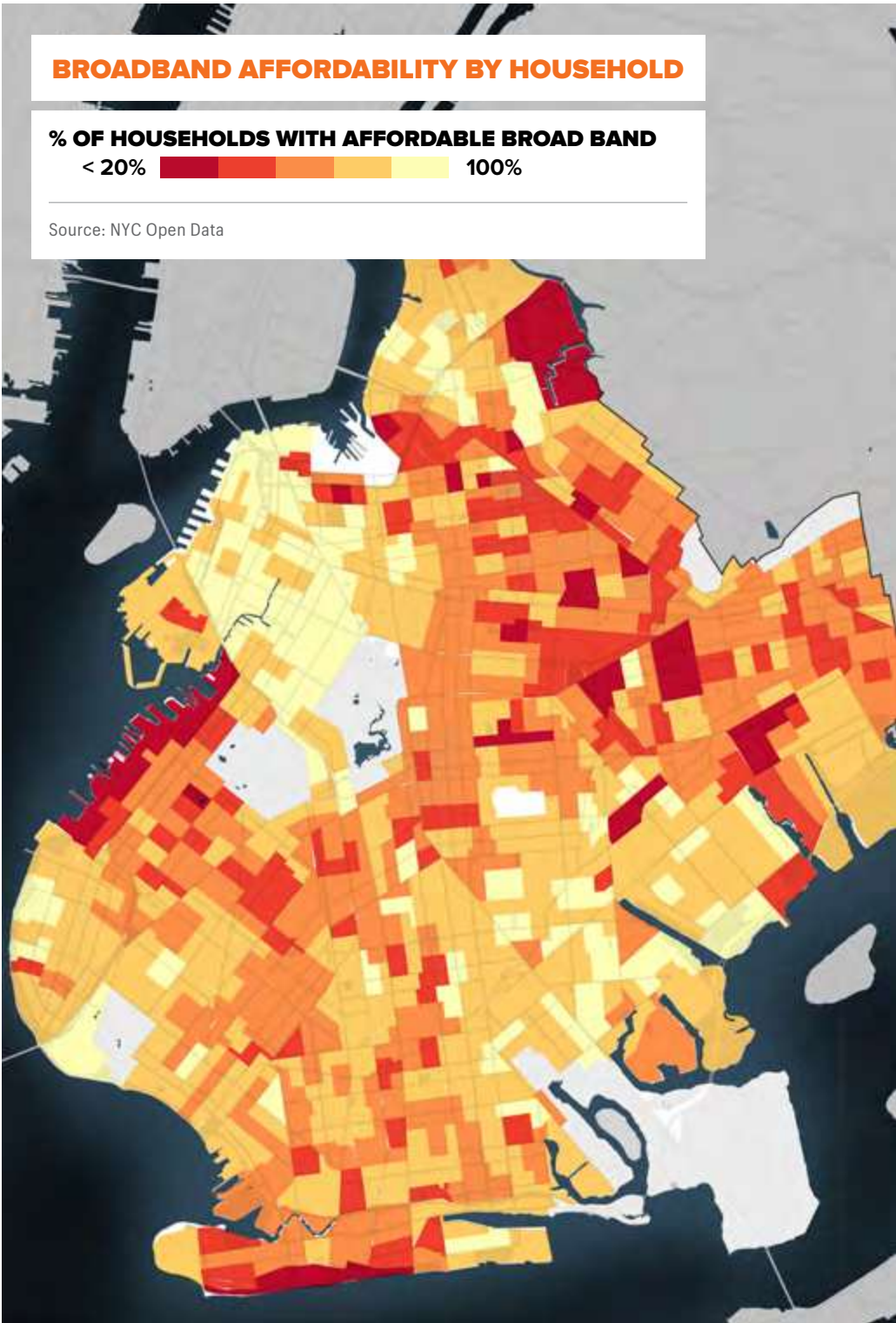
Access to high speed internet may also constrain economic opportunity across large swaths of the Borough. High speed (or “broadband”) internet infrastructure has emerged as essential infrastructure in cities nationwide, serving as a critical utility that supports businesses in commercial areas and providing economic opportunities for residents in their homes. 30% of all households in Brooklyn lack access to broadband internet. Wider access to broadband internet is concentrated in wealthier neighborhoods including North Brooklyn and Downtown Brooklyn, while access is sparser in lower-income neighborhoods in South Brooklyn. Broadband access is of critical importance to economic and educational opportunity; 34% of people outside the workforce lack broadband at home, while 21% of unemployed New Yorkers lack access. 40% of New Yorkers with less than a high school education lack broadband at

home compared to 11% of New Yorkers with a bachelors or advanced degree.

The current mayoral administration has made a commitment to providing affordable or free internet access to all New Yorkers, including by scaling community Wi-Fi initiatives in Red Hook and Queensbridge and its Link NYC kiosks. These pilots have illustrated opportunities to both monetize connectivity and enhance digital equity and opportunity. With over one dozen kiosks already in place, LinkNYC will ultimately count 7,000 kiosks citywide providing free, high speed wireless internet access, and is anticipated to generate over \$500 million in revenue through ad partnerships and sponsorships, as well as the monetization of data. These community solutions will require building or replacing existing fiber networks, which provide the backbone of such Wifi outlets. This will require significant capital investments and collaboration across public and private industry stakeholders to build out Brooklyn’s network at scale. The New York City Economic Development Corporation has announced a call for proposals to seek responses for potential mechanisms to implement citywide broadband fiber, with the goal of providing free home access for all school-age children. Potential responses and solutions will be under study until 2019.

GEOGRAPHIC ISOLATION

The creation of new employment centers is constrained by existing infrastructure. Access to transit and information infrastructure in Brooklyn is a variable that has largely



informed development and employment clustering in the borough. Brooklyn is home to three major employment centers, defined as areas with more than 50,000 employees per square mile, all of which are located on transit hubs or in areas with high concentrations of broadband service and access (see Figure 6 below). Downtown Brooklyn, with its access to multiple subway lines and commuter rail at the Atlantic Terminal, has seen its status as a commercial center rise, and seen large-scale new real estate development. While new development, especially residential, persists despite gaps in access to transportation, deliveries of any type with large rentable building area are almost exclusively limited to areas with access to subways—including, critically, the borough’s declining supply of office and industrial space. The exceptions to this trend tend to be large office and retail spaces that have prioritized affordability or access to the waterfront over location in dense commercial and residential areas.

Poverty is concentrated geographically, away from infrastructure and employment centers. Poverty occurs across the borough but is concentrated in the northeastern, central, and southwestern regions of the borough, including the neighborhoods of Borough Park, Brownsville, Ocean Hill, and East New York. Neighborhoods with the lowest occurrences of poverty are concentrated in the northwestern regions of the borough—which have seen significant investment since 2010, as well as the lower density southeastern waterfront. Poverty rates have decreased the most over the last few years in North Brooklyn neighborhoods including Williamsburg, Greenpoint, Bushwick, North Crown Heights, Prospect Heights, and Fort Greene, as an influx of new residential development has displaced some residents and new commercial development has provided new economic opportunity for residents that remain in place. Meanwhile, poverty rates have increased the most in South Brooklyn, including Coney Island and Bay Ridge.

VIBRANCY

Neighborhood amenities that support vibrancy and quality of life are not distributed evenly. While Brooklyn is home to several signature parks, many neighborhoods in the borough are underserved by open space. Considered through the lens of the City’s environmental impact assessment process (CEQR), neighborhoods underserved by open space include Greenpoint, Bushwick, Gowanus, Sunset Park, Crown Heights, Borough Park, and Flatbush.

Despite Brooklyn’s wealth of culture, the City’s recent cultural plan, CreateNYC, found that cultural assets are unequally distributed across the city’s neighborhoods. The Social Impact of the Arts Project (SIAP) developed a neighborhood cultural asset analysis demonstrating that areas with the most cultural resources also tend to have the highest incomes. Participation with such assets correlates with improved health, personal security, and school effectiveness, demonstrating the relationship between culture and healthy communities. These impacts are more pronounced in culturally underserved communities; while low-income communities might have fewer cultural resources, these resources lead to greater measurable impact in social wellbeing. Manhattan and Downtown Brooklyn have extraordinarily

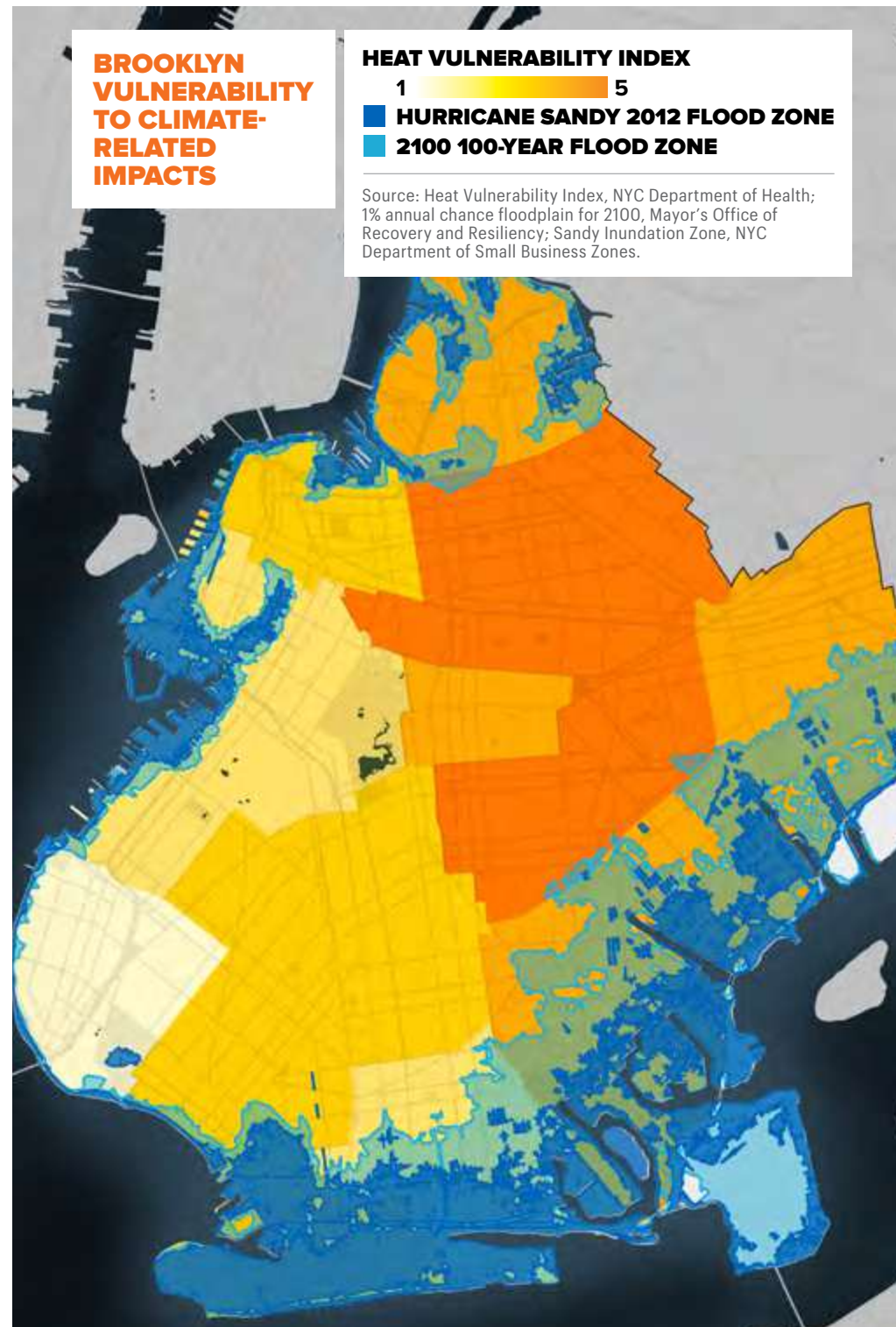
Neighborhood amenities that support vibrancy and quality of life are not distributed evenly.

high concentrations of assets, while many neighborhoods in other parts of Brooklyn have much fewer. Cultural producers are also pressured by the same real estate conditions challenging businesses, with rising costs for production space impacting smaller organizations and individual artists.

CLIMATE RISK

Brooklyn's businesses, buildings, infrastructure, and communities are increasingly exposed to climate related threats that stand to compound existing stresses. These threats include tidal inundation and groundwater table rise caused by sea-level rise, coastal storm surge caused by increasing frequency and severity of coastal storms and exacerbated by sea-level rise, storm water flooding caused by increasing precipitation events, and high heat events caused by increasing temperatures. These hazards, their impacts, and the underlying stresses related to housing affordability, neighborhood quality, equitable economic opportunities, and transportation with which they interact, suggest a need for a systemic approach to the future economic development goals of Brooklyn.

Future projections prepared by the New York City Panel on Climate Change (NPCC), indicate that this exposure is expected to increase as the most intense hurricanes are expected to increase by 50% and sea levels are expected to rise by up to 6 feet city wide by the end of the century. In waterfront communities, groundwater table rise, and increasingly frequent tidal inundation will cause regular street flooding, as well as exposure of



underground utilities and building foundations to settlement and the corrosive effects of salt-water intrusion. Further, the increasing frequency and severity of coastal storm surges will also expose Brooklyn's shoreline and waterfront neighborhoods to direct damages to homes, business, and infrastructure, as well as cause erosion of beaches. Sea-level rise combined with precipitation events will impact the existing storm water system's capacity to drain water, causing backup of water into streets and homes during rain events. Today, nearly 85,000 buildings in New York City are located in the 1% annual chance floodplain established by FEMA's preliminary Flood Insurance Rate Maps (pFIRM). Almost half of those buildings are in Brooklyn; they are valued at \$24 billion and home to more than 400,000 people. A large share of this risk is carried by neighborhoods near the East River waterfront and Jamaica Bay. For example, Brooklyn Community Board 13, encompassing the neighborhoods of Brighton Beach, Coney Island, Gravesend and Sea Gate, has the highest concentration of homes within the best-available floodplain assessment in New York City, with 93% of all home in the 1% annual chance floodplain.*

The damage and disruption caused by Superstorm Sandy resulted in the identification of critical projects and the allocation rebuilding dollars, including as part of the City's resiliency program, the New York State Community Reconstruction Program, and Rebuild by Design initiatives, all of which have convened diverse city stakeholders to plan for the future of Brooklyn by proactively identifying chronic local stressors that exacerbate the consequences of shocks, such as coastal storms and flood events. However, many of the capital projects and community-based programs identified by these initiatives, ranging from flood levees to housing retrofits and community-based preparedness programs, require significant capital investments and coordination across public- and private-sector actors and have yet to advance to project implementation.

Neighborhoods and vulnerable populations throughout Brooklyn are increasingly exposed to the impacts of urban heat. The NPCC has projected that increases in temperatures will result in three times more heat waves (3 days of temperatures that exceed 90 degrees) city-wide. Already, over 100 New Yorkers die from heat every year, and the number is projected to continue increasing as global climate change accelerates. Density, access to green and open spaces, lack of access to air conditioning, and an inadequate community and medical support systems are all risk factors for illness and death due to heat impacts, especially among those living in poverty, the elderly, very young, and chronically ill. Every neighborhood in Brooklyn is noted for moderate to high vulnerability to heat, especially neighborhoods in Central Brooklyn, such as Crown Heights, Bedford-Stuyvesant, and East New York.

Some recent initiatives and investments have taken a broader view towards resiliency, and have considering community, health, and economic development. For example, Governor Cuomo's office recently announced the \$1.4 billion Vital Brooklyn initiative, which will focus on lowering barriers to health and wellbeing in Central Brooklyn. While resiliency is central to the initiative, it also encompasses other goals, such as

Brooklyn's businesses, buildings, infrastructure, and communities are increasingly exposed to climate change related threats that stand to compound existing stresses.

improving health and poverty indicators and, for the purposes of this CEDS, are looked at as a model for a systemic approach to addressing some of the borough's most pressing issues.

UTILITIES

While Brooklyn's electrical grid is well-developed and in good condition, renewing the grid and ensuring adequate supply requires investment and innovation. Even with continued measures to reduce per-capita energy consumption and new energy efficiency measures, the New York State Independent Operator (NYISO) foresees that summer peak demand will grow through 2027, up to 12,788 MW (or 14% above summer peak load in 2016). Meanwhile, the State has indicated its intention to close the Indian Point nuclear plant, as well as several aging electricity plants over the next 5 years (which represents more than 25% of the City's energy supply). These closures, though in line with the State's goals of obtaining 50% of its power from renewable sources by 2050, could have negative effects on the overall energy infrastructure and supply if adequate measures are not taken. Further, the continued acceleration of climate related shocks may reduce the reliability of the existing electricity transmission networks. New infrastructure, as well as guidelines for integrating energy efficiency and green energy creation into new development, should be explored to ensure Brooklyn's energy system is robust, redundant, and resilient.



Brooklyn brownstones



Sheepshead Bay Marina

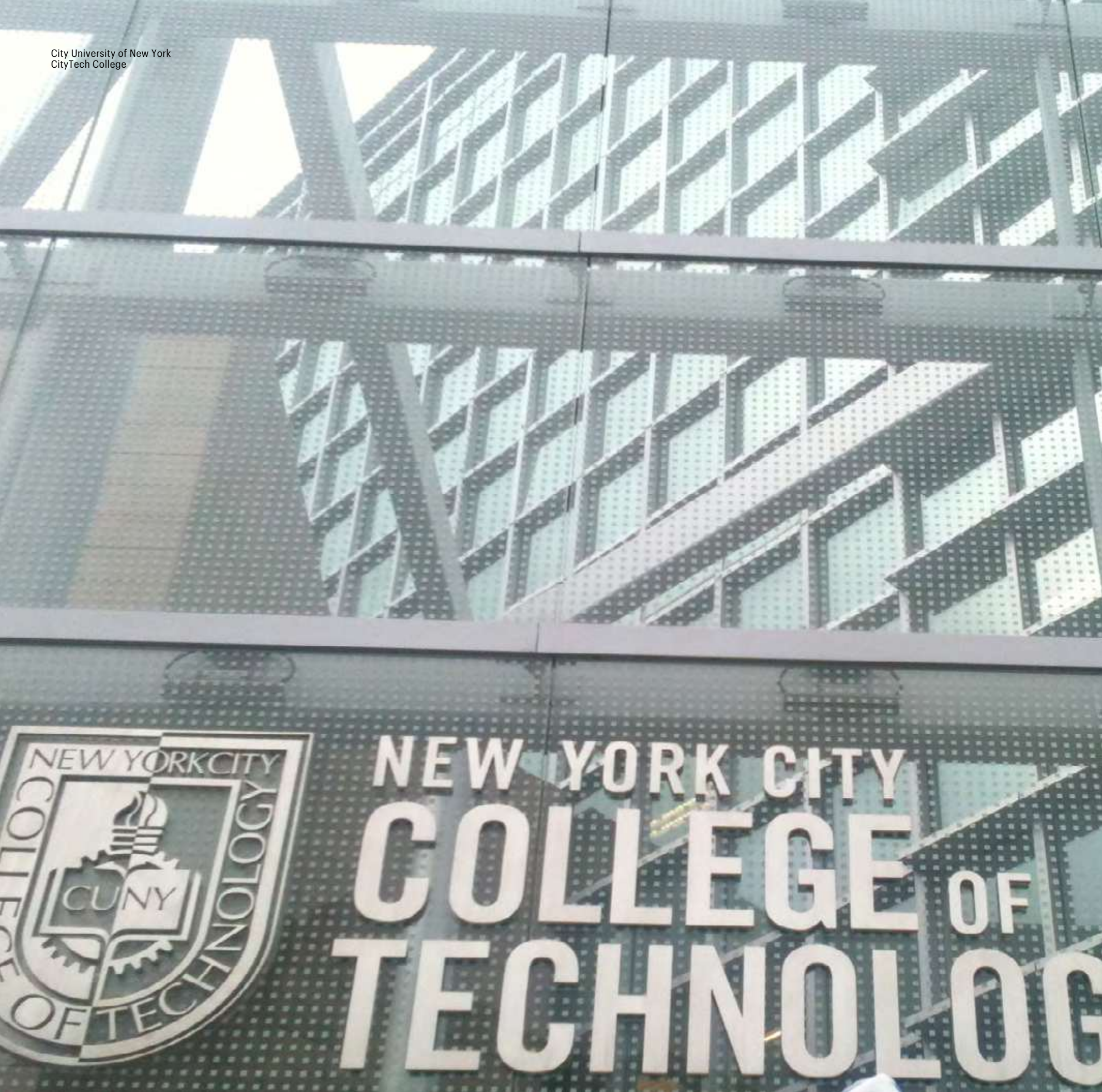
STRATEGIC DIRECTION

A vision for Brooklyn’s future as a place where employers, people, and neighborhoods thrive must be supported with concrete goals and indicators to measure the progress of strategic initiatives and tactics and evaluate target application areas.

VISION

What is the vision for Brooklyn's future? Brooklyn will continue to evolve into one of the country's most dynamic urban economies, where employers, people, and neighborhoods thrive. Brooklyn will continue to grow in terms of population and economic expansion, emphasizing inclusive growth that creates new employment opportunities; better connects residents to economic opportunity at a diversity of entry points; and fosters vibrant and equitable neighborhoods that attract and retain the next generation of workers and residents. Brooklyn's neighborhoods and economy will be prepared to withstand and bounce back resiliently from disruption to industry and environmental threats associated with climate change.

Technology and innovation will play an important role in Brooklyn's growth. Brooklyn will build upon a historic New York City legacy of leveraging technology, such as the subway, to connect people with innovation to expand access to opportunity, attract investment, improve quality of life, and connect people with economic opportunity. Major investments and policy changes will reflect this forward-facing vision of transformation and evolution, identifying boroughwide regulatory and programmatic interventions and place-based investments that leverage innovation and change to bring Brooklyn's economy firmly into the future.



LESSONS FROM THE PAST

Brooklyn has long been a major economic engine driven by innovation and defined by the core foundations of its economy: its employers, people, and neighborhoods. Understanding where the borough has come from can inform an understanding of where it is headed, including the strengths and challenges that are likely to continue to shape the borough's history for the next 100 years.

EMPLOYERS

While the meaning of innovation has changed over time, Brooklyn businesses have always set new standards for industry. While in the 20th century Brooklyn workers often made the products that Madison Avenue helped to advertise, in the 21st century Brooklyn has become a destination for all sectors, shifting from solely manufacturing and shipping to knowledge based industries. Countless aspiring entrepreneurs, many of whom were immigrants, have also thrived over the last 100 years in Brooklyn, making clocks, earplugs, gloves, paintbrushes, children's books, and food products.

PEOPLE

Brooklyn is one of the most diverse communities in the country, and has been made more diverse by waves of immigration and domestic migration over the last century. Over the last century, millions of Brooklyn residents have worked in the borough's commercial centers, staffing the borough's historic factories as well as offices and shops. While historically many businesses were the sites of social injustice, possessing the same challenges of exploitation and racism that mirrored industry across the country, Brooklyn's residents have also sought and achieved new financial opportunities for generations, including the borough's large immigrant communities. Recent investments and rising household incomes have lifted many Brooklyn residents to new levels of prosperity, but inequality remains.

NEIGHBORHOODS

Brooklyn's iconic neighborhoods have long been defined by small communities as well a global outlook that attracts innovation. Many of the borough's neighborhoods are rooted in ethnic communities home to small businesses across the borough that have long contributed to borough vibrancy. At the same time, a range of iconic multinational brands got their start in Brooklyn, including Standard Oil, Bristol Myers Squibb, Nathan's Famous, Twizzlers, and Domino Sugar near the turn of the last century, and present day globally loved brands including Brooklyn Brewery, Etsy, Vice Media, and Grado Labs. Investments in neighborhood vibrancy and commercial infrastructure have always been critical to Brooklyn's appeal to residents, workers, and employers alike.

TIMELINE

1918

Brooklyn Chamber of Commerce founded, with a vision as protector and promoter of the commercial and industrial interests of the city.



1930s - 1940s

Brooklyn is a major industrial supplier to the nation, including for wartime needs. Planning and construction begins on the Brooklyn Queens Expressway and Gowanus Expressway (today, Highway 278). Urban renewal razes several residential neighborhoods to make way for new infrastructure and affordable housing.

1960s

The Brooklyn Army Terminal and Navy Yard are decommissioned. America's first Community Development Corporation, the Bedford Stuyvesant Restoration Corporation, is founded to support equitable neighborhood development.

1980s

Planning for the revitalization of the waterfront, including Brooklyn Bridge Park, begins. The Brooklyn Navy Yard Development Corporation (BNYDC) is established to support industry diversification.



2000s

The City of New York takes note of BNYDC's success and funds major upgrades to Yard's basic infrastructure. The Downtown Brooklyn Cultural District commences significant development.



2010s

Innovators located along the formerly industrial waterfront attract billions of dollars from investors. NYU Tandon opens. The Brooklyn brand continues to shape global tastes.

1920s

The Great Migration and significant Puerto Rican immigration diversify the borough. The Brooklyn Chamber of Commerce begins admitting female members.



1950s

Deindustrialization presages employment losses and disinvestment in Brooklyn industry. The Brooklyn Dodgers move to Los Angeles.



1970s

The blackout of 1977 and the rioting that follows come to represent disinvestment in Brooklyn; almost half of Bushwick's commercial operations close within one year.

1990s

Metrotech development commences. New waves of immigration continue to contribute to Brooklyn's vibrancy.



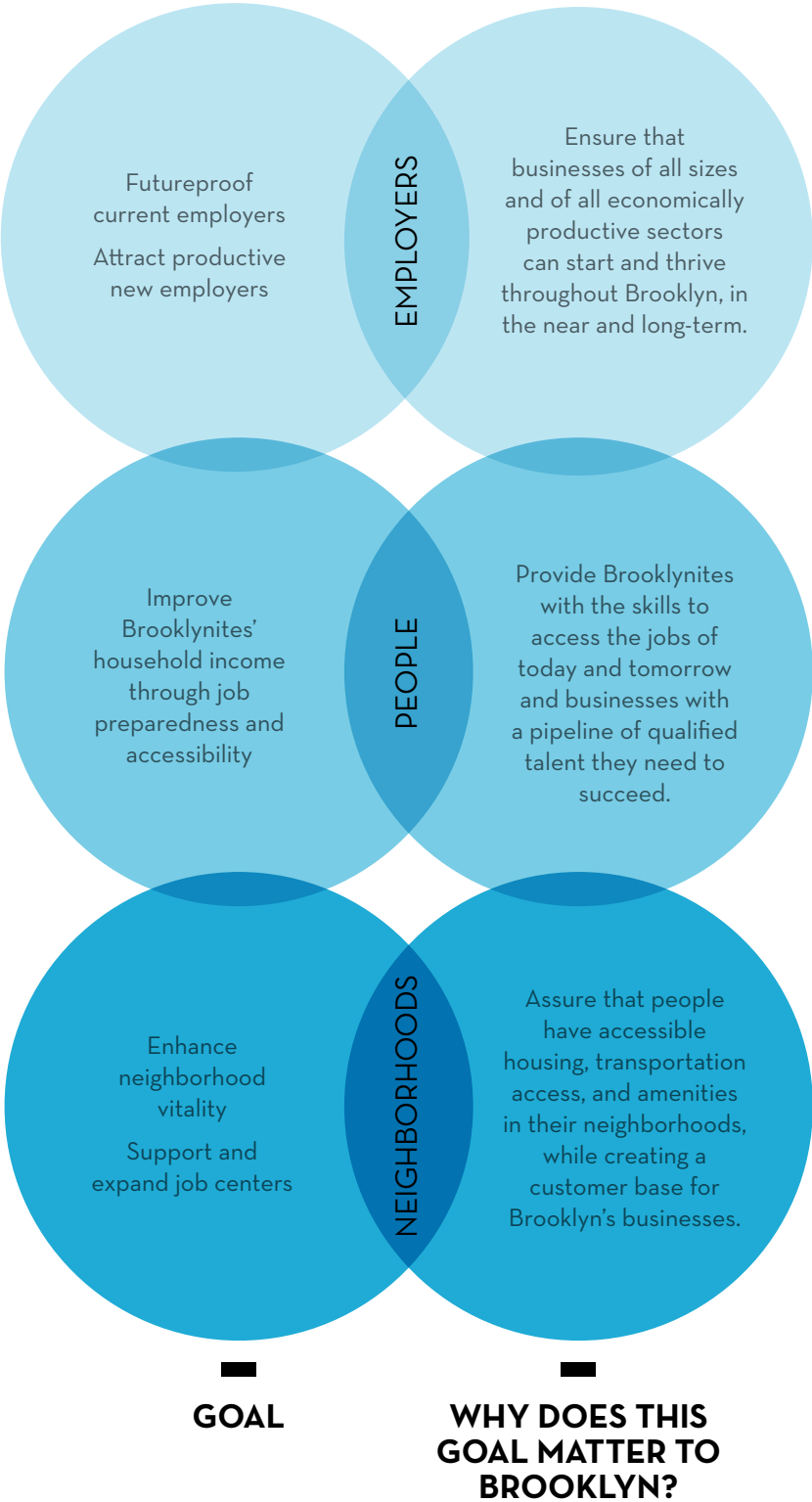
2018

Brooklyn Chamber of Commerce has evolved into an influential economic development engine that provides direct business services and advocacy on the city, state, and federal levels.



GOALS

In order to achieve this vision, this Strategy identifies goals consistent with the key challenges outlined in the Diagnosis of Opportunities and Challenges section. Each goal is multifaceted, addressing challenges that benefit Brooklyn’s employers, people, and neighborhoods, and will guide the implementation of proposed investments and initiatives in the following section.



INDICATORS OF SUCCESS

Can strategic initiatives address BK’s challenges to realize its goals? Strategic initiatives that can achieve the goals this strategy outlines must be evaluated and identified upon their ability to create cross-cutting benefits across Brooklyn’s Employers, People, and Neighborhoods. The Strategic Initiatives identified by this CEDS (as detailed in the following section) comprise four categories of strategic focus:

Employer Development and Attraction: By helping prepare existing businesses for the future and attracting new dynamic employers, Brooklyn can usher in further prosperity, catalyze neighborhood investment, futureproof the borough’s economy, and provide more economic opportunity for Brooklyn residents.

Workforce Development: By providing better workforce development, Brooklyn can futureproof its workers for the 21st century, connecting people with the employment opportunities that allow them to invest in themselves and their communities, while ensuring that businesses can hire the skilled workers they need to thrive. .

Infrastructure: By building new infrastructure to increase mobility and connectivity, businesses and customers can tap into new services and markets. People can access jobs, schools, hospitals, and each other more rapidly and efficiently. New, resilient infrastructure can also help reduce vulnerability.

Housing and Neighborhood Vitality: Increasing housing supply can help alleviate housing stresses on new and existing residents, ensuring that the borough continues to grow and remains accessible. Investments in neighborhood vitality—like open space, cultural assets, retail amenities, and improved public services—can help improve quality of life, ensuring that Brooklyn attracts and retains the workers, residents, and businesses of the future.

How can the implementation of Strategic Initiatives be evaluated?

As the strategies and investments identified in the next section are implemented, it will be critical to track both outputs (measurements of how the designated initiatives have been implemented) and outcomes (measurements in changes to underlying societal trends). As illustrated in the graphic to the right, success in achieving the goals of this CEDS can be evaluated along key outputs and outcomes.

Employer attraction and retention

OUTPUTS

New jobs, especially earning more than \$50,000/year
New businesses, especially in targeted industries
New commercial space

OUTCOMES

Increased number of residents living and working in Brooklyn
Increase in median household income
Increased number of businesses in target sectors such as information, manufacturing, and healthcare • Establishment of new, recognized commercial centers that support existing and future businesses

Workforce development

Higher program completions

Reduction in the cost of employer-led training and retraining • Reduction in the number of job openings and the length of time jobs go unmatched

Reduced workforce turnover

Reduction in unemployment for underserved communities

Increase in matches between employer led training programs and employment

Shortened unemployment durations

Infrastructure

Increased % of residents served by high capacity transit

Reduced commute times boroughwide

Increased % of residents with fast and affordable broadband internet

Reduction of the “digital divide” • Growth of target industries in new job centers.

New flood protection, water pumping infrastructure, and energy resiliency infrastructure

% of waterfront residents, businesses, patients protected from climate risk • % of waterfront real estate protected from climate risk • Reduction of System Average Interruption Frequency Index (SAIFI) for utility services

Housing and Neighborhood Vitality

Economically accessible housing units

Reduction in % of rent burdened households

New mixed-use development, particularly retail and commercial office space in underserved neighborhoods

Increase in commercial activity in underserved neighborhoods

Publicly accessible and inviting open space

Increased ratio of open space assets to residents • Increase in % of residents who live within .25 miles of a public accessible park

Safe, active streets

Reduction of pedestrian deaths and injuries

Strengthened cultural assets

Enhanced neighborhood vitality and social and economic activity



STRATEGIC INITIATIVES AND TACTICS

What strategic initiatives can accomplish these goals?

This CEDS outlines a variety of actions and investments to advance these strategic goals. A combination of targeted investments, policy changes, and new programs can lay the foundation for both economic growth in the short-term as well as build the economic resilience of Brooklyn for the long-term.

Employer attraction and retention

Attract and retain employers that provide Brooklyn residents with employment opportunities and contribute to regional economic growth. Notwithstanding strong employment growth since 2010, Brooklyn faces a competitive and changing business environment. Rising costs of doing business, technological change, and competition from other regional communities could constrain future growth potential. Despite some new deliveries, the inventory of commercial space needed for business growth has experienced a net decline since 2010. The creation of new commercial centers and business growth in Brooklyn can be supported with targeted interventions to create commercial space across the borough, and to increase economic diversification and resiliency. Potential strategies include:

1. Unlock new commercial development and office space.

Redefine manufacturing zones to provide space that supports every stage of business. Current zoning in manufacturing zones does not address present day needs for the integrated set of uses businesses need to thrive, including logistics, manufacturing, back-office, and housing infrastructure. Redefining manufacturing zones to permit a broader range of uses would help to provide space to support every stage of business, complement existing manufacturing uses, and create more vibrant neighborhoods. The need is especially acute along the “Innovation Coast,” Brooklyn’s East River waterfront replete with tech businesses and startups.

Expand the Industrial Development Fund. Expand the existing fund to stimulate creation of new manufacturing space by non-profit developers to support the creation of affordable commercial space. Space developed by this fund could be managed through a boroughwide lease model.

Upzone transit-accessible commercial districts. Upzoning underutilized commercial districts, particularly those located near existing transit assets, would provide incentives to create new commercial space. Potential areas of interest include Downtown Brooklyn, Broadway Junction, Coney Island, North Brooklyn, Empire Boulevard, or job hubs near major hospitals in Central Brooklyn.

Expand existing and develop new convention and meeting space. Business visitor spending across the borough continues to rise, and Manhattan convention space is the busiest in the country. Expanding existing facilities at the Marriot and Brooklyn Expo and developing complementary new facilities accessible to Manhattan and Queens could help to capture a larger share of business visitor spending citywide.



Unlocking the Commercial Space of Tomorrow in Manufacturing Zones

Supporting the development and preservation of commercial space will help drive Brooklyn’s economy. Upzoning commercial districts, changing IBZ regulations to allow for broader mixes of uses consistent with today’s economy, and making available publicly owned land for development can all support economic expansion by providing employers with needed space.

In particular, redefining the City’s manufacturing zones has the potential to create commercial space most supportive of future-facing creative, tech, and advanced manufacturing industries by allowing for integrated neighborhoods that combine various commercial typologies with existing manufacturing and light manufacturing, which in turn can be preserved and enhanced as a result.

2. Leverage public assets to support new commercial development

Reposition publicly owned vacant land. Significant amounts of publicly owned land exist across the borough, including in underdeveloped areas served by transit. For example, near Broadway Junction there are multiple large public parcels currently used for parking and storage that could be repositioned to create a new commercial center.

Leverage NYCHA property. NYCHA is the largest landlord in the country, and has significant property that could be made available for redevelopment to create revenue streams to support housing improvements and preservation, serve residents, and support community-facing commercial activities. Across its portfolio, NYCHA has significant inventory of vacant or underutilized land that could support densification as well as new development to offset deficits, as described in the Authority’s NYCHA NextGen plan. For example, there are development opportunities on some campuses, including at Farragut Houses near the Brooklyn Navy Yard, or near Broadway Junction and East New York. In addition, the agency’s portfolio has significant vacant ground floor space that could be repositioned for commercial activity that serves NYCHA and community residents, creates new economic opportunity, and better integrates NYCHA property into the surrounding neighborhood fabric.

3. Reduce costs of doing business with new tools

Reform property taxes to incentivize landlords to lease to small businesses: Brooklyn’s small businesses – the engines of its prosperity – are already burdened by high commercial rents and costs of doing business in New York City. The City should seek property tax solutions to incentivize property owners to give favorable long-term leases to small businesses through tax credits or abatements.

Improve access to working capital for small businesses. Small businesses often cite difficulties accessing credit as an impediment to their success and expansion. Supporting small business loan funds like the Brooklyn Alliance Capital or the Excelsior Growth fund can help more businesses grow, invest, and remain in Brooklyn.

Reduce regulatory burdens to unleash innovation. As innovation transforms the economy, Brooklyn needs a flexible and tech-friendly approach to regulation. Though regulations help create a livable city and can help balance public goals with private sector gains, the City should study how to reduce the regulatory burdens it places on new businesses and allow tech disruptors to gain a foothold in the borough, including in fields such as healthcare & biotech, transportation, hospitality, fintech, and retail.



High costs of doing business could constrain growth of existing small businesses or the attraction of new start-ups. Pictured: Tenants at Industry City.

Workforce Development

Match residents’ skill sets with the industries of the future to increase the number of Brooklyn residents with quality jobs. Brooklyn has experienced significant private employment growth, and higher-wage industries including healthcare, tech, and the knowledge industries are growing faster in Brooklyn than they are citywide. At the same time, much of this growth has been in the low-skill, low-wage retail services and food and accommodation industries. Brooklyn’s educational institutions are the backbone of the borough’s talent development pipeline, but are distributed unevenly by investment level, capacity, and geography. Initiatives that target workforce development can help reduce the gaps between job openings and current skills, and prepare workers and businesses for current and future job markets.

1. Create higher education and workforce development programs that match resident skill sets with the industries of the future and jobs with diverse entry points.

Expand training in future-facing industries such as data science and cyber security. Expanding upon existing initiatives that give a broader base of Brooklynites the skills to access jobs in the fast-growing tech and knowledge industries can expand access to higher paying jobs to residents traditionally underserved by such opportunities. Employer-led training programs can build upon this can also provide workers with real world experience that best positions them for the job market. For example, expanding upon the City’s Tech Talent Pipeline initiative, and realizing the Mayor’s goal of establishing New York City as a cybersecurity hub by supporting new programs such as NYU Tandon’s Information Systems and Internet Security (ISIS) laboratory could strengthen future economic prospects and support more equitable growth. Partnership models between the City and private industry such as Industry City’s Innovation Lab could also be replicated in new emerging commercial and innovation clusters (see call-out box).

Create a system that allows educational institutions to continuously update curriculums that reflect shifts in the economy. Brooklyn’s schools is a great agent of social mobility in Brooklyn, but significant gaps between job openings and program completions suggest that curriculums are not mirroring the present economy. Creating an institutional framework that allows for frequent updates to ensure alignment with the jobs of the future will create more opportunities to connect residents with opportunity. CUNY and other institutions such as NYU Tandon should also explore opportunities to more closely collaborate with employers, to both connect students with opportunities after graduation and to seek input on adjustments to curriculums, including in future growth programs such as data management, coding, and cybersecurity.

Improve college success by helping students meet financial and advisory gaps. Resources should be targeted to addressing the causes of delayed completions and dropouts. For example, the City and State should direct resources toward non-tuition expenses that burden low-income students. The Governor and State Legislature should develop a funding source that would make the Accelerated Study in Associate Program (ASAP) a universal program at CUNY, which is in the process of being expanded to 25,000 students but would still cover less than half of all system students, support changes to the Tuition Assistance Program that align with how students study, and provide resources to cover other non-tuition costs, such as MetroCards.

2. Expand educational infrastructure.

Co-locate educational institutions with new commercial development. Distance from educational assets—and the lengthy commutes and associated costs that come with it—can deter attendance in workforce development programs. To better connect residents with skills in new commercial nodes and provide effective real-world connections to industry, new educational institutions or outposts of major institutions should anchor commercial development. Developers could receive incentives to include facilities space in their projects.



Building Workforce Development and Entrepreneurship

New training programs and workspaces that combine education and training with commercial activity and settings are helping to prepare Brooklynites for jobs of the future. For example, the Innovation Lab, a partnership between Industry City, CUNY’s City Tech (New York City College of Technology) and local community development organizations, is an integrated entrepreneur development and employment center that provides prescreening and job placement services at more than 400 businesses that work out of Industry City, largely focused in the creative, manufacturing, and tech industries. Higher education institutions are also providing students with new professional opportunities. The Brooklyn College Feirstein Graduate School of Cinema at the Brooklyn Navy Yard also provides students with real-world experience, with a large state of the art facility that offers the most current workspaces, studios, stages and equipment to provide students with the opportunity to create in a fully professional setting. Within the Navy Yard, proximity to the businesses who operate there further benefits students, as does the presence of the Made in NY media center, a collaborative workspace, incubator, educational center that supports new and emerging talent. A planned virtual and augmented reality laboratory will provide further opportunities for innovation in new media learning and training.

Infrastructure

Build upon existing system strengths with targeted infrastructure investments to create new opportunity areas for growth and serve the job centers of the future. Large swaths of the borough are underserved by transit access. Internet connectivity is key to accessing economic and educational opportunity, yet a large share of Brooklyn residents lack access to broadband internet at home. Billions of dollars of investment and almost one fifth of Brooklyn residents are threatened by climate-related risks. Investments in systems and infrastructure allows for more connectivity within Brooklyn and to other commercial centers in New York and around the world. Improved access to jobs, businesses, markets and services helps support the workers and businesses of the future, and create new opportunity areas for investment in presently underserved areas.

1. Implement smart transportation technology to improve connectivity around the borough.

Encourage innovation in smart transit interventions: New York City should loosen regulatory restrictions and create more partnerships with existing small businesses and on-demand ridesharing companies to improve last-mile access to existing subway and commuter rail lines. Such partnerships, in trial phases in Philadelphia, Oakland, and Columbus, can help mitigate the mobility limitations caused by Brooklyn’s “subway deserts.” Partnerships with ride-sharing companies can also help reduce costs and increase choices for paratransit, such as Massachusetts Bay Transportation Authority’s (MBTA) On-Demand Paratransit Pilot Program, which offers on-demand wheel-chair accessible transit to system customers through partnerships with ridesharing companies like Uber and Lyft.

Encourage smart tech to increase speed, efficiency, and reliability of public transit: Technology to improve the capacity and ease of use of the subways, such as modern signal infrastructure or modern payment systems, should be implemented speedily, so as to improve reliability and capacity. The borough should also position its bus system to benefit from technology to reduce “bunching,” increase speed and reduce boarding times. This includes implementing autonomous vehicle technology, smart payment systems, transit-signal-priority technology, smart bus tracking and dispatch, and Cooperative Vehicle Infrastructure systems.



Smart Transit Technology to Improve Bus Service

Advancements in transit technology could address critical challenges of slow and inefficient service that confront bus service across Brooklyn.

The ability of buses to adhere to their advertised schedule is vital to effective bus operations. Automated vehicles (AVs) can help provide more efficient and safe service. Helsinki launched a new, electric self-driving bus line in the fall of 2017. The goal of the initiative is to provide a convenient and sustainable option to complement public transit. Buses are equipped with GPS tracking for ease of use. Cities in Europe and China are also experimenting with self-driving buses to add capacity and reach more users.

The benefits of AV technology can be complemented by smart Cooperative Vehicle Infrastructure systems that leverage communications between infrastructure, such as traffic lights and transit vehicles to improve congestion. These systems dynamically adjust bus speed and traffic signal timings along the path of a running bus to improve its schedule adherence.

2. Expand transit infrastructure to connect Brooklyn talent with economic opportunity and move goods.

Implement critical rail projects: Several rail initiatives have been identified as priorities for expanding transit access and building upon the existing system. While not the only rail proposals for Brooklyn, priorities include:

BQX: The BQX will link neighborhoods along a 14-mile route along the Brooklyn and Queens waterfront from Sunset Park to Astoria, linking communities underserved by transportation and nodes of commercial activity to established transit systems. The City is undertaking planning for the project, which is projected to serve more than 15 million annual riders by 2035.

X-Line: The Tri-Borough Express, or “X-Line,” would leverage existing freight tracks and rights of way, running from Bay Ridge, across Flatbush, through Queens, and ultimately to the Bronx, connecting multiple existing subway lines across the southeastern half of Brooklyn, while ensuring adequate accommodation for freight traffic. Served by new transit access, the neighborhoods the X-Line would service would vastly improve in their connectivity and attract commercial investment. Other metro areas in the U.S. and around the world successfully mix freight and passenger operations. A feasibility study and due diligence for permitting freight and passenger trains to move through the same corridor should be advanced, as should opportunity assessments for potential new station area development. Already, the MTA has issued a Request for Proposals to develop a mixed-use project above a 3.8 acre section of the LIRR’s Bay Ridge Branch freight rail corridor that could serve as a model for the entire corridor.

Utica Avenue Subway: The idea of a train line down Utica Avenue has existed since the early 20th century, featured in transit expansion documents from the 1920s and 1930s. More recently, the De Blasio Administration’s OneNYC plan proposed a study of the line, which could serve as an extension of the 4 line.

Train Extension to Red Hook: A proposal to expand train service from lower Manhattan to Red Hook would provide critically needed transit access and connectivity to other subway lines. Enhanced transit access would serve existing residents and attract investment to the neighborhood. In an assessment of one potential extension route.

Express Service to South Brooklyn: The restoration of F Train Express service would improve long commute times from South Brooklyn. A feasibility study recently completed by the MTA recommended implementation, which remains under consideration. In addition, the extension of the B train from Brighton Beach to Coney Island/Stillwell Avenue should be explored to provide further connectivity.



Expand and improve citywide Select Bus Service: Since the City introduced Select Bus Service in 2008, the program has improved service on some routes. Improvements to Select Bus Service could enforce dedicated bus lanes and expand service routes to serve more Brooklyn residents, especially in areas that lack subway access.

Promote use of rail and seaports for freight: Promoting collaborative regional solutions for the safe, efficient, and environmentally sustainable movement of freight can help to ease truck traffic on the borough’s roads and strengthen industry—especially via rail and seaports. Expanding and modernizing the Brooklyn Army Terminal can be used for further freight and rail access. Allowing for shared freight and passenger rail networks, such as along the future X-Line, can help increase the efficiency of both systems. The Cross-Harbor Freight strategy being created by the Port Authority of New York and New Jersey and other agencies has highlighted that serving modern rail equipment requires that the rail right-of-way, signals and rail yards be brought into a good state of repair. Rail yards would need to be expanded to accommodate increased freight demand and to clear the rail right-of-way, allowing passenger and freight trains to travel unobstructed throughout the day.

Expand Ferry Service for Residents and New Jersey Commuters: Although Downtown Brooklyn has become an increasingly attractive location for office tenants, the lack of direct connection to New Jersey commuters is an impediment to long-term growth and new business attraction for companies that might consider Brooklyn as a Manhattan alternative. Direct ferries from Hoboken Terminal to Downtown Brooklyn would allow commuters on NJ Transit direct access to Brooklyn without having to cross through Manhattan, cutting commute times by more than 10 minutes and increasing the likelihood of corporate relocations to Brooklyn’s key commercial centers. In addition, there are opportunities to expand service to other underserved parts of Brooklyn, including additional service in Sunset Park and Coney Island, connecting to Sheepshead Bay and Canarsie.

Study the potential to expand bicycle usage boroughwide: Bicycle usage has expanded citywide, offering an important transportation alternative that provides health and environmental benefits. Expanding bicycle lanes to strengthen road safety and capacity and exploring opportunities to expand bicycle share programs could grow these benefits. In addition the borough’s existing pedestrian and bike bridges are at capacity, preventing expansions in commuting that would provide health and environmental benefits to residents and workers. Increasing access for alternative modes between Brooklyn and Manhattan and Queens can help to enhance connectivity. The Department of Transportation’s current study to evaluate adding capacity to the Brooklyn Bridge should be supported, and alternative bike and pedestrian routes should also be explored.

3. Leverage connectivity to expand economic opportunity to all.

Create a new architecture of broadband connectivity to increase commercial and residential access: Ubiquitous high-speed internet for businesses will support attraction and retention in emerging commercial clusters, while access for individual Brooklynites will support workforce development activity and enhance access to employment opportunities. The City has stated a goal of providing ubiquitous, affordable, high-speed internet access by 2025. A stronger core architecture of broadband fiber will increase boroughwide access and reliability, and will help to support the expansion of community wifi efforts such as Link NYC and public community centers as well as cell phone data capacity. To do so, City assets, financial resources, and partnerships with private companies should be mobilized to facilitate the buildout and sustainability of transformative broadband infrastructure across all boroughs.

4. Strengthen investments and assets by ensuring resiliency to climate-related events.

Implement storm surge barriers and other protective solutions in vulnerable coastal areas, such as Coney Island Creek, the Gowanus Canal, and Newtown Creek, and deploy a long-term solution for flood risk in Jamaica Bay. Coastal infrastructure has been identified by resiliency planning initiatives as critical assets to strengthen and protect communities and investments from flood inundation. Implementing protective solutions along the borough’s water bodies will protect existing and future investments and enhance quality of life for vulnerable residents, including large concentrations of NYCHA residents.

Develop public private partnerships to implement green infrastructure. Green infrastructure can mitigate climate-change related challenges including stormwater management and heat while adding value to neighborhoods. Further study should be undertaken to identify cost-effective opportunities to implement green infrastructure retrofits and, where possible, leverage private capital to do so, creating value while strengthening neighborhoods’ resiliency and vibrancy through “greening.”

Ensure the supply of reliable, affordable, and sustainable energy. Invest in renewable energy to meet City and State greenhouse gas reduction targets, and increase capacity in Brooklyn to serve growing population and businesses. A new transmission cable, such as the submerged Empire State Connector cable, could transmit affordable, renewable power from Upstate New York to help increase energy supply and reliability while helping the City and State reach goals for renewable energy production. Energy retrofits on existing structures could also help to provide new sources of renewable energy. Other renewable energy opportunities should also be explored, such as offshore windfarming.” Opportunities to increase power supply via natural gas capacity should also be explored.

Incorporate resiliency into new development to both create new economic activity while making neighborhoods more resilient overall. New development can serve as a resiliency solution by integrating enhanced requirements for building adaptation, including to address flooding risk, heat, and energy efficiency. The City has taken the steps to integrate resiliency guidelines into its capital program, making it the first city in the country to do so. Expanding these guidelines to new private development can ensure that investments are protected over time.



The CitiBike bicycle share program



Green roof technology at the Brooklyn Navy Yard

Housing and Neighborhood Quality

Enhance neighborhood vitality and quality of life to retain and attract the residents and workers of tomorrow. Brooklyn’s net population growth is slowing. Despite a boom of residential development, social stressors including poverty and housing costs have grown, with a large share of residents living in public housing. Concerns over the durability of Brooklyn “cool” have been sparked by neighborhood change and displacement. Place-based investments can enhance placemaking, quality of life, and resiliency to ensure that Brooklyn remains attractive (and accessible) to a diversity of current and future residents. Maintaining accessibility to neighborhoods with affordable housing, great retail, exciting restaurants, and amenities will allow Brooklyn to continue to attract and retain workers and talent.

1. Improve delivery of municipal services through the deployment of place-based “smart city” technology.

Implement cloud-based technology to improve sustainability and efficiency.

Sustainable and accessible municipal services can help increase quality of life across the borough. Supporting and leading the rollout of smart-city technology, such as the initiatives of the City’s “Building a Smart + Equitable City” report, would allow Brooklyn to remain on the cutting edge of forward-looking neighborhoods. Initiatives could include incentivizing smart indoor lighting and wireless water meters to reduce energy and water costs, smart-waste management to increase efficiencies in recycling and garbage collection and help beautify neighborhoods or even snow-plow tracking to reduce delays for workers and businesses during adverse weather.

2. Increase density to create new housing opportunities.

Rezone transit-accessible, underutilized areas to provide new residential

opportunities. Increasing the housing supply can ultimately help bring down the costs of housing for all, making the borough more accessible and inviting to future talent. Increasing density in areas that are served by high-capacity transit or near major job centers can create new housing supply for Brooklyn residents, with inclusionary housing requirements to ensure people with a diversity of incomes can access these opportunities. The City should advance or study proposed and potential rezonings underdeveloped areas that are well served by transit.

3. Preserve and strengthen retail corridors.

Incentivize affordable retail space. Neighborhood retail provides an important amenity to residential areas that enhances quality of life and sense of place. Incentives

to provide affordable street-level real estate can preserve neighborhood character across the borough. These might include a zoning bonus for affordable retail space, eliminating the special permit requirement of gyms and health clubs to open up more opportunities for active ground-floor uses, investing in the Chamber’s “Chamber on the Go” program to bring business aid to retail establishments directly, as well as tax policy and financial incentives such as a new tax abatement or subsidy program for owners who provide long-term, affordable leases for retailers.

4. Create new open space in underserved neighborhoods.

Create new open space in underserved neighborhoods:

Parks improve neighborhood vibrancy and quality of life, but many of Brooklyn’s neighborhoods, including Bushwick, Gowanus, Crown Heights, Borough Park, and Flatbush, are underserved by open space. The inclusion of open space should be a part of planning for any new major development to ensure that new assets serve the community that surrounds them.

Create a new linear park under/over the Brooklyn Queens Expressway (BQE): The transformation of areas under the BQE (where it is elevated) and the decking of areas over the BQE (where it is below grade) into an expansive greenspace and bicycle

network would leverage the existing strengths of the neighborhoods it spans, stitching together critical nodes of activity along the waterfront and providing an amenity that improves quality of life and attracts investment. Primarily city-owned rights of way can help facilitate project implementation. New revenue sources should be considered as part of this development, such as metered parking and concession stands.

5. Foster cultural innovation across Brooklyn.

Strengthen existing assets. As the City’s CreateNYC cultural plan identified, many existing cultural assets face funding shortages or challenges reaching audiences. Place-based investments or new cultural “districts” that create destinations where nodes of cultural assets exist can increase visitation and grow revenues, eventually attracting additional investment.

Provide affordable cultural space.

Cultural innovation can be supported through the provision of affordable cultural space, which is in short supply across the borough. As part of the City’s CreateNYC plan, the City strives to preserve and develop long-term affordable workspaces through the Affordable Real Estate for Artists initiative (AREA). These efforts could include leveraging publicly owned space in Brooklyn.



Brooklyn small retail

Incentives for Affordable Retail

In the face of changing retail environments and rising commercial rents, small businesses and in particular small retailers have struggled, facing displacement even as storefronts across the city remain empty for months.

Other cities have recognized the important value that retail provides. For example, the City of San Francisco’s Legacy Business Historic Preservation Fund recognizes small businesses as community assets and provides grants to businesses or the property owners that house them to lower rents and enable these businesses to thrive, even as rents rise.



PROJECT CLUSTERS

Where could strategic initiatives and projects identified by this CEDS be realized?

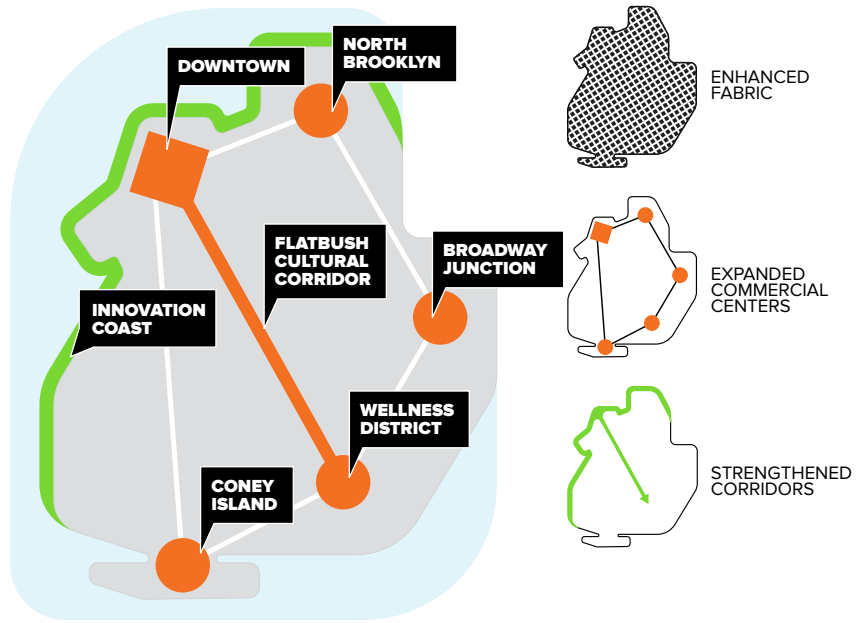
Projects identified by this CEDS can be realized boroughwide or focused in areas where they are likely to create maximum impact, strengthening or catalyzing existing or future nodes of activity and vibrancy. Where potential tactics or projects can be considered geographically, locations should be evaluated for their potential to create new benefits and impacts consistent with the Vision and Goals.

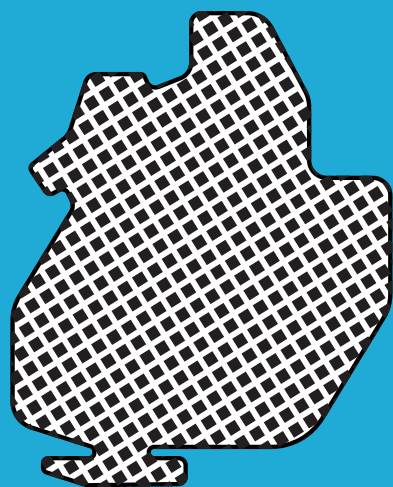
Building upon the existing conditions analyses in the preceding pages, this CEDS proposes project implementation clusters that consider industry and employment trends, transit access, existing zoning and land use, underutilization of existing land, housing density, distribution of neighborhood and cultural assets, and the distribution of educational assets. While further study would be required by the City and stakeholders to refine and expand upon these illustrations, the neighborhoods and sites proposed for these potential project clusters are intended to be illustrative of potential future states for Brooklyn.

The potential clusters are centered around three key networks that help to define movement through the borough as well as serve as key landmarks: the Innovation Coast, connected along the East River waterfront and by the BQE; a ring of Expanded Commercial Centers ringing the borough with Downtown Brooklyn as a hub; and the Flatbush Corridor, linking the dense Downtown Brooklyn corridor with a wealth of cultural assets spanning Flatbush Avenue all the way to Brooklyn College.

Potential clusters where strategic recommendations could be concentrated are centered around three key networks that help to define movement through the borough as well as serve as key landmarks:

- Enhanced Fabric:** Strategic recommendations are applied boroughwide to enhance the economic, physical, and community fabric of the borough and support growth and vitality everywhere.
- Expanded Commercial Centers:** A network of expanded commercial centers forms a ring with Downtown Brooklyn at its center, expanding activity and creating new economic opportunity for residents and neighborhoods across Brooklyn.
- Strengthened Corridors:** Brooklyn's historic spines are reinforced. Downtown Brooklyn, the borough's biggest commercial center, is expanded and strengthened. The Innovation Coast is strengthened and integrated with the surrounding neighborhoods, connected by and spanning the BQE, as is the Flatbush Corridor, linking the dense Downtown Brooklyn corridor with a wealth of cultural assets spanning Flatbush Avenue all the way to Brooklyn College.





Enhanced Fabric BOROUGHWIDE

Envisioning a Future Brooklyn

Applied across the borough, strategic initiatives and tactics can build upon existing strengths to create opportunity and attract growth for residents in every corner of Brooklyn. Existing and new businesses will have access to new tools that lower costs of doing business, while innovation will be unleashed by lowering regulatory barriers. The workforce of the future will be better equipped with up to date curriculums and new support tools. Boroughwide transit improvements will serve residents more efficiently and provide ubiquitous high-speed internet access, while new smart city cloud technology will improve the delivery of services to Brooklyn’s neighborhoods.

Key Strategies

Business Attraction and Retention Unlock new commercial and office space: Expand the Industrial Development Fund ● Reduce costs of doing business with new tools: Lower property taxes for small businesses; improve access to working capital for small businesses; reduce regulatory burdens to unleash innovation.

Workforce Development Create workforce development programs that match resident skill sets with the industries of the future and jobs with diverse entry points: Create a system that allows educational institutions to continuously update curriculums to reflect shifts in the economy; expand training in future-facing industries such as data science and cyber security; improve college completion success.

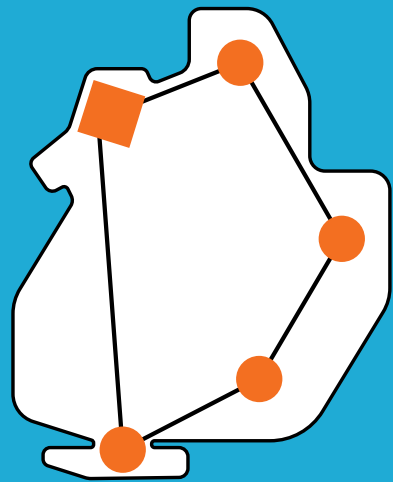
Infrastructure Implement smart transportation technology to improve connectivity around the borough: Encourage innovation in smart transit interventions; encourage

smart tech to increase speed, efficiency, and reliability of public transit. ● Expand transit infrastructure to connect Brooklyn talent with economic opportunity and move goods: Expand and improve Select Bus Service. ● Leverage connectivity to expand economic opportunity to all: Create a new architecture of broadband connectivity to increase commercial and residential access. ● Ensure the supply of reliable, affordable, and sustainable energy: Invest in renewable energy and explore additional natural gas capacity to meet City and State GHG reduction goals, and increase capacity in Brooklyn.

Housing and Neighborhood Quality

Improve delivery of municipal services: Implement cloud-based technology to improve sustainability and efficiency. ● Foster cultural innovation across Brooklyn: Provide affordable cultural space.





Expanded Commercial Centers

Envisioning the Future of Brooklyn’s Commercial Centers

A network of expanded commercial centers forms a ring with Downtown Brooklyn at its center, expanding activity and creating new economic opportunity for residents and neighborhoods across Brooklyn. Commercial growth in Downtown Brooklyn and secondary centers can be fostered by prioritizing flexible space that supports every stage of business and supporting the development of amenities and infrastructure that attract businesses, including educational anchors, vibrant mixed-use neighborhoods, transit, and cultural assets. As Brooklyn’s primary commercial center, Downtown Brooklyn will be strengthened with more Class A office space, while a satellite of expanded commercial centers will provide a diverse range of offerings for all types and stages of business. Potential enhanced commercial centers could include:

Envisioning the Borough’s Commercial Centers

Downtown Brooklyn: New class A commercial development would provide needed space for existing and new business growth, while incorporating smart city technology and green infrastructure into new construction could help position the downtown core as forward facing business district. The downtown core could be expanded through commercial rezoning at Flatbush Avenue and Fulton Avenue as well as development opportunities at Farragut Houses.

Central Brooklyn Wellness District: A wellness district that leverages Central Brooklyn’s existing concentration of hospitals and educational facilities can serve as a precedent for new healthcare delivery approaches and create accessible new employment opportunities. Densification could support accessory businesses and research facilities such as SUNY Downstate, as well as new wellness living facilities.

North Brooklyn: North Brooklyn, spanning from the North Brooklyn Industrial Business Zone to Bushwick, can foster the growth of creative and innovation businesses that have emerged there by leveraging existing strengths, including transit connectivity and existing industrial space. Unlocking new commercial space in industrial zones can attract new investment and support the creation of more integrated neighborhoods to expand quality of life and access to economic opportunity.

Broadway Junction: Broadway Junction could be repositioned towards mixed education and mixed commercial uses to create new workforce delivery systems and a commercial center that foster economic opportunity for all. A new institutional presence would anchor densified development and provide pathways to new employment opportunities, while rezoning industrial land and leveraging public assets could provide new opportunities for commercial development and densification.

Coney Island: Coney Island can leverage its existing strengths—including access to good transit, proximity to JFK airport—and diversify its residential and commercial offerings to grow visitation to Brooklyn, attract new investment, and enhance economic opportunity for local residents. New hospitality/tourism and retail anchors on open development sites in south Brooklyn could foster additional entertainment and tourism growth that establishes Coney Island as a

hospitality and entertainment destination. A hospitality education center could leverage proximity to Kingsborough College and its Culinary Arts Program to foster innovation and small businesses.

Key Strategies

Business Attraction and Retention Unlock new commercial and office space: Redefine industrial zones to provide space that supports every stage of businesses; upzone transit-accessible commercial districts. ● Leverage public assets: Reposition publicly-owned vacant land; leverage NYCHA property.

Workforce Development Expand educational infrastructure: Co-locate educational institutions with new development.

Infrastructure Expand transit infrastructure to connect Brooklyn talent with economic opportunity and move goods: Implement the X-Line and Utica Avenue subway; expand and improve Select Bus Service; promote use of rail and seaports for freight; expand transportation options for New Jersey commuters. ● Leverage connectivity

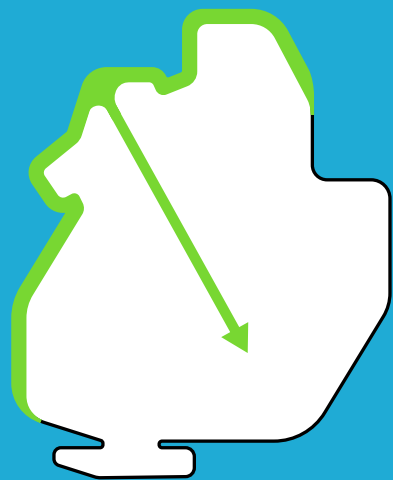
to expand economic opportunity for all: Create a new architecture of broadband connectivity ● Strengthen investments and assets by ensuring resiliency to climate-related events: Implement storm surge barriers and other protective solutions in vulnerable coastal areas; develop public-private partnerships to implement green infrastructure; incorporate resiliency into new development.

Housing and Neighborhood Quality

Increase density to create new housing opportunities: Rezone underutilized areas.



Downtown Brooklyn



Strengthened Corridors
INNOVATION COAST
& FLATBUSH
CULTURAL CORRIDOR

Envisioning the Future of Brooklyn’s historic spines.

Brooklyn’s spines are reinforced, creating circulation and integrating the neighborhoods they touch. Brooklyn’s East River waterfront from Greenpoint to Fort Hamilton is a home for innovation, strengthened with new commercial space and integrated with the surrounding neighborhoods by a new linear park under the BQE. Investments in a Flatbush Avenue corridor that extends from a strengthened Downtown Brooklyn, through the BAM Cultural District, and to Brooklyn College creates a network of commercial and cultural assets.

INNOVATION COAST

Once dominated by industrial and maritime uses, Brooklyn’s East River coast, from Williamsburg to Sunset Park, is undergoing significant change. While some industrial and maritime uses remain vital to the borough’s future, a span of underutilized former industrial space has attracted innovation industry businesses, which in turn support Brooklyn’s manufacturing future. Further business attraction and neighborhood vibrancy can be fostered via investment in a linear ecosystem of commercial space for every stage of business, anchor institutions, vibrant mixed-used neighborhoods, and cultural assets along Brooklyn’s Innovation Coast. While these sites have been isolated from the borough by the BQE’s physical footprint, a new open space network under and over the highway will connect the waterfront and provide linkages to adjacent neighborhoods. Potential initiatives include:

The Coastline: Commercial growth along the Innovation Coast can be fostered by prioritizing real estate that supports every stage of business and supporting the development of amenities and infrastructure that attract businesses. The redevelopment of key former industrial sites, such as the Port Authority’s Piers 7-12, the Navy Yard, and others could anchor the “Coast” with industrial and commercial mixed uses that support regional businesses while preserving critical existing functions. For example, the South Brooklyn Marine Terminal could be strengthened as a significant resource for the maritime industrial economy, providing expanded freight opportunities and serving emerging industries such as renewable energy.

Inland Connections: A key barrier to stitching together the burgeoning Innovation Coast and the rest of Brooklyn is addressing the physical separation created by the Brooklyn Queens Expressway. Transforming the spaces under and over the BQE into an expansive greenspace and bicycle network will leverage the existing strengths of the neighborhoods it spans, stitching together critical nodes of activity and providing an amenity that improves quality of life and attracts investment.

Cybersecurity and Emergency Response Innovation Center: Cybersecurity is a strong growth industry within the innovation economy, and has been identified as a potential business attraction opportunity by the City due to its strengths and experience in

counterterrorism. The City should foster more cybersecurity businesses by helping to anchor a new cybersecurity and emergency response innovation complex, potentially occupying a portion of the Fort Hamilton if space is available within that facility.

Key Strategies

Business Attraction and Retention Unlock new commercial and office space: Redefine industrial zones to provide space that supports every stage of businesses; upzone transit-accessible commercial districts

Workforce Development Create workforce development programs that match resident skill sets with the industries of the future and jobs with diverse entry points: Expand training in future-facing industries such as data science and cyber security.

Infrastructure Expand transit infrastructure to connect Brooklyn talent with economic opportunity and move goods: Implement the BQX; expand and improve Select Bus Service; promote use of rail and seaports for freight; expand transportation options for New Jersey commuters. ● Leverage connectivity to expand economic opportunity

for all: Create a new architecture of broadband connectivity ● Strengthen investments and assets by ensuring resiliency to climate-related events: Implement storm surge barriers and other protective solutions in vulnerable coastal areas; develop public-private partnerships to implement green infrastructure; incorporate resiliency into new development.

Housing and Neighborhood Quality Increase density to create new housing opportunities: Rezone underutilized areas ● Create new open space in underserved neighborhoods: Create a new linear park under the Brooklyn Queens Expressway





Strengthened Spines

INNOVATION COAST & FLATBUSH CULTURAL CORRIDOR

STRATEGIC DIRECTION | PROJECT CLUSTERS

THE FLATBUSH CULTURAL CORRIDOR

Envisioning the Future of Brooklyn Culture

Brooklyn's renaissance has undoubtedly been enabled by its cultural cachet, its diverse food and retail choices, and its vast network of arts and cultural organizations, events, and institutions. As Brooklyn continues to grow, strengthening its small businesses, restaurants, cultural institutions, and unleashing the creativity of its restaurateurs, artists, and musicians will enable it to continue to attract innovative businesses, talented workers, and sustain vibrant neighborhoods. Investments in a Flatbush Avenue corridor that extends from a strengthened Downtown Brooklyn, through the BAM Cultural District, and to Brooklyn College would create a network of commercial and cultural assets that would serve as a spine for the borough's future growth.

Flatbush Cultural District: The BAM Cultural District should be extended down Flatbush avenue to Brooklyn College, leveraging key assets including Prospect Park, King's Theater, and the Center for the Performing Arts. New affordable production space can support the cultural innovation of the borough's future.

Key Strategies

Business Attraction and Retention Unlock new commercial and office space: Redefine industrial zones to provide space that supports every stage of businesses; upzone transit accessible commercial districts. ● Leverage public assets: Reposition publicly owned vacant land; leverage NYCHA property.

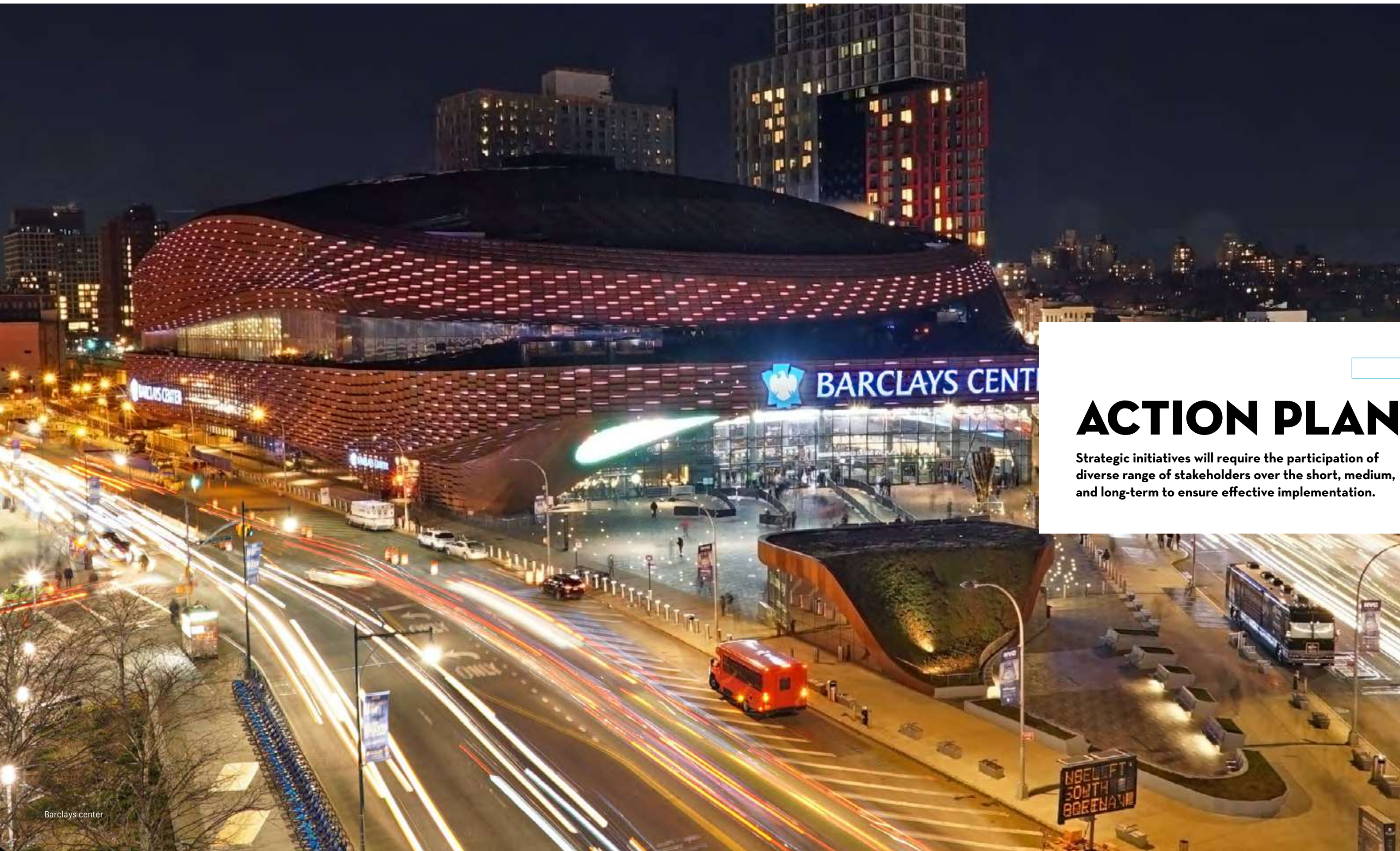
Workforce Development Expand educational infrastructure: Co-locate educational institutions with new development. Leverage proximity to Brooklyn College's Graduate School of Cinema to support the next generation of cultural innovation.

Infrastructure Expand transit infrastructure to connect Brooklyn talent with economic opportunity and move goods: Implement the X-Line and Utica Avenue subway; expand and improve Select Bus Service; promote use of rail and seaports for freight; expand transportation options for New Jersey commuters. ● Leverage connectivity to expand economic opportunity for all: Create a new architecture of broadband connectivity ● Strengthen investments and assets by ensuring resiliency to climate-related events: Develop public-private partnerships to implement green infrastructure; incorporate resiliency into new development.

Housing and Neighborhood Quality Increase density to create new housing opportunities: Rezone underutilized areas ● Preserve and strengthen retail corridors: Incentivize affordable space ● Foster cultural innovation across Brooklyn: Strengthen existing assets; provide affordable cultural space.



Walt Whitman Theater at
Brooklyn College



Barclays center

ACTION PLAN

Strategic initiatives will require the participation of diverse range of stakeholders over the short, medium, and long-term to ensure effective implementation.

ACTION PLAN

This appendix identifies in detail the parties that would be responsible for proposed project implementation as well as an anticipated timeline for implementation, so as to ensure initiatives are carried out effectively. Investments categorized as Short-Term (0-5 years), Medium-Term (5-15 years), and Long-Term (15-30 years).

Employer Attraction & Retention

Unlock new commercial development and office space

City of New York, and its agencies including NYC Economic Development Corporation (NYCEDC), Small Business Services (SBS), and City Planning (DCP)
MEDIUM-TERM

Leverage public assets to support new commercial development

City of New York, and its agencies including NYCEDC, NYC Housing Authority (NYCHA), and DCP
MEDIUM-TERM

Reduce costs of doing business with new tools

City of New York and the State of New York, as well as associated economic development agencies
SHORT-TERM

Workforce Development

Create higher education and workforce development programs that match resident skill sets with the industries of the future and jobs with diverse entry points

City University of New York (CUNY); the City of New York and its agencies including the New York City Economic Development Administration; the State of New York; and private industry partners in relevant industries
SHORT-TERM

Expand educational infrastructure

City of New York, including NYCEDC, NYCHA; City University of New York (CUNY)
LONG-TERM

Infrastructure

STRATEGIC INITIATIVE

Implement smart transportation technology to improve connectivity around the borough

RESPONSIBLE PARTIES & TIMELINE

Metropolitan Transportation Authority (MTA), New York City
SHORT-TERM

Expand transit infrastructure to connect Brooklyn talent with economic opportunity and move goods

Metropolitan Transportation Authority (MTA), New York City, New York State, Amtrak
MEDIUM- TO LONG-TERM

Leverage connectivity to expand economic opportunity to all

City of New York, including NYCEDC
MEDIUM-TERM

Strengthen investments and assets by ensuring resiliency to climate-related events

City of New York, including Mayor's Office of Recovery and Resiliency, Department of Environmental Protection (DEP), and Department of Parks
MEDIUM-TERM

Housing and Neighborhood Quality

Improve delivery of municipal services through the deployment of place-based "smart city" technology

City of New York and its agencies
SHORT-TERM

Increase density to create new housing opportunities

City of New York, Department of City Planning, and New York City Council
SHORT-TERM

Preserve and strengthen retail corridors

City of New York, New York City Council
SHORT-TERM

Create new open space in underserved neighborhoods

City of New York, and its agencies the Department of Transportation the Department of Parks and Recreation
MEDIUM-TERM

Foster cultural innovation across Brooklyn

City of New York, including the Department of Cultural Affairs, Small Business Services, and NYCEDC
SHORT- TO MEDIUM-TERM

In addition to robust community consultation, the development of this strategy was informed by a broad range of data sources and publications.

Sources of data underpinning strategy analysis include:

- ✦ Employment and educational program data from EMSI, the Bureau of Labor Statistics, and LEHD on the Map (Census)
- ✦ Social indicators from the Census and American Community Survey
- ✦ Hotel data from STR
- ✦ Data on business activity provided by the Brooklyn Chamber of Commerce
- ✦ Data made available by the City, including NYC Open Data and the New York City Department of City Planning’s Community District Profiles Portal, Pluto, and MapPluto
- ✦ Transportation data from the Metropolitan Transit Authority, NYC Ferry, and Citibike
- ✦ Visitation Statistics from NYC & Co.
- ✦ Open Space Environmental Review data from the New York City Mayor’s Office of Environmental Coordination
- ✦ Interviews with major corporate tenants and real estate brokers

Publications consulted and referenced include:

- ✦ CEO Poverty Measure 2005-2014: An Annual Report from the Mayor, NYC Center for Economic Opportunity, 2016.
- ✦ Cool Neighborhoods NYC: Heat Vulnerability Index, Office of Mayor Bill de Blasio, 2017.
- ✦ CreateNYC, New York City Department of Cultural Affairs, 2017.
- ✦ Degrees of Difficulty, Center for an Urban Future, 2016.
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- ✦ Engines of Opportunity, New York City Council, 2014.
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- ✦ Higher Education and Upward Mobility New Lessons from Big Data, Raj Chetty, Stanford University, 2017.

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- ✦ Next Generation NYCHA, New York City Housing Authority, 2015.
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- ✦ The Cities that are Stealing Finance Jobs from Wall Street, Forbes Magazine, May 2013.
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- ✦ Urban Freight Initiatives, New York City Department of Transportation, 2015.
- ✦ What the Future of Work Will Mean for Jobs, Skills, And Wages, McKinsey Global Institute, 2017.

Design:

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IMAGE ATTRIBUTIONS

Maps:

Bjarke Ingels group developed a series of existing urban conditions visualizations, realized in the maps placed throughout this report.

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