Transportation & Infrastructure Recommendations

To support the Land Use Framework for the Study Area and ensure a well-functioning employment district, the *North Brooklyn Plan* proposes **to**:

- **Make improvements that can support operations of industrial businesses.**

- **Manage conflicts between different modes, including trucks, cars, bikes, and pedestrians, to improve safety.**

- **Improve the public realm and pedestrian experience.**

These recommendations are based on a preliminary, on-the-ground assessment of existing conditions and interviews with businesses stakeholders. Confirmation of specific geographies for implementation will require further analysis and coordination with DOT. Further, DOT is conducting two studies with implications for the *North Brooklyn Study*: the *North Williamsburg Transportation Study* (study completed in Summer 2018), the goal of which is to improve pedestrian safety, congestion, and parking, and the *Smart Truck Management Plan* (anticipated completion in Winter 2019), a plan to improve quality of life for all New Yorkers through the safe, reliable, and environmentally responsible movement of goods. The latter will also feature specific borough action plans to improve freight truck management.

NYCEDC also conducted *Freight NYC,* a comprehensive, multimodal freight plan to identify ways of creating thousands of freight-related jobs, improve air quality, reduce roadway congestion through truck diversion, and expand urban distribution space across New York City's five boroughs. Key elements include the preservation of legacy rail, maritime, and distribution infrastructure, particularly east of the Hudson in Queens and Brooklyn.

1.
Pilot innovative approaches to addressing transportation challenges in urban industrial areas.

ISSUE:

For trucks, navigating the Study Area efficiently is a challenge.

There are numerous challenges facing trucks moving through the Study Area, including insufficient truck routes and signage, poor roadway conditions, and congested streets.

RECOMMENDATIONS:

Develop enhanced truck wayfinding for truck routes.

Circulation in the Study Area would benefit from clearer signage for the designated truck routes. DOT has recently recommended installing more colorful and frequent signage and is awaiting approval from the Federal Highway Administration. While not included in DOT's recommendations, DOT's treatment of Select Bus Service dedicated lanes, which includes painted roadways and gantries, could be a potential model for truck routes.

Explore roadway reconstruction with durable materials.

There are numerous streets in the Study Area, particularly along the truck route, that have potholes and other types of wear. Maintaining roadways is difficult in areas where heavy tractor trailers wear down asphalt. The reconstruction of heavily used roadways, such as Morgan Avenue, to current DOT specifications that include concrete beneath the asphalt, could potentially save the City resources in the long-term.

Explore installation of mountable curbs to facilitate truck turns.

Although DOT does not routinely install mountable curbs, portions of the Core Industrial Area with light pedestrian traffic may be an appropriate location to test this as a solution to truck turning radius challenges.

Use low-cost technology to improve freight operations.

Explore opportunities to use video capture technology to improve data on freight activity, as well as low-cost GPS for improved truck navigation. Another approach would be to pursue adding large vehicle guidance to web-based navigational tools.

ISSUE:

Loading activities are uncoordinated and often informal, leading to inefficient business operations and unsafe pedestrian conditions.

On-street loading is prevalent in the Study Area due to a lack of adequate loading facilities as well as some business' preference to load on the street. As there are limited opportunities for the construction of new industrial buildings with modern loading berths, innovative solutions are needed.

RECOMMENDATION:

Study and pilot new on-street design solutions for freight loading.

A toolkit of interventions can help to improve the efficiency and safety of truck loading and unloading. *See following page.*

On-street loading activity

Loading activity blocking sidewalk

LOADING TOOLKIT

A toolkit of interventions can help to improve the efficiency and safety of truck loading and unloading.

## Consolidated loading and staging zones to formalize and organize loading activity

Dedicated areas located mid-block can be utilized for loading during peak loading hours. These areas can be designated on the curb, street or sidewalk with paint, signage or other materials.
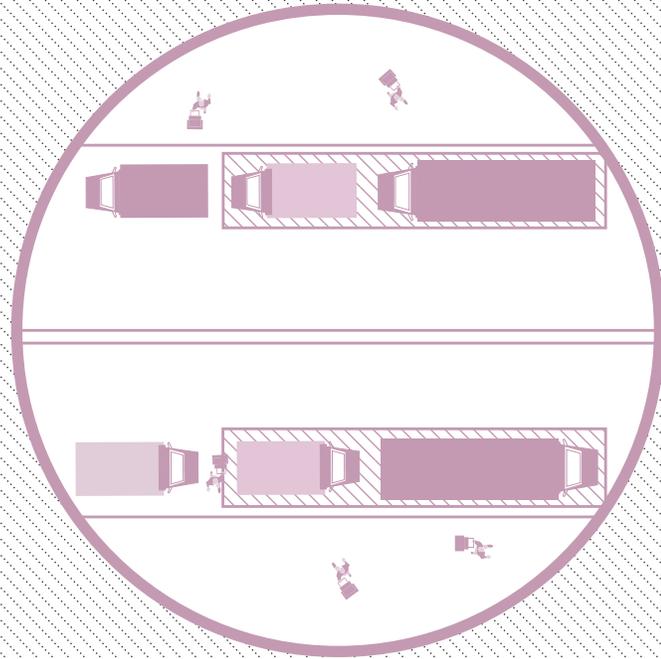
## "Pop-up" consolidation centers to increase space for loading and queueing

Vacant or underutilized lots in strategic locations could serve as temporary loading consolidation centers. Shifting on-street loading activity to a nearby center could bring an active use and economic opportunity to underutilized sites.
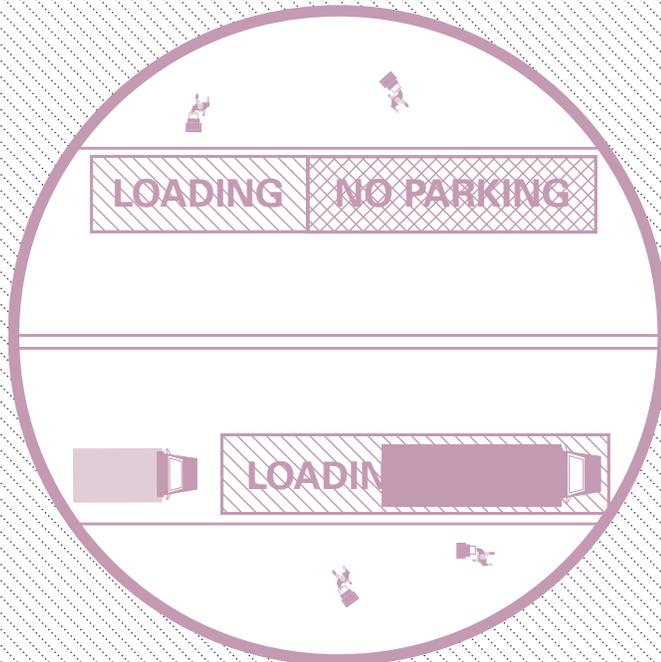
## Improved loading coordination between businesses

City protocol could be established, in collaboration with DOT and 311, for gathering input from businesses on the block when an individual business requests a loading zone or any changes to curb regulations.

CONSOLIDATED LOADING ZONES

LOADING **NO PARKING**

LOADIN

CURBSIDE REGULATIONS
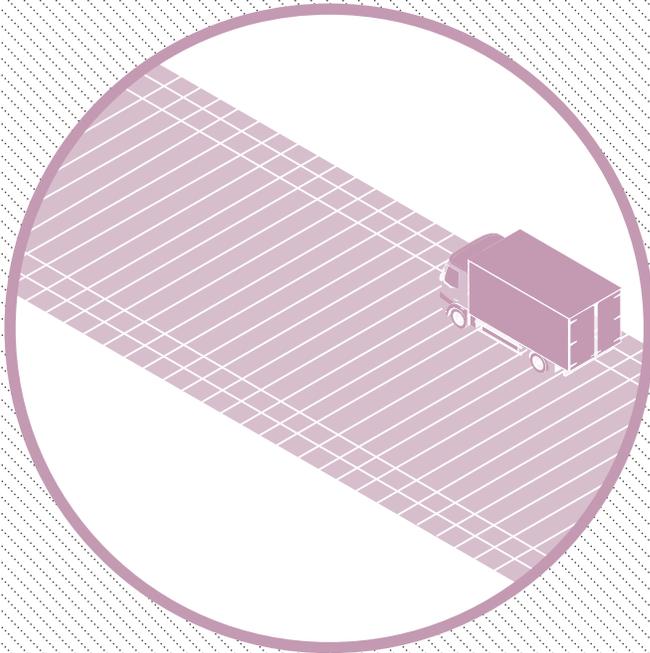
FLEXIBLE STREETS

Flexible industrial streets to increase space for loading and queueing

On exclusively industrial streets with little pedestrian activity in the Core Industrial Area, flexible streets with proper signage and painted curb designations to allow loading equipment and vehicle use in sidewalk area can formalize existing activity and expand space for loading and queuing.
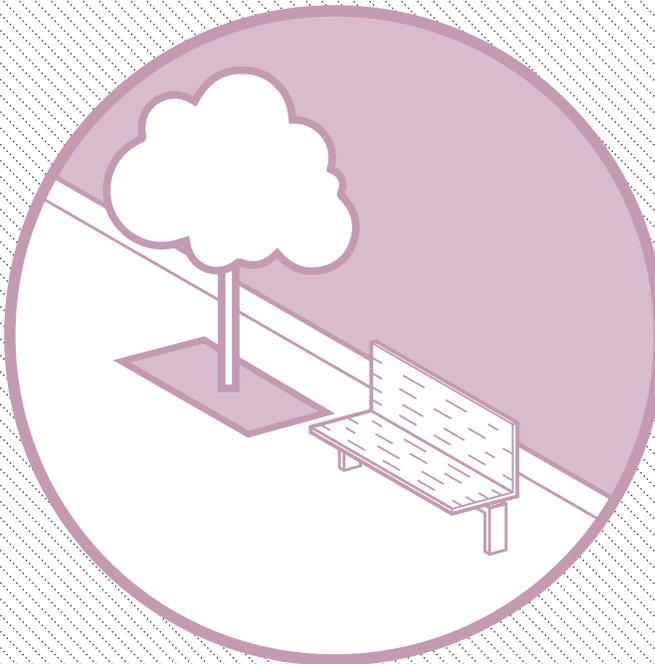
PEDESTRIAN IMPROVEMENTS

Pedestrian-oriented streetscape designs to delineate pedestrian passageways apart from heavy loading activity

In areas with high — and increasing — pedestrian activity and loading activity, it may be appropriate to delineate pedestrian passageways using paint and streetscape elements such as trees, seating, and bollards.

ISSUE:

Existing bike network is limited, despite increased ridership among employees and residents.

The bike network in the Study Area faces numerous challenges: there are few north-south connections, and those that exist are designated truck routes. Truck traffic in the Study Area creates unsafe cycling conditions, with bikes competing for space with vehicles. Further, existing bike lanes are located on the edge of the existing bike network, and thus have limited connections to other areas.

RECOMMENDATION:
Analyze opportunities for additional bicycle infrastructure.

DOT is working on creating new bike lanes in the area, such as the lanes installed the summer of 2017 that connect the Williamsburg Bridge to Morgan Avenue in the Study Area via Meserole and Scholes streets. DOT also recently extended the Grand Street bicycle network to connect with the networks in Queens and Bushwick, and will make further improvements to bike lanes on Grand Street in advance of the L train closure

Additional opportunities for expanding the bike network should be identified, especially routes that create north-south connections, promote safety for cyclists, and ensure sufficient roadway space for trucks. Ideally, new bike lanes would be separated from roadways with heavy truck traffic. However, given the limited opportunities for north-south connections in the Study Area, this type of separated bike lane may only be possible through a street rebuild, a potentially costly project that would be difficult to implement in the near-term.

The network should also be evaluated near the Kosciuszko Bridge, which will include a new bike path as part of Phase 2 (anticipated to open in 2020).

ISSUE:

Heavy truck traffic produces emissions that are harmful to the environment and negatively impact residential areas through which they navigate.

RECOMMENDATION:
Implement the Clean Trucks Program.

DOT's pilot Hunts Point Clean Trucks Program provides incentives in Hunts Point and Port Morris in the Bronx to trucking companies to encourage use of technologies that reduce emissions. The program has been highly successful, with replacement of 500 heavy-polluting diesel trucks.

Roadway without bike lane

ISSUE:

Portions of the Study Area lack adequate transit access.

Over 60 percent of the Core Industrial Area is beyond a half-mile walk from a subway station, which likely encourages car usage and traffic in this area.

2.
Advance high-impact capital projects.

ISSUE:

Major infrastructure is outdated, resulting in additional congestion.

RECOMMENDATION:

Encourage shuttle bus service.

Shuttle bus services between business clusters and nearby subway stations could help to increase transit access. One private sector precedent is a shuttle bus run by the Factory, a large manufacturing space in Long Island City, which connects to several subway lines and the Long Island Rail Road. News reports suggest that in preparation for the L train shutdown, some businesses in the Study Area are considering coordinating private shuttle service.

RECOMMENDATION:

Prioritize replacement of the Grand Street Bridge.

The Grand Street Bridge, built in 1902 to the design standards of that age, has lane widths that are now too narrow for modern vehicles. The bridge is nearing the end of its useful life and currently has several substandard features which leads to trucks, buses, and many vehicles destinated for the jobs in the industrial areas surrounding the bridge queuing on either side of the Bridge. A contract for total

design and support services for the reconstruction is expected to commence in June 2019. This complex project will require the coordination of many agencies; a full environmental review is expected. As part of this process, alternatives will be investigated to address all the substandard features and keep traffic moving and eliminate queuing. DOT has programmed the reconstruction of the Grand Street Bridge in the 10 Year Capital Plan. Construction for a replacement bridge is programmed for 2023 through 2027.

Grand Street Bridge

3.
Prioritize state of good repair and operational improvements.

ISSUE:
Narrow streets lead to difficult turning radii for trucks.

RECOMMENDATION:
Daylight selected street corners.

Establish "No Standing" zones at corners to facilitate truck turning, paired with the relocation of obstructions such as stop signs and utility poles. Locations for daylighting could be selected through coordination with businesses that use longer trucks in their daily operations.

ISSUE:
Many streets are in poor condition, and missing necessary street markings.

RECOMMENDATION:
Repair and restripe streets in poor conditions.

Prioritize the restriping and resurfacing of priority corridors vital to the IBZ, especially along key truck routes.

ISSUE:
Much of the Study Area experiences flooding during rain events.

RECOMMENDATION:
Install green infrastructure.

Rain gardens and bioswales, which NYC DEP is currently installing throughout New York City and the Study Area, can be coordinated with street repairs. These small areas can prevent flooding by collecting rain water after significant rain events or when snow melts in areas where there are significant drainage issues.

Narrow street

Poor roadway condition

Bioswale in Growth District

4.
Improve pedestrian conditions in the Growth District and Transition Area.

ISSUE:
Conflicts between trucks and pedestrians occur as pedestrian activity increases in certain areas.

ISSUE:
Pedestrian improvements have not kept up with new pedestrian activity.

RECOMMENDATION:
Improve pedestrian safety.

In line with the goals of *Vision Zero*, pedestrian safety should be improved in pedestrian-heavy areas. The Study Area includes one priority corridor in the *Vision Zero Brooklyn Pedestrian Safety Action Plan* (Flushing Avenue, also a major truck route), which should be prioritized for improvements.

Installing traffic controls at uncontrolled intersections, a number of which are near subway stations, can improve safety in these areas. High-visibility or raised crosswalks could be placed appropriately and striping refreshed. Traffic calming measures such as speed humps, raised crosswalks, and neckdowns can also improve safety.

Other areas for improving both pedestrian access and safety should include connections to and around bridges in the Study Area, including Metropolitan Avenue, Greenpoint Avenue, and the new Kosciusko bridges.

RECOMMENDATION:
Improve the public realm.

The pedestrian realm could be improved through the installation of street trees, street lamps, seating areas, bicycle racks, and expanded sidewalks. To highlight the arts in the Study Area, programs such as DOT's Community Commissions could be explored.

Need for improved pedestrian crossings

Opportunity for new pedestrian amenities
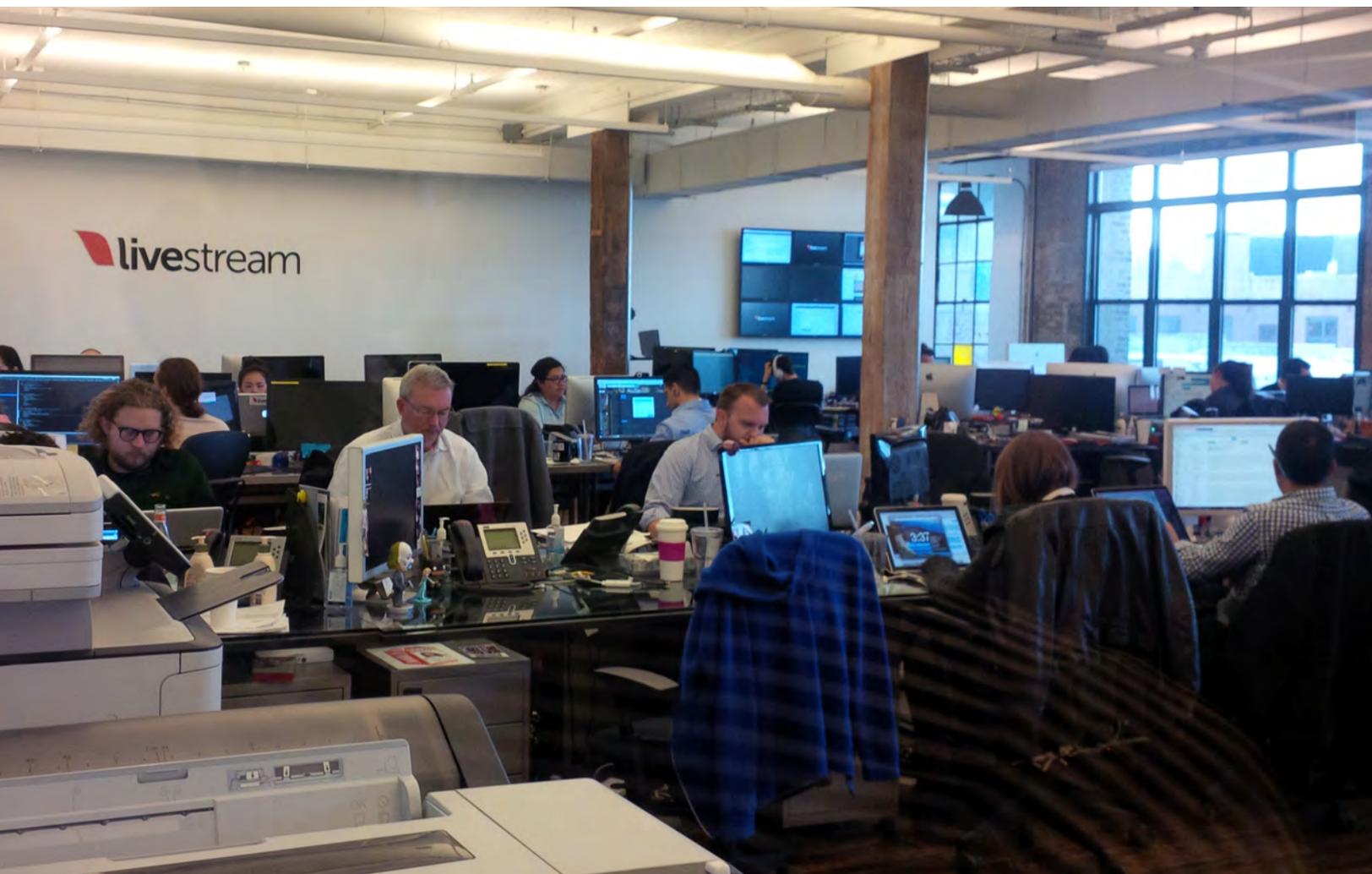
Workforce Development

Helping New Yorkers Access the Jobs of the Future

The *North Brooklyn Plan* seeks to grow a diverse mix of jobs in areas accessible to both local residents and New Yorkers throughout the city. While land use policy can help create space for growing sectors, it must be complemented by workforce development programs to ensure that residents, including those with lower educational attainment or from lower-income communities, have the skills necessary to access good jobs.

There are many long-established programs that focus on connecting residents to jobs in industrial and manufacturing sectors. However, tech-driven and professional services sectors are among the fastest growing and highest paying sectors in New York City, but businesses have said that there is a shortage of homegrown talent with the right education and skillsets.[42] Workforce development efforts in the Study Area should provide services to connect workers to opportunities in both industrial and non-industrial sectors to reflect the evolving job landscape in the area and citywide.

Workforce in North Brooklyn: What We Heard

The following issues related to connecting local workers to jobs were identified through the *North Brooklyn Plan*'s public outreach process:

- **New jobs, especially in the Growth District, may not be available to many residents in the surrounding communities**. Some residents are concerned that the job growth in the Study Area may not benefit current residents, as TAMI-related jobs often require a specialized skillset.

- **Businesses looking to hire locally are unable to find qualified employees**. Some businesses in the Study Area require very specific skillsets, such as advanced manufacturing, making local hiring a challenge. Employees often require on-the-job training or customized training programs.

- **Workers are moving farther from job centers.** A number of businesses have stated that local employees cannot afford to live in the area and are moving farther from their current jobs, thereby increasing commute times.

- **Businesses are not aware of local recruiting resources**. Businesses that are new to the Study Area may not know where to find local skilled workforce or be aware of existing programs that can help them recruit local residents.

Citywide Workforce Development Policy + Initiatives

There is a great wealth of relevant economic development policy and initiatives that can support the goals of the *Plan*.

OneNYC

OneNYC, a comprehensive plan for a sustainable and resilient city released in 2015, committed to growing jobs through capital investments, zoning, and other policies, including in innovative and tech-driven sectors, FIRE (finance, insurance, and real estate) sectors, and emerging industries such as life sciences and advanced manufacturing. *OneNYC* addresses the need for a robust, inclusive workforce development system. By doing so, it builds on *Career Pathways: One City Working Together,* a report released in 2014 that lays out the City's framework for workforce development. One of the approaches highlighted in *Career Pathways* is sector-based training that provides New Yorkers, including low- and middle-skill workers, with skills needed to enter the workforce and secure quality jobs.

Career Pathways and Industry Partnerships

In 2014, the *Career Pathways* report provided ten recommendations to help New Yorkers develop skills that today's employers seek, to improve job quality, and to improve coordination between workforce development programs and the City's economic development investments. The report launched the Industry Partnership initiative, an innovative model that draws on industry experts to identify the skills needed for today's workforce.

SBS has developed a series of Industry Partnerships and training programs in the following sectors, many of which are growing in the Study Area:

- **Technology**: NYC Tech Talent Pipeline *(see profile)*.

- **Healthcare**: New York Alliance for Careers in Healthcare, a public-private partnership that brings together stakeholders of the healthcare industry in order to address the sector's rapidly changing labor force needs.

- **Food Service**: The NYC Food & Beverage Hospitality Council launched Stage NYC, an apprenticeship-style program targeted at young adults that is designed to address the shortage of skilled back-of-the-house talent in full-service restaurants.

- **Industrial/Manufacturing**: The de Blasio administration committed to launch ApprenticeNYC as part of the *New York Works* report. The Manufacturing and Industrial Partnership has launched ApprenticeNYC for CNC Machinists, and is in the process of running its second cohort. ApprenticeNYC for Industrial positions is a new employer-training partnership model that allows New Yorkers to get the paid while they learn in a hands-on environment in advanced manufacturing and other fields.

- **Construction**: The Mayor's Committee on Construction has focused on establishing a common set of core skills needed for workers seeking entry into the sector.

Non-Partnerships Sector Training

- **Media**: Made in NY Production Assistant Training and Post Production Programs, aimed at providing unemployed and low-income New Yorkers with training and placement in entry-level positions in film and television production.

New York Works

In its *New York Works* report, the City made a commitment to growing jobs in diverse sectors, while acknowledging that access to jobs is equally important. Building on *Career Pathways, New York Works* identifies five approaches to helping New Yorkers get on career paths to the middle class: continue working with businesses to develop meaningful training programs; provide training at public higher education institutions; deliver "bridge" training combined with adult basic education; create targeted outreach to ensure diversity across growing sectors; and develop ApprenticeNYC — a new training model that provides on-the-job training in the tech, industrial, and healthcare sectors.

Workforce1 Career Centers

Workforce1 Career Centers are the City's major workforce hubs, providing New Yorkers with training services, job readiness coaching, and job placement assistance. There are three Workforce1 Centers in Brooklyn: Downtown Brooklyn, East New York, and Coney Island. There are also several Workforce1 Industrial and Transportation Career Centers across the city, including in Jamaica, Sunset Park, Long Island City and Port Morris.

Opportunity NYCHA

NYCHA's Office of Resident Economic Empowerment and Sustainability (REES) partners with local workforce development organizations to directly connect NYCHA residents with training and job prep programs tailored to their needs. REES also hosts the TechPortal, an IT training program aimed at NYCHA youth. For NYCHA residents near the Study Area, REES partners with St. Nick's Alliance and Opportunities for a Better Tomorrow.

Youth-Targeted Education

A major City priority is exposing students to a variety of career paths at an early stage and providing early computer skills and hands-on experiences. There are programs underway that aim to meet that goal and help to connect students to the types of TAMI jobs growing in the Study Area:

Career and Technical Education

The NYC Department of Education (DOE) offers Career and Technical Education (CTE) programs in high schools to prepare students with the skills needed to establish a career path in growing industries. CTE programs are offered in a variety of fields, from tech to culinary arts to multi-media production. Students also receive exposure to the work environment.

There are two CTE schools near the Study Area: Automotive High School in Greenpoint, and the Williamsburg High School for Architecture and Design.

Youth Employment

The NYC Department of Youth & Community Development (DYCD) provides employment opportunities for youth between the ages of fourteen and twenty-four to further their education and training. Programs include connections to internships, mentorships with businesses, summer employment, and job training for at-risk and out-of-school youth.

Computer Science for All NYC (CS4All: NYC)

CS4 All:NYC is a City initiative to create a solid education foundation in the city's public schools. A partnership between DOE and Computer Science for All NYC, the ten-year initiative aims to ensure that all public school students will receive computer science education at every school level by 2025.

NYC Tech Talent Pipeline

The NYC Tech Talent Pipeline (TTP), an Industry Partnership aligned with the City's *Career Pathways* approach, is a public-private partnership to provide quality jobs for New Yorkers and quality talent for New York businesses.

Together with over 250 industry partners, the initiative works to increase the pool of homegrown tech talent through defining employer needs, developing education, training, and hiring solutions, and connecting New Yorkers with the skills needed to succeed. The goal is to create a comprehensive pipeline — from a strong K-12 foundation to innovative local colleges that are able to deliver qualified New Yorkers for jobs at growing tech businesses.

Among the programs incubated and launched by TTP and its industry partners are ten new and expanded training and education programs that include the NYC Web Development Fellowship (a full-time intensive training program), CUNY Tech Prep (a year-long program for tech majors at all eleven CUNY senior colleges with applied projects and connection to employers), and Bridge-to-Tech (part-time training programs designed for New Yorkers with no prior tech experience).

Each of these programs is designed to deliver qualified candidates while surfacing best practices for equipping candidates that can be taken to scale across the city's 1.1 million public school students, 125+ colleges, and he 500,000 New Yorkers served by the public workforce system.

Achieving the Mayor's vision for a tech ecosystem fueled by homegrown talent requires a comprehensive higher education pipeline that can effectively prepare students for jobs that are in demand. Through the Tech Talent Pipeline Academic Council, sixteen Presidents and Provosts of local public and private colleges have committed to aligning tech education with industry to improve pathways to careers in tech for 1,300+ students. In response to this Council and TTP industry partners, in June 2017, the City announced that by 2022, the number of public college graduates with tech bachelor's degrees will double.

North Brooklyn Workforce Organizations

There are a number of local organizations that provide workforce development support for residents in and around the Study Area, including:

- **St. Nick's Alliance**, the largest workforce development provider in the Study Area, offers diverse programs, including skills training in targeted industries, job prep and placement assistance, adult education, and career counseling.

  St. Nick's, with support from DYCD, has launched two pilot programs aimed at providing out-of-school youth with training and paid internships in sectors with strong career pathways: certified nursing assistant (CNA) and information technology. The latter program is twelve weeks long and consists of training in IT computer skills, computer-assisted graphics, and coding (Certifications in A+ and Adobe Photoshop), as well as a required 5-week paid internship with a local company. The goal of this program is to expose young adults to the diverse opportunities that these skills can deliver, while providing on-the-job experience necessary to secure a quality job.

- **Evergreen**, a membership organization that champions manufacturing, creative production, and industrial service businesses in North Brooklyn that is also NYC SBS's Industrial Service Provider for the North Brooklyn Brooklyn and Greenpoint-Williamsburg IBZs, links businesses in these areas to jobseekers, both directly and through partner workforce organizations.

- **Opportunities for a Better Tomorrow** (OBT) provides job training, placement services, and internship experiences for local residents in Williamsburg, Bushwick, and other communities.

Training North Brooklyn High Schoolers in Architecture and Design

Local partnerships between schools and the private sector can connect students to growing sectors, such as design and architecture. In 2016, a partnership was created between the Williamsburg High School for Architecture and Design and Heritage Equities, a local developer whose tenants on Moore Street include tech and media companies.

Launched in 2016, the goal of the partnership is to provide students with exposure to different types of jobs in the architecture and design field, while providing them with hard and soft skills attractive to potential employers. The partnership has connected students with a lecture series by practitioners, mentors in the field, and internships working at the construction sites of real projects. This program can serve as a model for other apprenticeship-style programs in emerging sectors with strong career pathways

New Opportunities for Workforce Development in the Study Area

While workforce development efforts exist citywide and in the Study Area, there are opportunities to strengthen existing programs and advance new initiatives that prepare and connect local residents to jobs in growing, 21st century sectors.

1. Develop a Broader Newtown Creek Valley Workforce Development Strategy

The North Brooklyn IBZ is located in close proximity to two other IBZs in Long Island City and Maspeth, which together contain over 40 percent of all industrial jobs in IBZs citywide. By approaching workforce development in these IBZs comprehensively through an umbrella workforce development organization, more jobs can become accessible to a diverse group of people with a wide array of skills.

A potential model for this type of organization is LESEN (Lower East Side Employment Network), which was established in 2007 as a network of organizations that provide workforce development services. The organization has engaged over 100 local businesses and has placed over 300 local residents. LESEN is a success because of the strong leadership of local community organizations such as Henry Street Settlement and University Settlement, which receive City support for workforce and education programs.

Local community organizations and the Mayor's Office of Workforce Development, in conjunction with SBS, should work with stakeholders in all three IBZs to understand the current workforce challenges in order to develop ways to better connect local residents to employment opportunities.

2. Connect Workers to Fast-Growing Sectors

Industry Partnerships convene and engage stakeholders through industry advisory councils, academic councils, and alumni councils to establish a common agenda and ensure that employer demands and skills requirements are the focus of workforce development investments. Through industry engagement, the Partnerships are able to identify gaps in the labor market and develop new training models that can be replicated by providers throughout the city.

SBS will help New Yorkers in the Study Area find new and better jobs through its network of Workforce1 Career Centers. Services provided at Workforce1 Career Centers allow individuals to connect directly to jobs and training opportunities informed or developed by Industry Partnerships.

3. Reinforce and Coordinate Existing Programs and Organizations

There are a number of organizations that provide critical workforce development services today. These organizations, along with the City's workforce agencies and local elected officials, should work together to identify workforce development needs and opportunities to leverage local resources like the City's Workforce1 Career Centers.

4. Connect With Local Schools to Prepare Youth for Strong Career Pathways

As part of the City's commitment to providing youth with skills and experience that can lead to strong career pathways, the City should continue growing partnerships with local organizations, businesses, and schools to advise on the most useful educational and training opportunities for the future workforce in tech and other growing sectors.