

# **Downtown Pittsburgh Mobility Plan**

## **Issues & Opportunities**

**April 2020**



ARUP

Utile  
MonWin Consulting  
SmithGroup  
Nelson / Nygaard

April 2020

# Table of Contents

What We Heard	1
Downtown Pittsburgh Mobility Plan	2
Study Area	3
Who Uses Downtown?	4
Survey Findings	6
Public Realm	8
Walking	10
Transit	12
Private Vehicles & Parking	14
Biking	16
Deliveries & Freight	18
Environment & Infrastructure	20
Residential & Commercial Development	22
Conclusion & Next Steps	24



# What We Heard

## Build on What's Working, Focus on What's Not

The Point. Market Square. The Cultural District. The Three Sister Bridges. The lobby of the Omni William Penn. Downtown Pittsburgh has so many places that have special meaning to each of us. A lot has changed since Colonel John Campbell first laid out four blocks of Downtown in the 1760s, but the unique grid system at the confluence of the three rivers presents an array of opportunities, even within its well-defined constraints.

More recently Downtown and the surrounding area has seen new construction, restaurants, residents, and things to do, but we also know that it's not perfect. From congestion and safety to buses and bike lanes, there are many perspectives on what can be done to improve the experience in the Golden Triangle. In order to make progress, it is critical that we identify priorities and acknowledge trade-offs to ensure Downtown will remain a thriving, vibrant place long into the future.

That is why the Pittsburgh Downtown Partnership is leading the development of the Downtown Pittsburgh Mobility Plan. The Plan is intended to move Downtown closer to its potential, while balancing the many needs of this dynamic neighborhood. After almost six months of reviewing data and soliciting feedback from those who live, work, and visit Downtown, several clear themes have emerged:

- People love Downtown because it's walkable, interesting, and fun.
- Congestion is a pain, especially at intersections, bridges, and tunnels, as well as during big events.
- Sometimes our streets feel chaotic and regulations are not enforced.
- Safety can be a concern, particularly at crosswalks and at night.
- Thoughtful design, with an emphasis on quality sidewalks and lighting, can go a long way.
- Big ideas and new technologies are exciting, but they shouldn't distract us from proven, sometimes simple solutions.

This report details specific issues and opportunities relevant to how people get to, around, and experience Downtown, and these themes will continue to be refined as we move through the planning process. We are excited to share our latest findings and welcome additional feedback on projects, programs, and policies that can move Downtown forward.

We thank you for your interest and continued support!

The Pittsburgh Downtown Partnership



# Downtown Pittsburgh Mobility Plan

## Why are we doing this?

Downtown Pittsburgh functions as the economic and cultural heart of western Pennsylvania and serves as the hub of Allegheny County's transit system. Every day, thousands of residents, employees, students, and visitors make Downtown's streets bustling and vibrant. As Downtown and the surrounding neighborhoods continue to transform it is critical that the Golden Triangle's mobility network evolve to meet new demands and users, while continuing to retain its unique character and position as the center of the southwestern Pennsylvania region.

## Plan Objectives

- Accelerate progress towards a Downtown that encourages multimodal trips creating an enjoyable experience for all.
- Define mode priorities for each street with the goal of optimizing the network during peak travel times.
- Identify a set of Guiding Principles and Goals to evaluate trade-offs for future projects, programs, and policies.
- Strengthen coordination, communication, and trust between Downtown stakeholders and public agencies.

## In This Report

This report summarizes the findings from investigations into Downtown's demographics, existing conditions data, previous planning efforts, public survey, and community engagement activities.

## Scope & Schedule

### Phase 1: Issues and Opportunities

August 2019 – January 2020

### Phase 2: Guiding Principles and Goals

January – March 2020

### Phase 3: Street Hierarchy Map

April – May 2020

### Phase 4: High-Impact Projects

June – August 2020

## Management Team

Pittsburgh Downtown Partnership (PDP)

City of Pittsburgh Department of Mobility and Infrastructure (DOMI)

City of Pittsburgh Department of City Planning (DCP)

Port Authority of Allegheny County (PAAC)

Southwestern Pennsylvania Commission (SPC)

## Consultant Team

Arup

Utile

MonWin Consulting

SmithGroup

Nelson / Nygaard



# Study Area

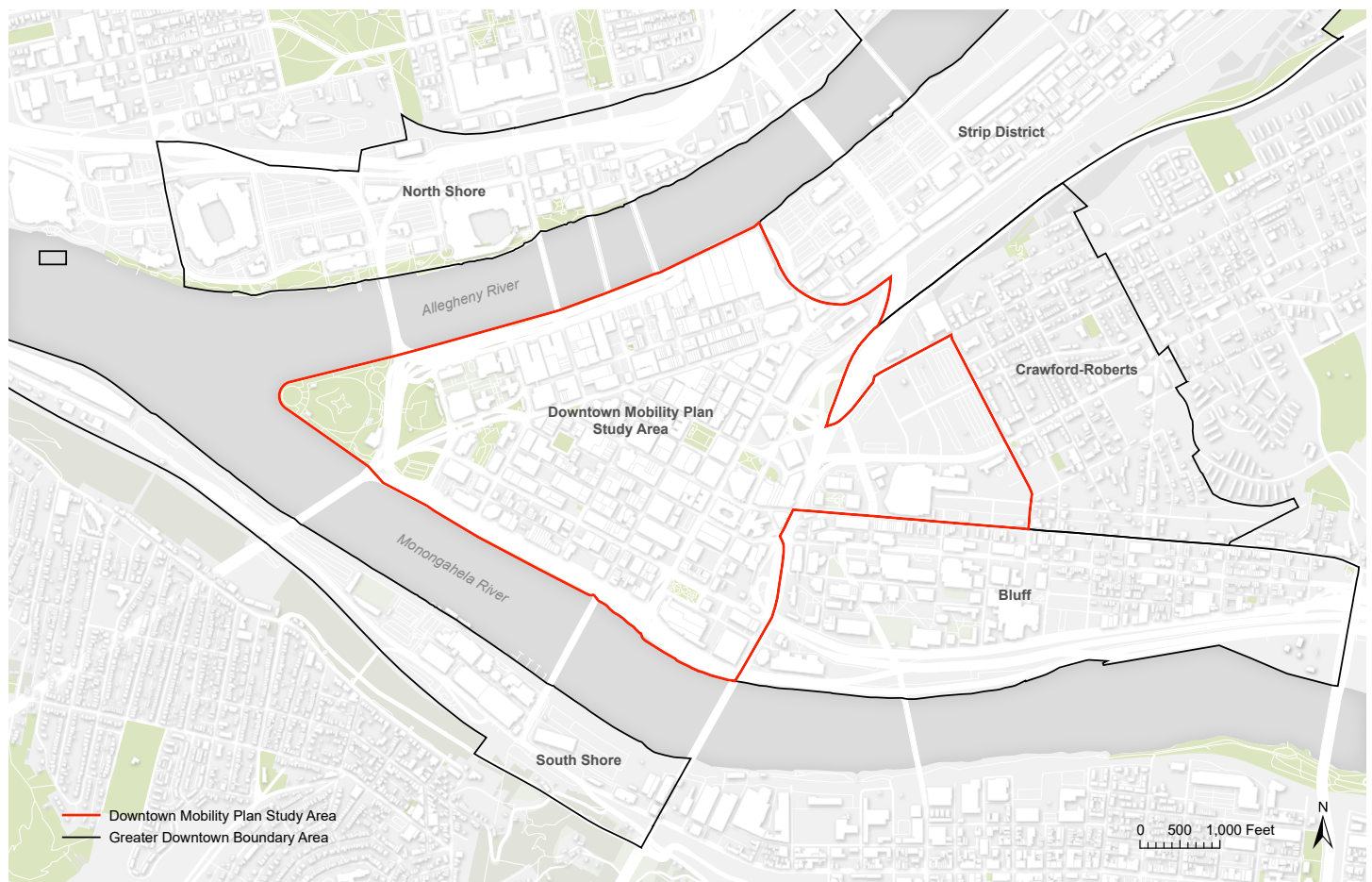
The focus of the Plan is to ensure that the Central Business District is prepared to meet the needs of a changing neighborhood, city, county, and region. We recognize that many people throughout the region call Downtown theirs, but for the purpose of this report the following definitions will be used to provide clarity on the study area's boundaries:

**Central Business District (CBD):**  
The City of Pittsburgh defined neighborhood boundary of the Central Business District (CBD) which is also

referred to as the Golden Triangle or Downtown. The most detailed analysis and recommendations from this Plan will be focused on what is going to most directly impact the CBD.

**Greater Downtown:** Includes the full neighbourhood boundaries of the CBD, South Shore, North Shore, Strip District, Crawford-Roberts (Lower Hill), and Bluff (Uptown). Greater Downtown is primary used when exploring the impact of current and future residential, developments, and destinations on the CBD.

## Study Area Map



# Who Uses Downtown?

## A Downtown for Everyone

Greater Downtown has four primary groups that make up the most frequent users: residents, employees, students, and visitors. Greater Downtown has seen change in both residential population and commercial developments over the last ten years that has impacted how people get around and experience the CBD. Several planned and proposed developments are expected to support this trend of continued growth and bring life to currently underutilized (or underdeveloped) portions of Greater Downtown, particularly in the North Shore, Strip District, and the Lower Hill.

### Residents<sup>1</sup>

- A total of 15,270 people live in Greater Downtown, or 5.0% of Pittsburgh's total population (305,012 people). These residents are primarily concentrated in the CBD and Bluff; together, these neighborhoods account for 74% of all residents in Greater Downtown.
- Overall, residents are primarily young and White, with a median household income of \$56,669. The median household income in Greater Downtown is almost \$10,000 higher than the median household income of the City of Pittsburgh (\$48,070) but is roughly \$5,000 less than the median household income of Allegheny County (\$61,179).
- Black and Hispanic/Latino residents are concentrated in Crawford-Roberts and Bluff. These neighborhoods also have Greater Downtown residents that demonstrate greater income disparity than the nation, with more residents likely to be in very high or very low earning brackets than in the middle.<sup>2</sup>
- 51% residents in the CBD, Bluff, North Shore, and Strip District reported that walking was their primary mode of transportation to work or school, followed by using a personal vehicle.

### Employees<sup>3</sup>

- The CBD accounts for 16% of all jobs in Allegheny County.<sup>4</sup>
- More than 110,000 daily weekday commuters come to the CBD, with only 1.4% of these employees both living and working in Greater Downtown. Overall, 24.0% (25,572) of the employees who work in Greater Downtown live in the City of Pittsburgh while the remaining 76.0% (80,999) of the employees commute from outside city limits in Allegheny County and adjacent counties.
- 45.0% of employees commuting to Greater Downtown regularly use public transit (includes bus and light rail) while only 41.0% of employees drive alone.<sup>5</sup>
- As some employees commute from outside Allegheny County, approximately 2,700 people commute to Downtown via non-Port Authority transit agencies daily, including Beaver County Transit Authority, Mid-Mon Valley Transit Authority, and Westmoreland County Transit Authority.
- PNC, UPMC, Highmark, and BNY Mellon are the four largest employers with each having over 5,000 employees located in the CBD.

## Visitors

- There were over 13.2 million visitors to Greater Downtown in 2018. Of those, 9.2 million were attending an entertainment or sports venue.<sup>6</sup>
- Over the course of a year, Greater Downtown sees significantly more unique visitors than it does unique residents, employees, and students combined.<sup>7</sup>
- Many visitors are accessing important human and social services, including the courts and Public Welfare Offices, while others are seeking out performing arts (21.0%), museums (20.0%), and other events (16.0%).<sup>8</sup>
- Visitors who identified their reason for being Downtown as "pleasure" were most likely to use public transit, either bus or light rail, to get Downtown. However, this is more conducive for daytime visitors than night-time visitors since many people, particularly those living in suburban areas, have more limited availability of transit options and infrequent service at night.

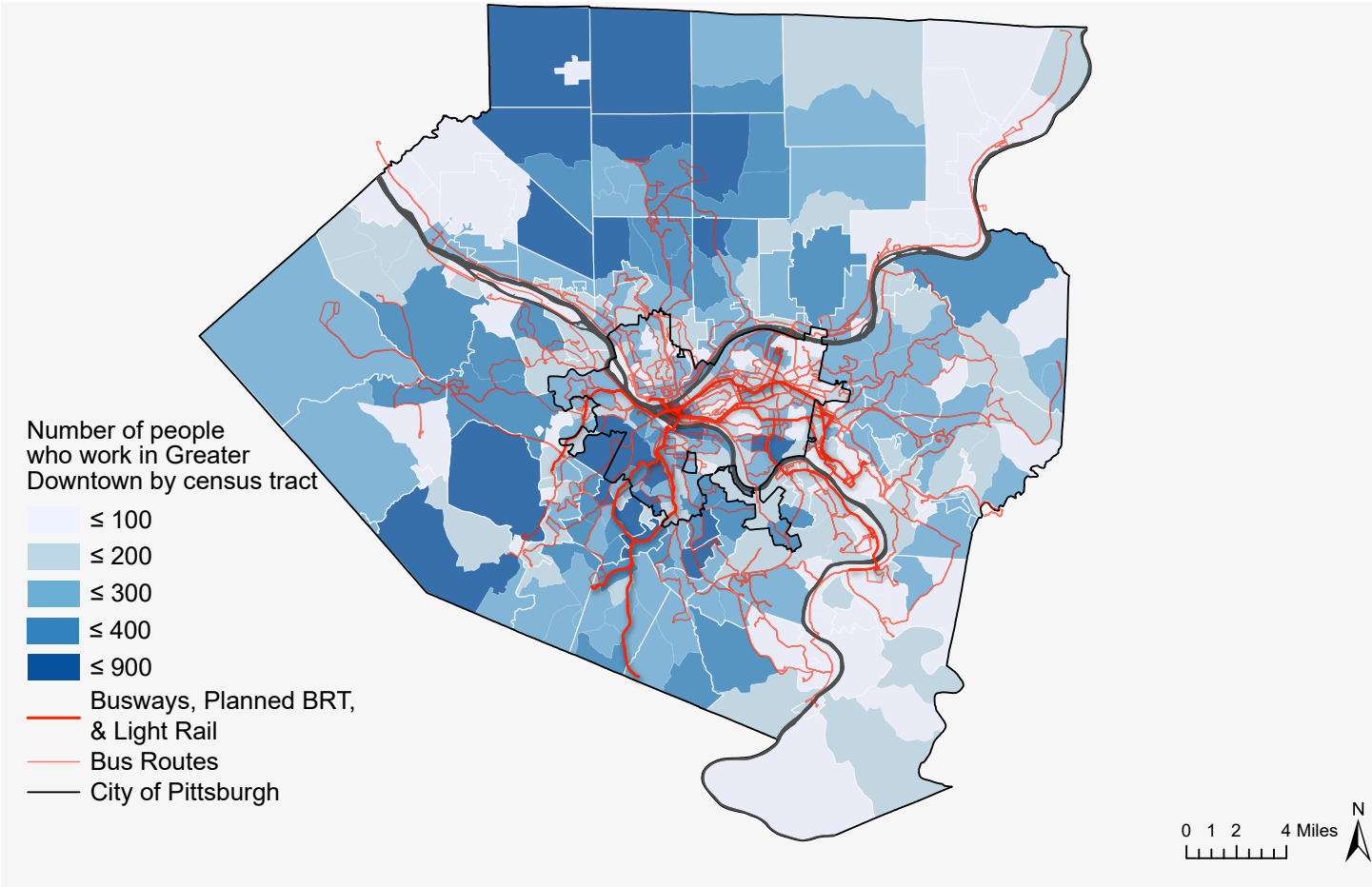
## Students

- There are four public/charter schools in Greater Downtown (City Charter High School, Pittsburgh CAPA, Urban Pathways, and Passport Academy Charter School) with a total of 2,233 students enrolled in the 2017-2018 school year.
- Many 6-12 Pittsburgh Public School students outside of Greater Downtown rely on public transportation to get to and from school, and many commutes require a transfer in the CBD, bringing thousands of students into the CBD every day during the school year.
- Three universities are in Greater Downtown (Community College of Allegheny County, Duquesne University, and Point Park University) with a combined enrollment of approximately 40,443 students during the 2017-2018 school year.<sup>9</sup>
- Point Park University is located in the CBD, with an approximate enrollment of over 4,000 students.
- The 2016 Downtown Pittsburgh Pedestrian Traffic Study found that walking was the largest means of transportation for students, accounting for 37.0% of all trips. Public transit was identified as the second most popular means of transportation for students, accounting for 31.0% of all trips. Only 13.0% students drove or carpooled to get to the CBD.<sup>10</sup>

## Additional User Groups

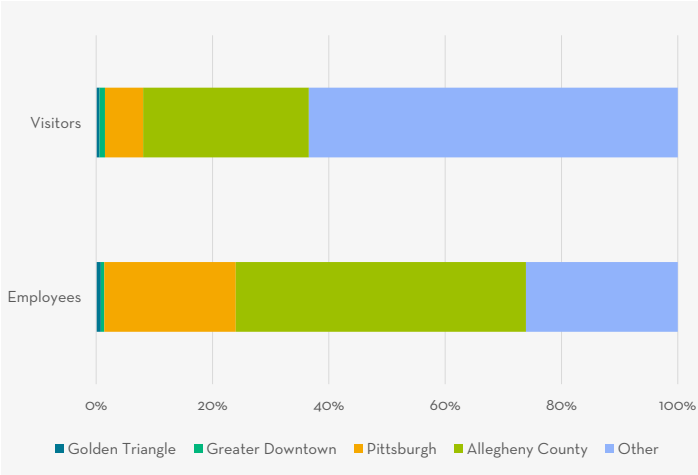
There are additional population groups that should be considered when understanding how people use Downtown, but there was insufficient public data available to develop a full profile. This includes people whose final destination is not in Downtown but require a transit transfer in the CBD, residents who do not regularly come Downtown, and people experiencing homelessness. Direct engagement to these specific groups will be conducted in order for this Plan to represent the needs of these populations in the context of all who experience or may experience Downtown.

# Downtown Employees and Transit Network



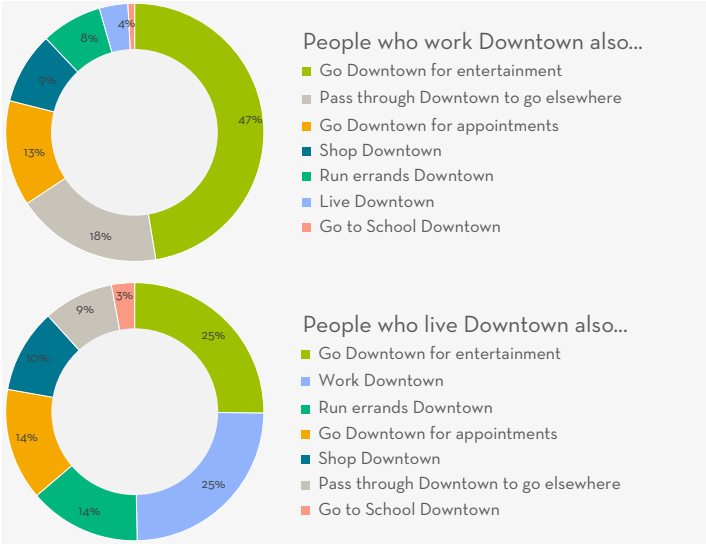
Source: US Census, Port Authority of Allegheny County

## Home Location of Downtown Employees and Visitors (PPG Arena Ticket Holders)



Source: PPG Arena, US Census

## Residents and workers also rely on Downtown for retail, entertainment, education, and transferring.



Source: PDP Mobility Plan survey, 2019-2020

# Survey Findings

## Background, Purpose & Process

In December 2019, the PDP released an online Issues and Opportunities survey open to the public to gain a deeper understanding of mobility gaps and the various needs amongst Downtown users. To reach residents across the southwestern Pennsylvania region, the survey was distributed through a variety of methods including direct outreach to targeted stakeholder groups by email, direct mail, social media, and television and print media. In total, the Issues and Opportunities survey received over 1,400 responses from almost every neighborhood and municipality across Allegheny County. The survey responses shown below offer some perspective on how people currently get around Downtown, their challenges, why they come, and what people hope to see in the future.

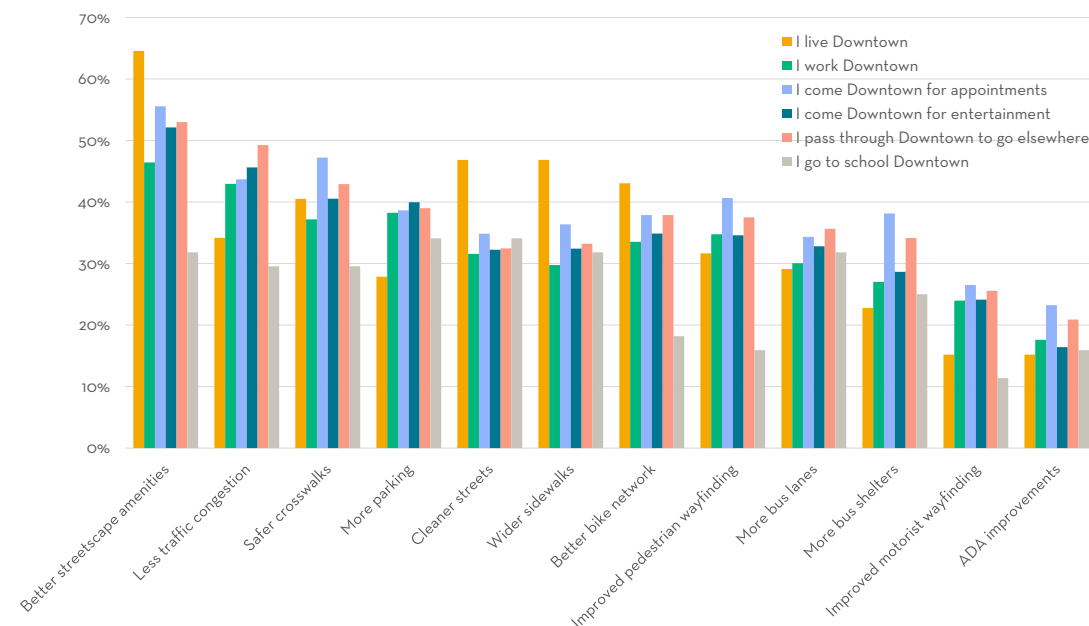
## Key Findings

Survey respondents widely agree that their priority is for general improvements to the pedestrian experience, though Downtown resident respondents expressed the strongest interest in enhancing the public realm and infrastructure by adding streetscape amenities, implementing safer crosswalks, and widening sidewalks. Many respondents also voiced a desire for greater parking availability and reduced traffic congestion; however, it's important to note that these priorities were higher among survey respondents who indicated they are employees or visitors rather than residents or Downtown students.

Overall, entertainment and employment are two major drivers that bring people to Downtown. Survey respondents also shared that expensive parking, inadequate lighting, and feeling unsafe at night were their primary concerns or frustrations with getting around the Golden Triangle.

## Downtown Users Agree...

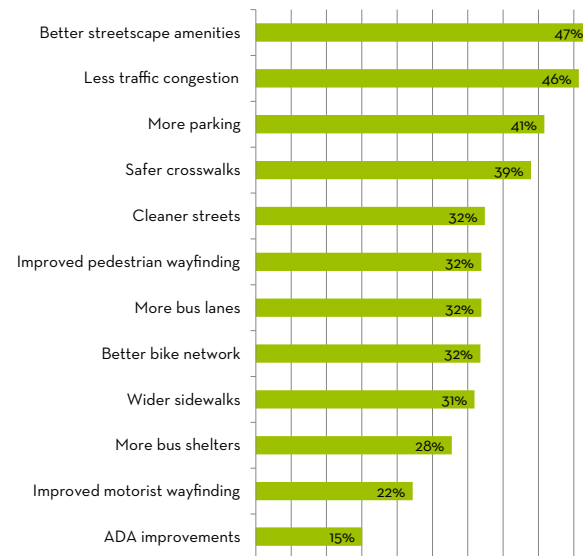
*People who come Downtown for different purposes have similar top priorities for what would make Downtown better.*



Source: Issues & Opportunities Survey, 2019-2020, with 1,432 online responses and 113 in-person responses.

## Improving Mobility Downtown

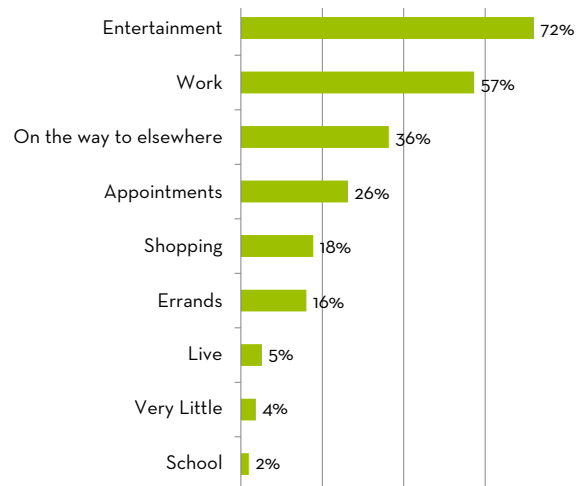
*What would make getting around Downtown Pittsburgh easier or more enjoyable for you?*



Source: Issues & Opportunities Survey, Downtown Pittsburgh Mobility Plan, 2019-2020

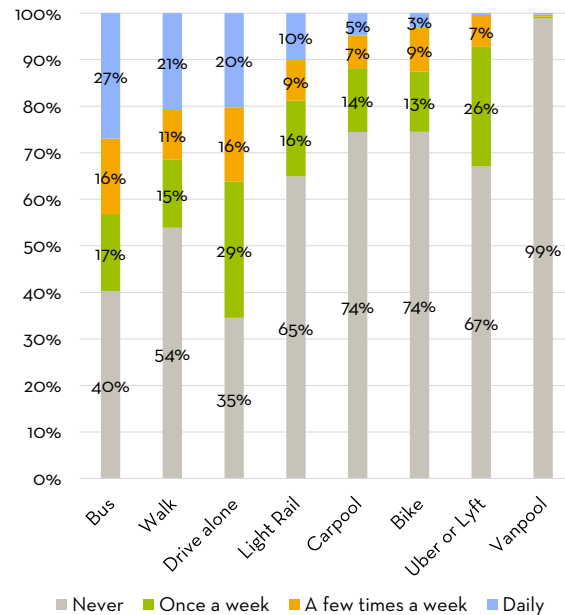
## How & Why People Come Downtown

What typically brings you to Downtown Pittsburgh?



On average, respondents selected about 2.5 options.  
Source: Issues & Opportunities Survey, 2019-2020

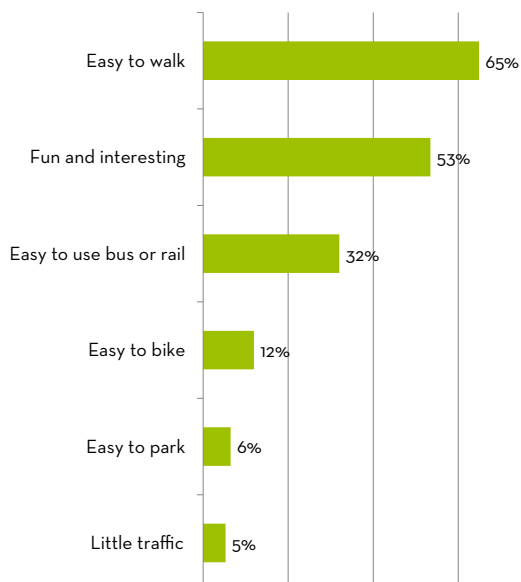
How do you travel to Downtown Pittsburgh?



Source: Issues & Opportunities Survey, 2019-2020

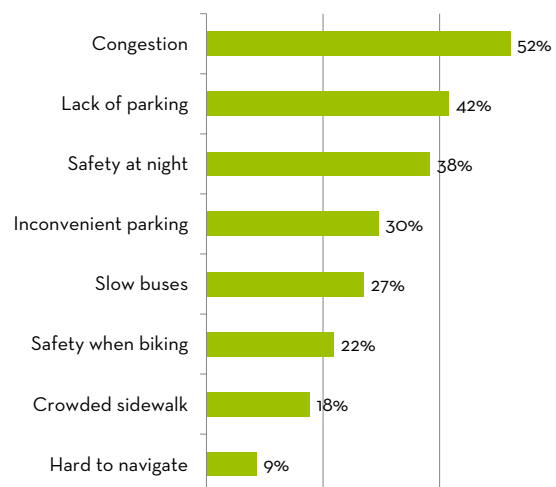
## Getting Around Downtown Today

What do you like about getting around Downtown Pittsburgh?



Source: Issues & Opportunities Survey, 2019-2020

What are your concerns or frustrations with getting around Downtown Pittsburgh?



On average, respondents selected about 2.5 options.  
Source: Issues & Opportunities Survey, 2019-2020

# Public Realm

## What We Know

Downtown Pittsburgh benefits from its compact size, gentle topography, and walkable street grid, making most destinations accessible on-foot and within a comfortable walking distance. Downtown's legacy of cultural and sporting venues translates to vibrant street life in many areas of Greater Downtown. An increasing number of restaurants and small businesses, coupled with effective public space programming, are activating new areas and extending activity into night-time hours. A comprehensive planter and hanging basket program, and public art installations in Market Square, Strawberry Way, and throughout the Cultural District, are a few examples of how Downtown's public realm is currently activated and enlivened for pedestrians.

Through the PDP's Paris to Pittsburgh Program, there has been an emergence of façade improvements and sidewalk cafes, with over \$2,000,000 committed to 101 projects over the past 12 years, encouraging and supporting the private sector's investment in public realm enhancements. Downtown's unique positioning also offers accessible river crossings to the North Shore and quality waterfront trails wrapping most of Downtown.

## Issues

- Pedestrian activity typically drops off after 6:00 PM leaving some Downtown streets feeling largely empty.
- Downtown is dark in many areas and often feels unsafe at night.
- Some corridors have blank walls, empty storefronts, and surface parking lots causing these spaces to be underutilized. A 2016 facade activity map (opposite page) demonstrates room for improvement.
- Downtown can feel disconnected from surrounding neighbourhoods and the waterfront areas due to highways, surface parking, and bridges.
- The narrow street grid reduces opportunities for greening, amenities, and sidewalk expansion.

## Opportunities

- Activate public spaces at night and implement designated 'night zones' with lighting and programming to improve perceptions of safety.
- Identify specific corridors to prioritize for pedestrian activity which have a high concentration of existing ground-floor activity and activation potential.
- Implement a pedestrian wayfinding system to improve navigability for residents and visitors.
- Explore ways to expand access to the waterfront, potentially by removing or reallocating redundant highway infrastructure.
- Build on the success of Market Square by continuing to activate open space with programming while ensuring long-term maintenance, with the I-579 Cap Park being an immediate opportunity.



*A majority of survey respondents said that getting around Downtown is "a fun, interesting experience." Source: PDP*



*"Better streetscape amenities" was the top response to the survey question, "What would help make getting around Downtown easier or more enjoyable for you?" Source: PDP*

*"Market Square would be more pleasant with no vehicles allowed."*

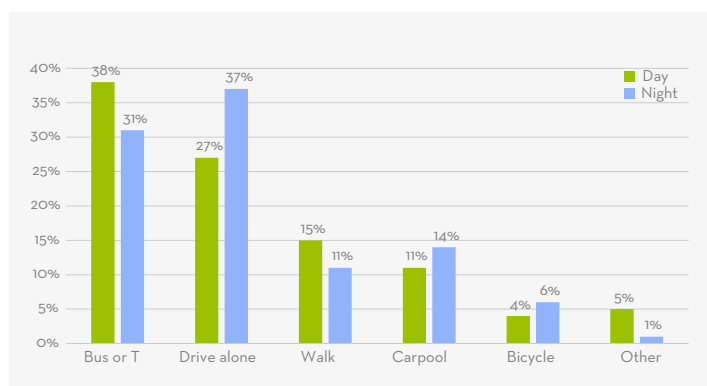
*"More destinations; more street activities (art, retails/food carts, musicians/buskers, etc.)."*

## Facade Activity (2016)



Source: Downtown Pittsburgh Public Realm Action Plan, 2016. This analysis indicated that there were many opportunities to activate facades across Downtown.

## Mode Choice by Time of Day



Almost 40% of survey respondents selected the option, “I feel unsafe, particularly at night.” Of those who selected that option, 55% were women.

“Some streets are really dark. My bus stop on Stanwix and Fourth is really dark, sometimes I feel unsafe.”

Source: 2016 Pedestrian Study, PDP

# Walking

## What We Know

Downtown is a highly walkable place, taking up only 0.64 square miles with a human scale street grid and limited grade change. New residential growth will enable more people to live within walking distance of employment opportunities, with more than 10% of people already walking to work in the City. Many commuters park in the fringe parking lots, located on the North Shore, Strip District, and Uptown, and walk or take public transit into the CBD to reach their destination. Overall, the majority of Downtown is within a 5-minute walk of a bus stop or T Station.

Downtown Pittsburgh has a relatively low rate of reported serious pedestrian crashes, despite some challenging pedestrian crossings. More recently, the City has been working to install new audible crossing signals and pedestrian countdown timers to help maintain and expand a safe walking environment for all users.

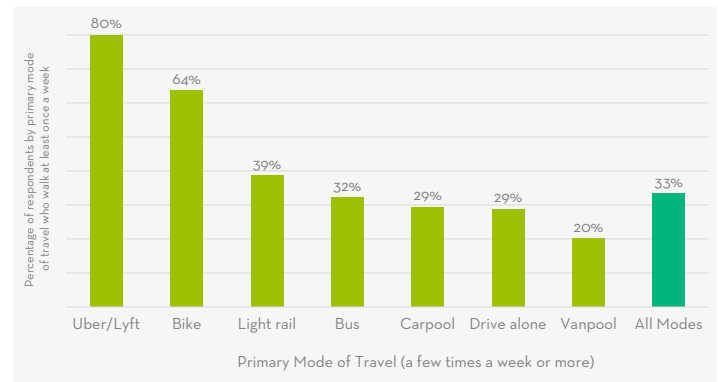
## Issues

- An inconsistent sidewalk network, with a patchwork of sidewalk materials at varying levels of quality, negatively impacts the pedestrian experience. A 2016 sidewalk quality map (opposite page) demonstrates room for improvement.
- Many crosswalks lack curb cuts or are not ADA compliant, causing accessibility challenges for those with mobility limitations.
- The current wayfinding signs are oriented towards drivers rather than pedestrians.
- There is limited signage to help people, particularly visitors unfamiliar with Downtown, find access to the waterfront.
- The lack of pedestrian lighting at night limits the paths people will take to walk to their destination.

## Opportunities

- Explore corridors that would benefit from a pedestrian-only experience, including Market Square or Strawberry Way.
- Deploy interventions to improve pedestrian crossings at larger intersections, such as high visibility graphic crosswalks.
- Use shared streets, where appropriate, as a tactical solution for improving the street life experience in areas that have low traffic demand but require vehicular access for limited uses such as deliveries.
- For streets with high pedestrian volumes, vehicle speeds can be reduced to improve safety for all road users, particularly pedestrians and cyclists.

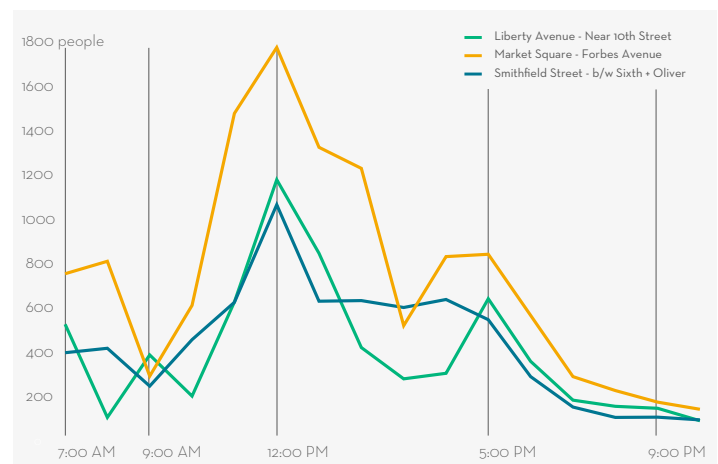
Many of the survey respondents who primarily travel by car, bus, bike, or other modes still walk at least once a week.



Source: Issues & Opportunities Survey, 2019-2020

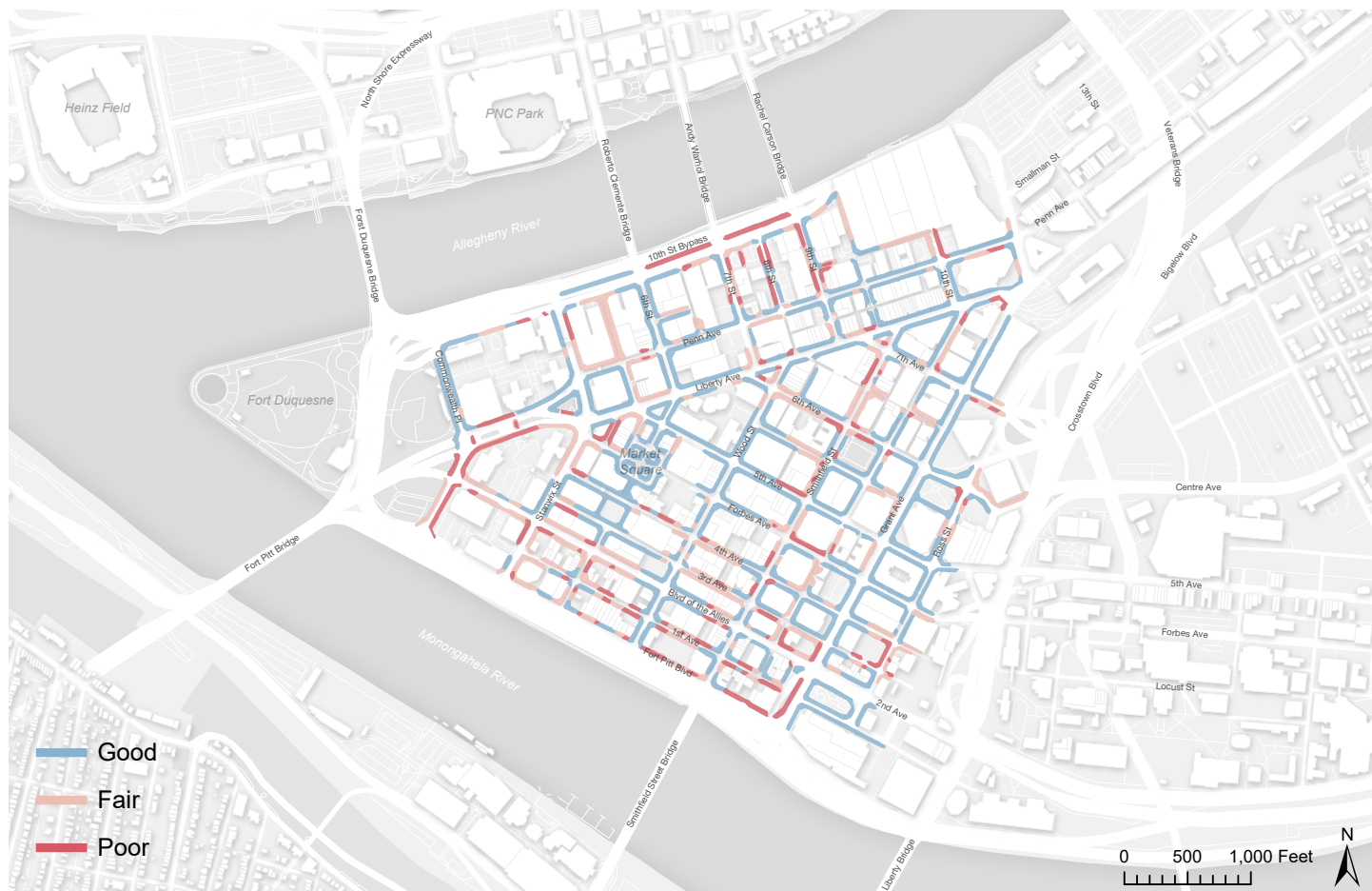
“Walking is the easiest. Driving can be easy if it’s not during rush hour.”

## Downtown Pedestrian Volumes on Select Streets



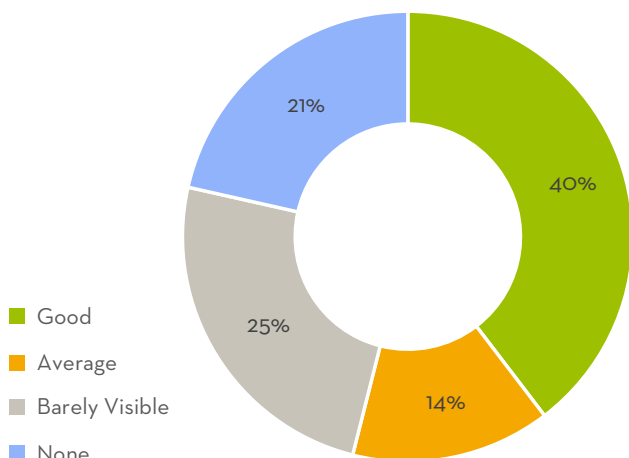
Source: 2016 Pedestrian Study, PDP

## Sidewalk Quality (2016)



Source: Downtown Pittsburgh Public Realm Action Plan, 2016. This analysis demonstrated the opportunity for sidewalk quality improvements in parts of Downtown.

## Crosswalk Quality (2015)



Less than 50% of crosswalks in Downtown either have no crosswalk or barely visible crosswalk.

Source: Envision Downtown, 2015. Many crosswalks have been improved since this data was collected in 2015..

# Transit

## What We Know

Over 45% of daily commuters choose to use public transit to get to Downtown, contributing to Pittsburgh's growing bus ridership. The CBD is well served by existing transit, with 84% of all PAAC buses passing through the Golden Triangle.

Downtown's existing transit network includes several examples of transit priority infrastructure that can be built upon, including four major busways and the light rail system. These assets offer congestion-free trips to and from Downtown, reduce the total number of vehicles on the road, and further incentivize transit use. Regional transit agencies offer options to commuters outside of Allegheny County to travel to Downtown Pittsburgh, but service and routes are limited, especially after peak hours and on the weekends.

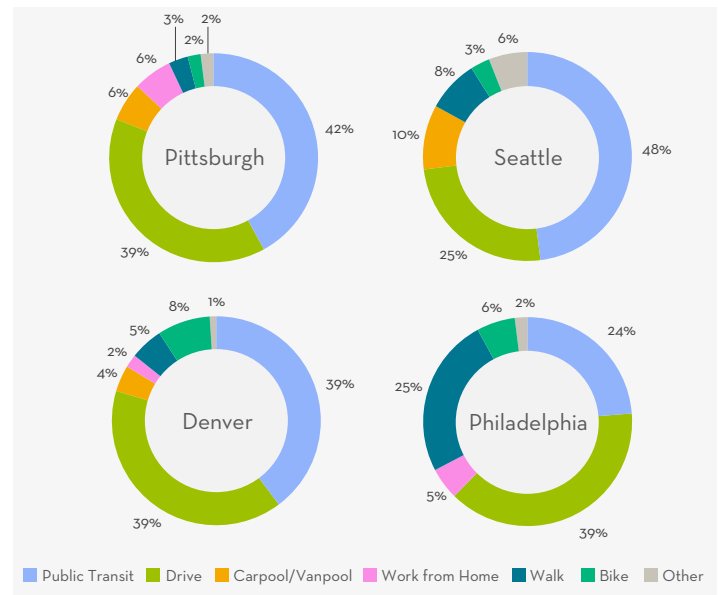
## Issues

- Current transit service does not meet the total demand, especially in suburban communities with a high number of Downtown employees and neighborhoods with a high percentage of residents who rely on public transit as their primary transportation option.
- Buses looping through Downtown are often overcrowded and stuck in congestion, especially during AM and PM rush, and they lack a dedicated hub for layover needs.
- The majority of transit stops Downtown do not offer a shelter and lack basic amenities such as lighting, seating, and real-time information.
- The transit system is not easy to understand or navigate for new or inexperienced riders.
- Passenger rail options are very limited and offer riders a poor station experience.

## Opportunities

- Offering free transfers, mobile payment, and 24-hour transit service are examples of strategies which can help to improve service and expand access to new riders.
- Expand rapid transit options to key regional corridors, such as the North Hills, and communities along the Monongahela, Ohio, and Allegheny Rivers.
- Improve the quality of Downtown transit experience by including priority routes and increased amenities at all bus stops.
- Identify a dedicated route to extend transit priority for the West Busway into Downtown and East Busway routes throughout the CBD.
- Leverage the planned Bus Rapid Transit (BRT) between Downtown and Oakland to prioritize Downtown transit corridors and expand pedestrian and transit amenities.

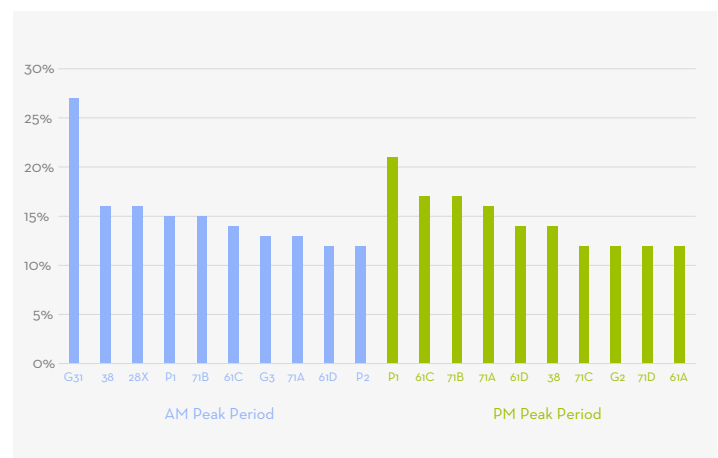
Downtown Pittsburgh has a very high public transit mode share compared to its peer cities, largely due to the continued increase in bus ridership.



Source: State of Downtown Pittsburgh, 2019

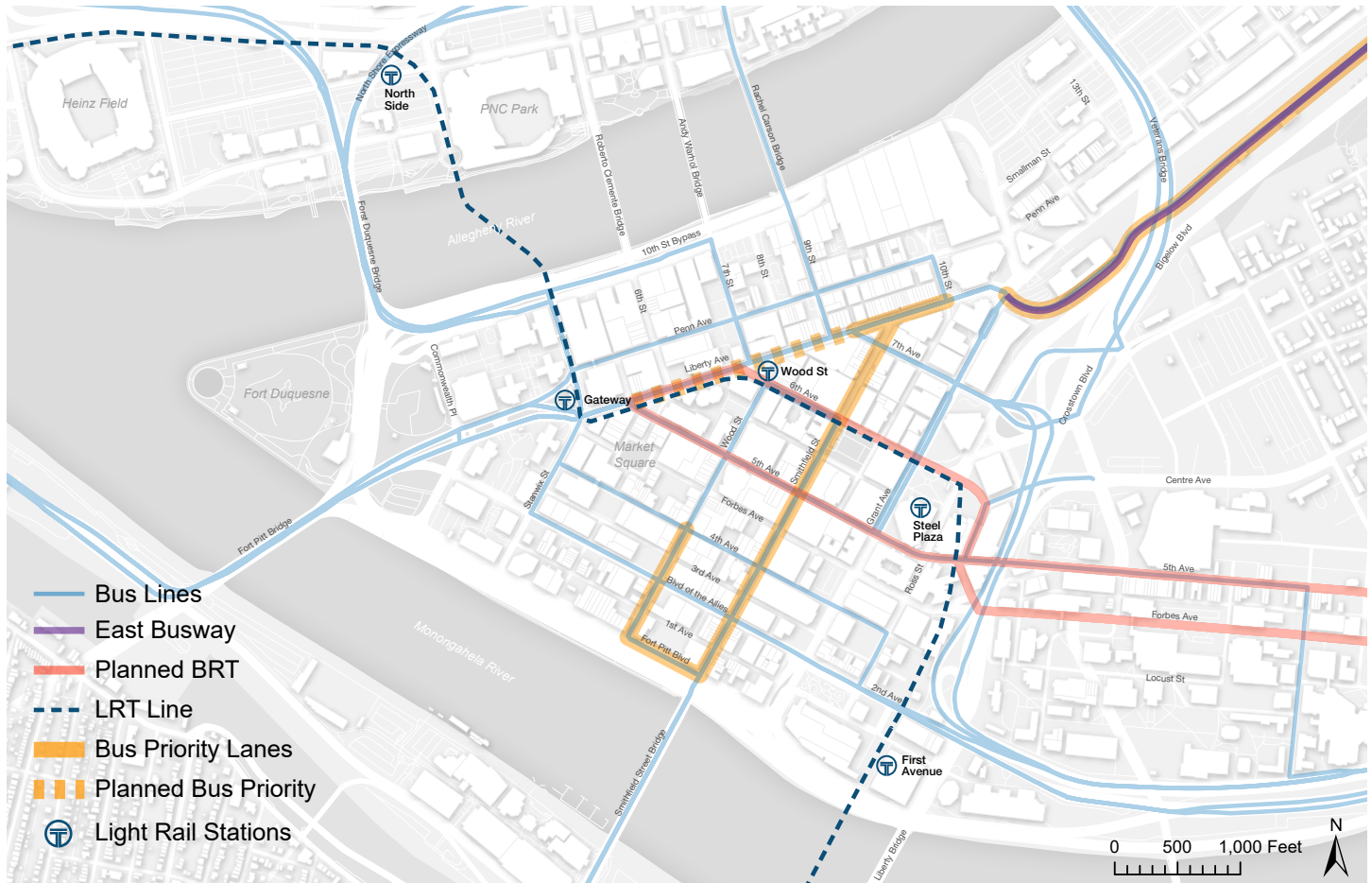
17 of the Port Authority's 20 most crowded routes serve Downtown. 15% of all trips on the P1/P2 were overcrowded in 2018.

## Overcrowded Peak Hour Trips by Route



Source: Annual Service Report 2018, Port Authority of Allegheny County

## Existing and Planned Bus Improvements



Source: PDP, Port Authority of Allegheny County

*“Bus service gets caught in rush hour congestion causing significant delays.”*

*“Sidewalks are blocked by people waiting at bus stops.”*

*“More priority bus lanes.”*

The quality and reliability of bus service suffers due to traffic congestion and vehicles blocking bus stops.

A third of survey respondents said that more dedicated bus lanes would make it easier to get around Downtown.

Survey respondents expressed that they would take transit if better service were available from their home location.

# Private Vehicles & Parking

## What We Know

Pittsburgh's road network provides direct access to Downtown via major arterials and highways. With seven bridges directly serving Downtown, private vehicles have access from all directions, but can experience congested conditions in the event of a roadway disruption. Downtown streets are laid out in a unique grid format, resulting in a confusing network of cross-streets and intersections.

Like most Downtowns, congestion is an issue during the morning and evening commutes and is even more challenging during special events. Of the daily commuters coming to Downtown in 2018, approximately 40% of trips were made by single-occupancy vehicles which took advantage of the 40,000 plus parking spaces found across Greater Downtown. The ParkPGH app and website provides an easy and intuitive resource on available parking. Carpooling and services like the Southwestern Pennsylvania Commission's CommuteInfo Program can provide an alternative to driving alone, but currently serve less than 5% of daily commuters.

## Issues

- Downtown access points, including the bridges and tunnels, are the primary cause of congestion during peak travel periods.
- Special events can cause additional congestion and add stress to the parking system, especially when there are overlapping or weekday events in Greater Downtown.
- The narrow street width and lack of enforcement of loading zones limit curb access for drop-offs/pick-ups and loading/unloading activities.
- Awareness of the current parking availability is often a major concern for visitors.
- Poor adherence and enforcement during peak travel times, including blocking intersections and loading/unloading activities, often causes frustration, confusion for motorists, and congestion.

## Opportunities

- During peak travel times, prioritize the curbside space for traffic flow, not parking and loading activities.
- Pursue a curb management strategy and explore the implementation of ride-share zones near key destinations, information on real-time parking availability, flexible curb uses, and a reduction of on-street parking.
- Incentivize major businesses and event venues to promote the use of public transit, carpool, biking, telework, and non-peak hour travel options to reduce single-occupancy vehicle demand, particularly on high demand days.
- Pursue more regional park and ride options and free shuttles to periphery parking during special events.
- Explore corridors that may benefit from the introduction of autonomous vehicle (AV) pilots.

The average speed in Downtown Pittsburgh is 13 mph, but most intersections function well.

*"Traffic is more congested getting in and out of the city (in my opinion) rather than in the city itself."*

*"Terrible congestion during rush hour."*

Over 40,000 parking spots exist in Greater Downtown, but visitors are often preoccupied with concerns about parking availability.

*"Parking is typically easy if willing to use a garage; the ParkPGH app is very helpful if the garages are full."*

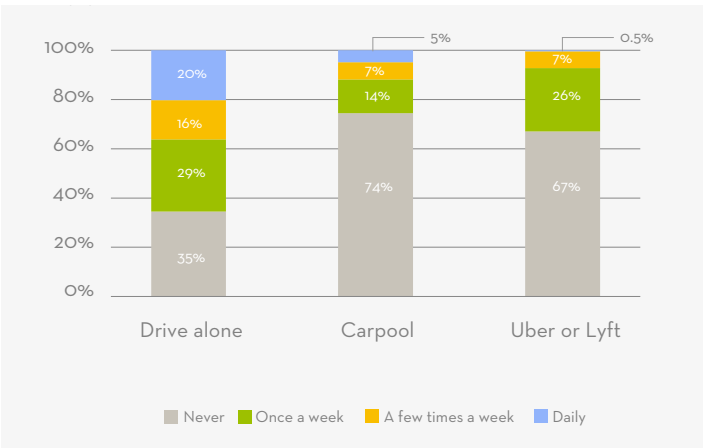
*"There are plenty of garages but they are expensive so I only bus Downtown. I wish parking was cheaper."*

PM Peak Highway Congestion and Intersection Performance



Source: Google Maps and 2018 DOMI Traffic Study

Survey Responses to the Question: “How do you typically travel to Downtown Pittsburgh?”



Source: Issues & Opportunities Survey, 2019-2020

Just under 40% of Downtown commutes in 2018 were made by driving alone in a car.

Only 36% of survey respondents said they drive alone to Downtown a few times a week or more, but almost as many said they drive once a week, and another quarter of respondents said they take an Uber or Lyft once a week.

# Biking

## What We Know

Downtown Pittsburgh's smaller footprint and level terrain provide excellent opportunities for cycling, whether you're commuting to and from work, enjoying a leisurely bike ride, or accessing commercial destinations. Both the protected multipurpose path along the Three Rivers and the Penn Avenue cycle track offer a safe and comfortable experience, but accessing them can be a difficult and often unsafe experience. Most bridges offer some level of bike accommodations and are more accessible as a result of their low profile and limited grade change. Over the past few years, cycling levels have increased in Downtown but have recently plateaued due to the lack of dedicated connections to surrounding communities, unclear routes, and limited accommodations to reach major destinations.

The Healthy Ride Bike Share program doubled their stations in Downtown, reaching a total of 19 in 2019, and over the next few years will be rolling out pedal assist e-bikes. In Fall 2017, Healthy Ride announced a partnership with the Port Authority to provide Connect Card holding riders with free, unlimited 15-minute rides as a way to begin addressing first and last mile commuting challenges. Downtown remains a popular destination for Healthy Ride users, with a 13% increase in trips between 2018 and 2019. In February 2020, the Department of Mobility and Infrastructure released the draft Bike(+) Plan which outlines a road map for improving bike infrastructure and policies throughout the City of Pittsburgh.

## Issues

- The lack of protected infrastructure in and around Downtown makes the biking experience feel less safe and excludes less experienced or less confident riders.
- Making connections to Downtown from surrounding communities is often limited to sharing a lane with cars (sharrows) or is non-existent.
- The bike network is currently disjointed and incomplete, making it difficult to provide easy or direct access to major destinations.
- Downtown has no bicycle wayfinding and an inadequate amount of secure bike parking.

## Opportunities

- Complete and enhance the existing trail network to provide safer connections to and from the Golden Triangle.
- Define a preferred route for cyclists traveling through Downtown by creating a fully protected and connected network.
- Identify where on-street or shared lanes can be used for safe routes to final destinations.
- Deploy bike specific wayfinding signage to direct cyclists to bike routes and key destinations.
- Encourage employers to invest in amenities such as showers, protected bicycle storage, and repair stations to help incentivize cycling as a regular commuting mode.

Healthy Ride trips grew by 7% between 2017 and 2018, with a total of 75,871 trips in 2018.

*"The footprint of Downtown makes it potentially ideal for walking, biking and transit, but I wouldn't say any of those modes are particularly easy. Or maybe it should be said, all of those modes could be greatly enhanced with investment and planning."*

Eight percent of survey respondents said they bike to Downtown one or more times per week, but 32% of all respondents said they would like a safer, more connected bike network.

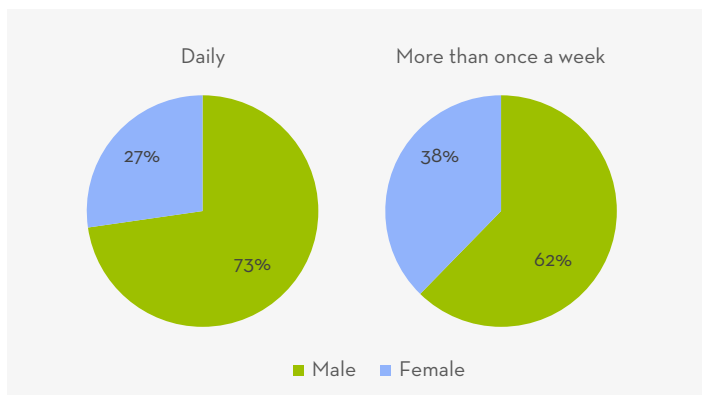
*"It would be awesome if there was a Park & Bike lot that you could rent a bike for the final few miles."*

## Downtown Bike Network



Source: PDP

## Survey Responses to the Question: “How do you typically travel to Downtown Pittsburgh?”



Recent investments have been made in bike infrastructure in Downtown, but the network is not yet complete and it has challenging connections to other neighborhoods.

Bike commuting is more common among men, which is typical of cities without a connected network of protected bike infrastructure. Source: Issues & Opportunities Survey, 2019-2020

# Deliveries & Freight

## What We Know

Delivery vehicles benefit from the well-connected regional highway network and multiple options to enter the Golden Triangle via the many bridges. Throughout Downtown, there are specific streets designated as truck routes that bear the vast majority of the freight traffic. Downtown's street network also includes several alleys which offer some buildings the ability to manage deliveries without disruption to key corridors and thoroughways.

Unclear and outdated loading restrictions and limited enforcement both add additional challenges to managing Downtown's streets. Transportation Network Companies (TNCs), including Uber and Lyft, also add an additional strain on the curb for pick-ups and drop-offs, particularly during PM rush and special events. Downtown is also adjacent to a wholesale distribution center in the Strip District where the three major streets, Smallman St., Penn Ave., and Liberty Ave., are all designated as truck routes. In addition, freight vehicles also contribute to Downtown's poor air quality.

## Issues

- A shortage of freight staging areas pushes loading and unloading activities to the curb where competition is most intense.
- Stacking and movement operations performed by delivery representatives often take place on the sidewalks which impedes pedestrian mobility.
- The significant volume of truck deliveries negatively impacts air quality and noise pollution.
- Limited coordination, poor quality alleyways, and insufficient enforcement constrain the opportunity to use alleys for consistent loading and unloading activities.
- Downtown lacks a coordinated delivery management strategy to address the rise in e-commerce, retail, and grocery deliveries due to new residents.

## Opportunities

- Incentivize off-peak and overnight deliveries to alleviate conflicting demand for curb space.
- Facilitate discussions between the delivery providers and property managers for using shared loading docks, delivery facilities, and parcel lockers.
- Create "green loading zones" to give electric trucks or cargo bikes priority loading and unloading locations.
- Work with public agencies to develop a flexible curb management program that responds to changing demand for curbs based on time, day, and season.
- Explore the potential for mobile consolidation centers near highway exits or fringe parking lots to reduce large trucks coming into Downtown; advocate for more last-mile deliveries to be completed using greener modes.
- Advocate for the enforcement of idling laws in place throughout Downtown at key loading/unloading areas.

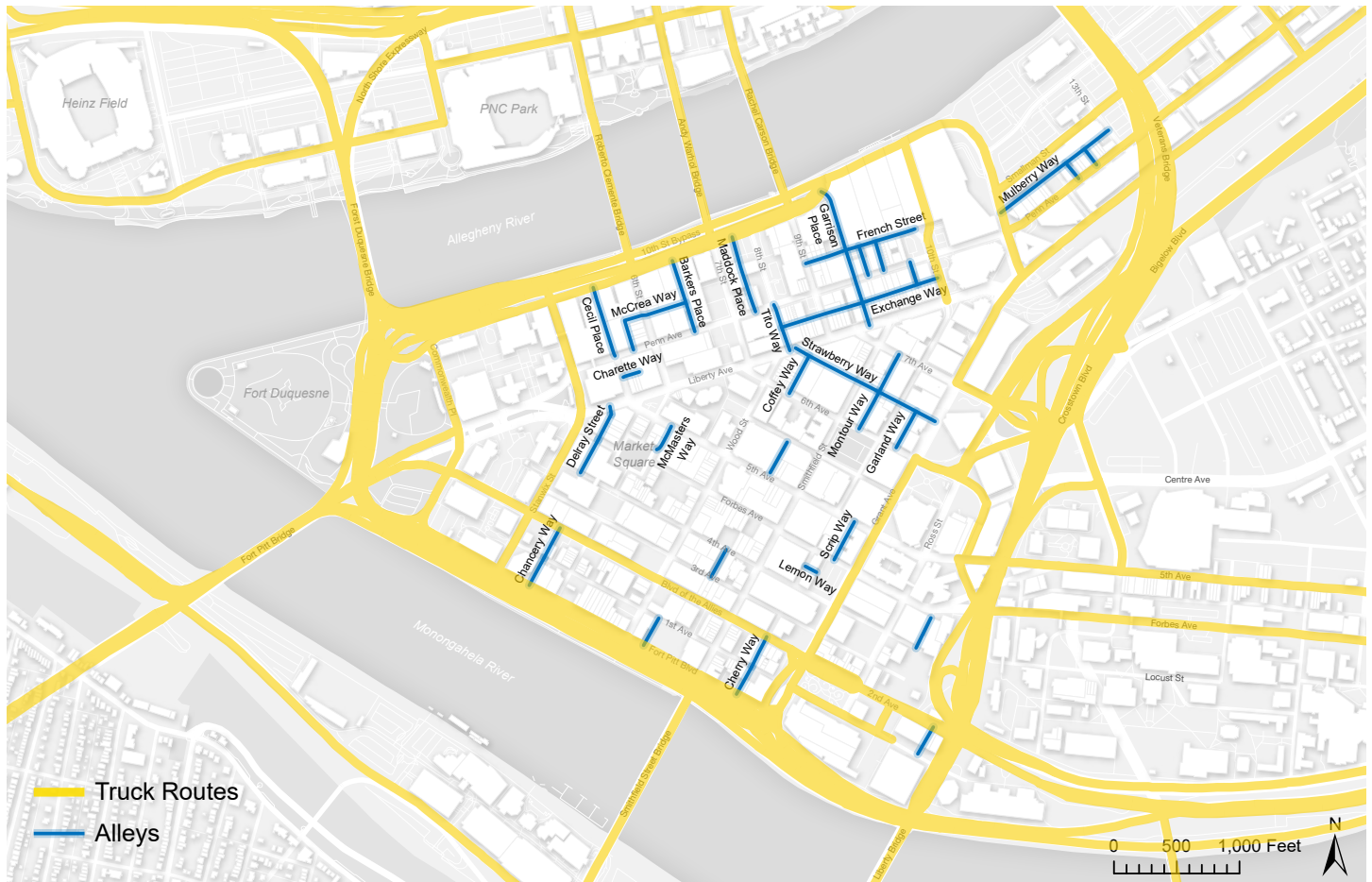
Across the country, the rising popularity of online shopping and delivery services has contributed to a surge of delivery vehicles competing for space on city streets.

Delivery vehicles can contribute to poor air quality and roadway congestion. More flexible strategies for curb management, as well as smaller delivery vehicles and e-cargo bikes, can help address this issue even as deliveries rise.



Source: PDP

## Downtown Alleys and Truck Routes



Source: PDP, Allegheny County, Arup analysis

Presence of alleys can enable separation of delivery/building service activity from pedestrians and traffic circulation.

However, not all alleys may be easily used for freight and service activities due to space constraints and poor conditions.

*“Delivery trucks should make the majority of their deliveries prior to the am rush hour and should use the loading docks or areas of the building.”*

# Environment & Infrastructure

## What We Know

Pittsburgh's strategic location at the confluence of the three rivers was determined for its industrial growth and also for its natural beauty. The picturesque Point State Park, waterfront paths, and urban parks helped keep Downtown users connected to open space. The City of Pittsburgh has prioritized addressing climate change and inequality directly through a variety of initiatives and programs currently underway, such as the p4 Principles, Climate Action Plan, OnePGH, and the 2030 District.

As a legacy city with many buildings, roadways, and utility infrastructure assets older than a century, Downtown is subject to the risks of significant disruptions due to infrastructure failures. Most recently, the sinkhole on 10th Street demonstrates the need for developing a process to regularly review and prioritize state-of-good-repairs for all physical infrastructure in Downtown.

## Issues

- The American Lung Association ranks the City of Pittsburgh 7th from the bottom in terms of year-round air quality, with Downtown at the epicenter of this issue.
- Extreme weather events and other climate change-related hazards have a significant impact on vital Downtown infrastructure, such as flooding on the 10th Street bypass, 376 "bathtub," and the Mon-Wharf.
- Unforeseen environmental hazards that impact roadways and utilities have immediate impacts on the reliability of the mobility system and economic continuity.

## Opportunities

- Activate the existing open space by providing year-round programming options at primary locations such as Point State Park and Allegheny Riverfront Park.
- Build a campaign that focuses on reducing transportation-related emissions by shifting trips to transit, walking, biking, and electric vehicles to improve local air quality.
- Invest in Pittsburgh's wealth of natural infrastructure, such as the large parks, rivers, and streams to improve air quality, reduce stormwater flows, and minimize urban heat island effects.
- Develop stormwater management and green infrastructure criteria to be used when deploying any new hardscaped project.
- 'Right-size' infrastructure, such as highway ramps and bridges, to support walking, biking, and transit, and improve Downtown's resilience to flooding.

Downtown Pittsburgh benefits from a range of open space, including a number of trails, parks, and plazas, but access, maintenance, and programming is inconsistent.

Infrastructure resilience is becoming an increasingly high priority.



Source: Pittsburgh Post-Gazette

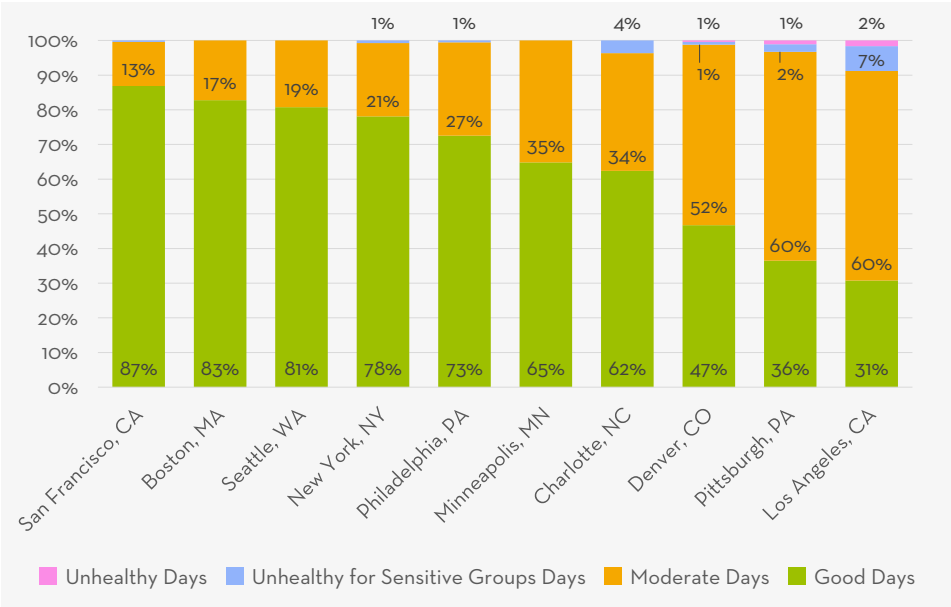
*"Not enough green space by the rivers. It'd be great if we could turn the lower roadway along the Allegheny into a park with cafés or food trucks."*

Open Space and Rivers



Source: City of Pittsburgh, Open Street Map

Air Quality in Peer Cities



Source: Environmental Protection Agency

# Residential & Commercial Development

## What We Know

Over the last 10 years, Greater Downtown has seen over \$10B in total investments through various types of developments, including office, retail, residential, hotel, entertainment, parks and trails, transportation, education, and civic projects. Between 2000 and 2018, Greater Downtown's population increased by 50%, with an additional 5,000 new residential units currently underway. The expansion of residential development has provided more street level activity outside of traditional business hours contributing to a more vibrant and safe living environment. The abundance of restaurants and cultural opportunities within a short distance offer both new and current residents a high quality of life.

The CBD has seen some significant development projects over the last few years, including the Tower at PNC and the JLL Center at Tower Two Sixty, but the Strip District, Lower Hill, and North Shore are seeing and will continue to see a large number of future development projects. These new, often lower density mixed-used projects emerging in these areas are displacing surface parking lots, while also bringing new residents and office workers into Greater Downtown. Ultimately, these land use changes will bring new travel demand challenges in the next five to ten years.

## Issues

- Downtown does not currently have a grocery store which limits residents' access to fresh produce and high-quality food.
- New residential development will attract more local truck trips from e-commerce deliveries and waste services, resulting in even more competition at the curb.
- Residential growth often excludes larger households and lower incomes.
- Some residents feel that Downtown amenities don't accommodate new residential needs, such as dog parks.
- New development projects on the fringe of the CBD are planning for new structured parking to accommodate new tenant demands in areas that are not accustomed to increased volume of traffic.
- The lack of night-time and weekend transit service makes it challenging for residents to forgo car-ownership.

## Opportunities

- Advocate for building affordable housing, with a Transit-Oriented Development (TOD) framework built in, to support high-quality living for lower income families who work Downtown in service jobs and within the expanding retail and entertainment sectors.
- Develop a marketing and communication strategy to promote Downtown's high transit accessibility and amenity-rich, walkable neighborhoods and promote more car-free living.
- Encourage new TOD along dedicated transit routes into Downtown, such as the light rail, East Busway, or future BRT.

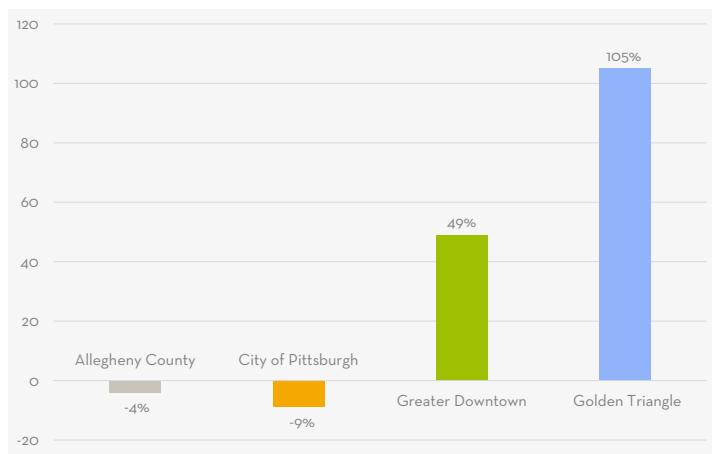
Rising real estate values reflect growing demand for commercial space in Downtown.

The average asking price per square foot of Class A office space in the Central Business District increased by 28% between Q1 2010 and Q4 2019.



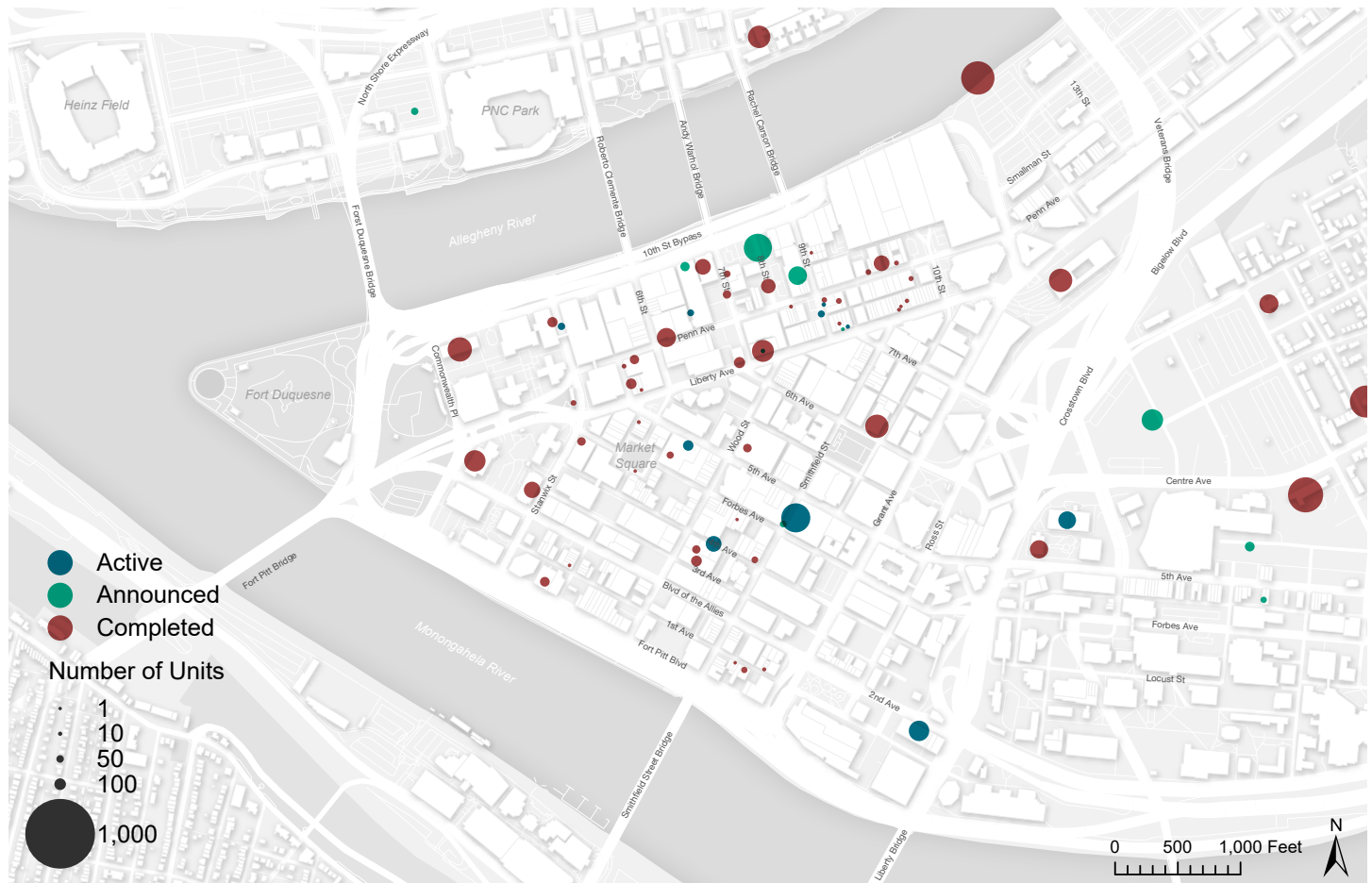
Source: Elkus Manfredi Architects

Downtown Pittsburgh's population grew significantly from 2000 to 2018, while the City and County declined slightly.



Source: US Census, State of Downtown Pittsburgh, 2019

## Downtown Residential Investment, 2016-2020



Source: PDP

Residential development has accelerated in line with rising demand for living Downtown.

As of December 2019, there were 5,113 residential units in the pipeline for Greater Downtown, 1,526 of which were in the Golden Triangle.

# Conclusion & Next Steps

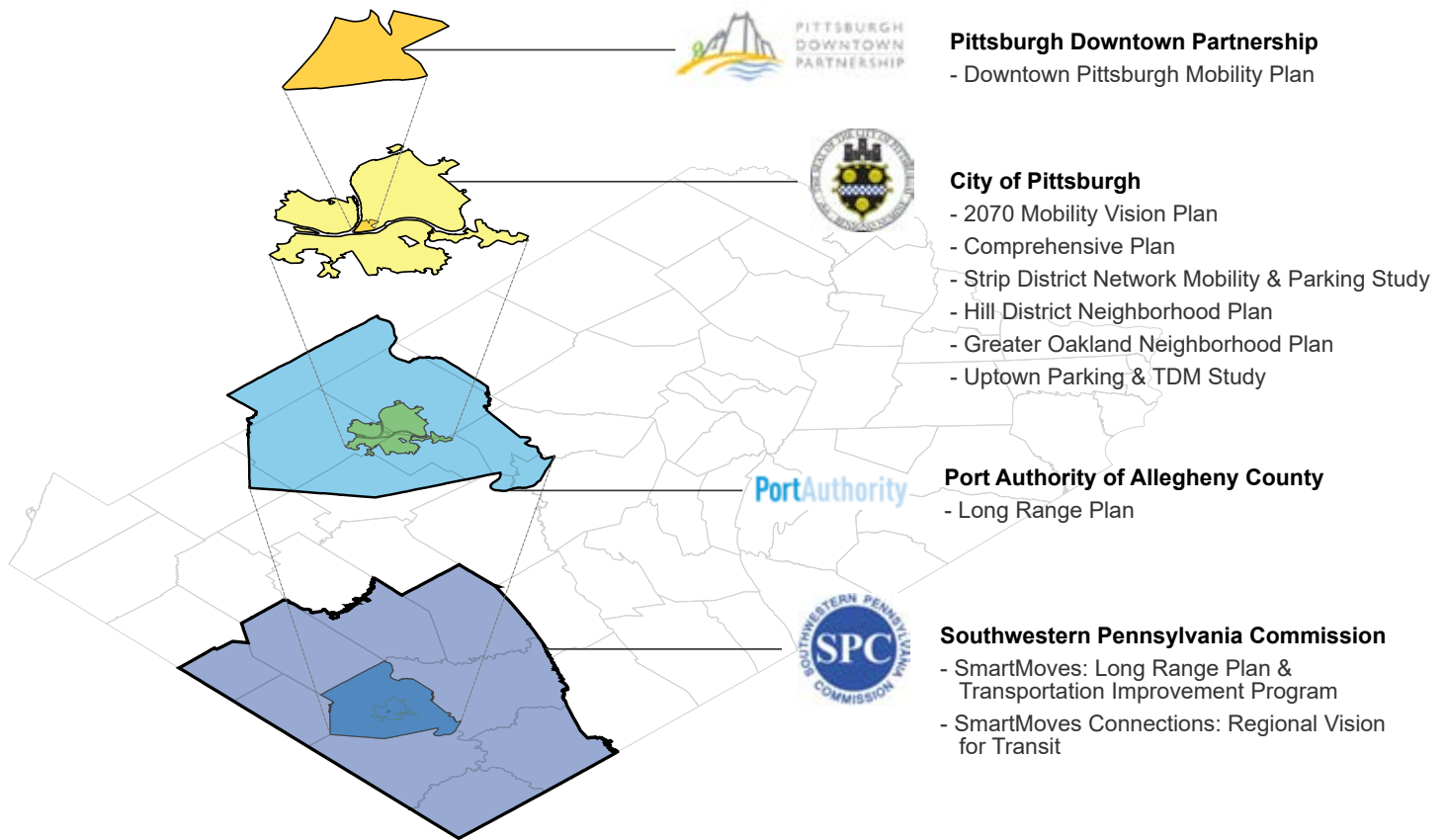
This report has identified initial findings and concepts that will be explored throughout the remainder of the planning process. In the coming months, the PDP will continue to work in collaboration with the various planning efforts being led by the City, Port Authority, and Southwestern Pennsylvania Commission. Most importantly, the next phases will heavily rely on engagement with the public and Downtown stakeholders, with a particular focus on traditionally underrepresented populations and neighborhoods.

The immediate next steps for the Plan development include:

- Developing **Guiding Principles and Goals** through community input to steer the plan development phase.
- Conducting a **Scenario Planning** analysis to understand how Downtown will grow and change in the coming years, and what the mobility system will require to continue to support users efficiently.
- Creating a **Street Hierarchy Framework** to identify priority users and modes on Downtown corridors throughout the day.
- Identifying a **High Priority Projects List** to more efficiently respond to immediate issues on near-term projects and programs while charting a path for larger, more challenging projects to be implemented through the partnership of our public agencies.



## Related Plans and Studies



Source: Arup

## Endnotes

1. American Community Survey 5-Year Estimates, 2017
2. <https://www.statista.com/statistics/203183/percentage-distribution-of-household-income-in-the-us/>
3. Much of the employee data available represents traditional 9 AM-5 PM commuters and isn't representative of off-shift workers or late-night shifts.
4. State of Downtown Pittsburgh Report, Pittsburgh Downtown Partnership, 2019. <https://downtownpittsburgh.com/employment-trends/>
5. Make My Trip Count Survey Data, Green Building Alliance, 2018.
6. State of Downtown Pittsburgh Report, 2019.
7. <https://nces.ed.gov/>
8. State of Downtown Pittsburgh Report, 2019
9. <https://downtownpittsburgh.com/education-venture-capital/>
10. Downtown Pittsburgh Pedestrian Study, Pittsburgh Downtown Partnership, 2016

**April 2020**