

# EMPOWERING PUBLIC PROPERTY

Simulating New Housing, Economic  
Development and Greenspace Policy with  
Newark's City-Owned Property Inventory



BREAK-OUT REPORT:

**Simulation 2: Use commercially and industrially  
zoned land to fuel equitable development of  
jobs, businesses and placemaking**



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## EXECUTIVE SUMMARY

### **Simulation 2:**

#### **Use commercially and industrially zoned land to fuel equitable development**

We explore how affordable commercial space can advance equitable economic development in Newark by identifying city-owned lots in zoning districts that permit commercial and industrial uses. The first set of properties we highlight consist of first-floor commercial space within mixed-use buildings. We identified 40 suitable parcels. Situated in mixed-use zoning and community commercial zoning districts, these parcels are close to residential areas and collocated with dense clusters of simulated affordable housing sites.

The second set of properties we examined are located in industrial and large-scale commercial (C-3) zoning districts. These lots are located farther away from residential centers of the city and zoned for light industrial and commercial uses. We propose that these lots are used as light industrial space to support Newark's advanced manufacturing renaissance, a strategic economic sector that is uniquely positioned to support equitable development in Newark through local business ownership, living income jobs, and economic innovation.

Our simulation proposes using either mixed-use street-level space or industrial space to advance affordable commercial and economic development for health care, food access, daycare, general consumer retail and manufacturing uses.

#### ***Health-oriented uses:***

Commercial spaces in mixed-use neighborhoods can provide healthcare and essential consumer amenities that affect the social determinants of health.

If these spaces are split into small- and medium-sized suites for a range of health-oriented and community uses, these 40 sites could accommodate about 100 health-oriented tenants if floor area is split into a mix of small suites (1,000 to 1,500 square feet) and medium suites (ranging from 2,200 to 3,600 square feet). Creating affordable commercial space for health-oriented uses creates opportunities for local entrepreneurship and community development.

#### ***Food and consumer retail uses:***

The 2,500 proposed affordable housing sites from the first simulation are located in neighborhoods that exhibit dire levels of social vulnerability according to the CDC's Social Vulnerability Index.<sup>1</sup> Grocery stores with fresh food, daycare centers, and other general

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<sup>1</sup> The CDC Social Vulnerability Index reflects population and housing characteristics that indicate social vulnerability, including socioeconomic status (high poverty, high unemployment, low income, no high school diploma); household characteristics (age 65 and older, age 17 or younger, disability, single-parent households); minority status and language (minority, speaks English "less



consumer goods are in short supply in neighborhoods with high concentrations of vacant property.

***Light industrial and manufacturing uses:***

Developing light industrial space with below-market rent to support advanced manufacturing can help drive equitable economic development in Newark. Using available industrial-zoned city-owned land to create affordable industrial space for multisectoral clusters of production, research, and design businesses could potentially support 800 growing businesses.

Nine industrially-zoned city-owned sites provide an opportunity to create nearly 4.2 million square feet of building space in six- to eight-story modern light industrial buildings.<sup>2</sup>

Based on the hypothetical allocation of uses in the simulation described above, the simulation shows that potential development on available sites could accommodate about 660 tenants in light industrial space and about 140 tenants in office space. If 70 percent of all usable industrial and office space is leased and rents are priced between \$10 per square foot and \$20 per square foot,<sup>3</sup> revenue could range between about \$20.8 million to \$41.7 million.

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than well”), and housing type/transportation (multi-unit structures, mobile homes, crowding, no vehicle, group quarters). (CDC, 2020).

<sup>2</sup> There are 14 parcels that make up 9 sites in industrial zoning districts under the proposed 2023 zoning ordinance. Six contiguous lots were merged for the purpose of simulating development potential. The simulation assumes that sites will be developed to the maximum permitted density (6 or 8 stories depending on the zoning district). We also assume that 70 percent of land area will be used for the building, which is less than the permitted building footprint area of 85 percent of land area in light of requirements for parking and loading docks for trucks. Notably, 3 out of 16 of the selected sites are on the NJDEP Known Contaminated Site list and would require significant environmental remediation to activate as viable commercial use (NJDEP, 2023). See **Appendix A** for a full discussion of the simulation methodology.

<sup>3</sup> There is not a well-established formula for “affordable” commercial rent. Below market-rate commercial rent is relative to market rate rents and the greater the difference, the greater the subsidy given to the business. We present a range here that is between 23 percent to 62 percent lower than market rate. In 2023 industrial rents in Newark ranged from about \$19.50 per square foot to \$26 per square foot, which is among the most expensive industrial rents in New Jersey (CBRE, 2023).





## INTRODUCTION

The strategic redevelopment of city-owned land in Newark holds immense promise for advancing policies of housing affordability in hand with placemaking, climate resiliency, and equitable development. Land that has come into the possession of the City of Newark due to tax delinquency, foreclosure, or landlord abandonment reflects a living legacy of structural inequality. This report reimagines public use by chronicling the opportunities for equitable growth and household mobility that might arise from a clearer view of Newark's current inventory.

City-owned property is a public asset that can be strategically leveraged as a policy tool to address Newark's immense unmet needs for affordable housing, equitable economic development, and climate resiliency. Newark faces an acute shortage of affordable housing. While multiple approaches are needed to fill the gap, the acquisition of city-owned land at a nominal fee is a critical resource for affordable housing development in Newark. Any plan that seeks to address the housing crisis must leverage a deep layer of subsidies to produce units that are affordable at the local level. However, supporting the development of healthy, livable neighborhoods requires more than brick-and-mortar affordable housing production. In hand with affordable housing development, Newark needs quality jobs and business ownership opportunities to advance the financial security of residents. Investing in infrastructure that increases climate resiliency is equally crucial to the future health and prosperity of a city that is

vulnerable to multiple climate risks including the urban heat island effect and wastewater and sewage overflow flooding.

Effectively, these policy goals rely on technical capacity-building at City Hall. It is not possible to envision and oversee the redevelopment potential of Newark without information systems that can record the quantity, location, and basic structural characteristics of property in the City's inventory. Quality data about the inventory is an indispensable tool in the effective management of this finite public resource. Indeed, bureaucratic practices of quantification to conceive of and manage land inventory are as old as modern cities (Scott, 1998). Yet, municipalities operate on an uneven playing field as it relates to having basic data infrastructure to reliably collect information about their assets and services. Building the City of Newark's technical capacity to manage property data is a prerequisite to the implementation of numerous active policy initiatives premised on the use of city-owned land, from the creation of the Newark Land Bank to the Investing in Newark Communities initiative that establishes deed restrictions for up to half of city-owned property (City of Newark, 2020; City of Newark, 2023). CLiME has devoted time and resources to produce foundational data management tools and techniques in partnership with the City of Newark that allow for the efficient and creative use of city-owned land as a resource for equitable development.



CLiME began the project in October 2022 with the goals of creating an up-to-date inventory of city-owned land and developing recommendations to institute data management practices for improved efficiency. At completion, the project has yielded:

- A validated list of city-owned property with fields that indicate the disposition status;
- A restructured database to improve efficiency and prevent future data errors;
- A data dashboard and map to convey the state of the inventory to internal city users and the public.

While this research emerged out of CLiME's technical capacity-building initiative with the City of Newark, the project sparked a broader inquiry into how the City of Newark may steward and transfer public land to advance its goals of affordable housing production, equitable economic development, and climate

resiliency. In the first section we describe CLiME's collaboration with the City of Newark and highlight the value of investing in municipal information systems as a cornerstone of policy implementation and evaluation. We continue in the second section by running a series of policy simulations with land inventory data. These simulations estimate the potential of affordable housing production, environmental remediation, and job creation on city-owned property based on development rights defined in the City's proposed 2023 zoning ordinance. Here we also suggest new neighborhood governance and ownership structures that embed democratic processes in local land use and redevelopment planning, such as Community Planning Boards, Community Land Trusts, and a Redevelopment Authority. In the final section we conclude by outlining policy recommendations to leverage city-owned property as a tool for equitable development.



## SIMULATION 2: USE COMMERCIAL AND INDUSTRIALLY ZONED LAND TO FUEL EQUITABLE DEVELOPMENT OF JOBS, BUSINESSES AND PLACEMAKING

We explore how affordable commercial space can advance equitable economic development in Newark by identifying city-owned lots in zoning districts that permit commercial and industrial uses. How can the redevelopment of commercially zoned city-owned property create spaces where equitable economic activity can flourish? Equitable economic development is not merely growth (i.e., a quantitative increase or “more of”) but more crucially a qualitative change in what business ownership, work, and production looks like and how it benefits Black and Brown Newark residents who have long been excluded from wealth-building in urban economies (Feldman and Lowe, 2017). Equitable economic development requires creating new capacity to seed and scale local minority-owned businesses, create quality jobs, and harness the talents and creativity of Newark’s workforce for economic innovation (Ibid). CLiME believes even this definition is too siloed from the need for placemaking in neighborhoods. Local businesses and institutions affect employment, wealth creation but also social determinants of health, a sense of community and distinctive culture. Therefore, in this simulation, we imagine equitable economic development including the eradication of food deserts, improved access to health care and other features of neighborhood placemaking beyond the established goals of job creation and

entrepreneurship. Most neighborhood institutions need affordable space in order to interact with the public. Creative use of city-owned land can stimulate neighborhood growth on behalf of residents.

*In this simulation, we imagine equitable economic development including the eradication of food deserts, improved access to health care and other features of neighborhood placemaking beyond the established goals of job creation and entrepreneurship.*

Beginning with jobs, Newark plays host to large employers in the region across economic sectors, from major universities and hospital systems to the Port Authority and Prudential Insurance. Yet, most Newark residents do not find jobs with promising career ladders within city limits. More than four in five jobs located in Newark are filled by non-residents. Meanwhile 75 percent of Newark residents in the labor force work outside of their city (City of Newark, 2020). The unemployment rate in Newark is about double statewide levels with joblessness hitting the Black population at nearly double the rate of the Hispanic and White Non-Hispanic populations (U.S. Census Bureau, 2019). It is crucial that urban economic policies aiming to seed or bring new business to Newark are coupled with robust workforce development



initiatives that address racial segmentation in labor market outcomes.

Entrepreneurship holds promise as a wealth-building and job creation vehicle, but local minority-owned businesses must overcome significant structural barriers that impede their success. About 70 percent of Newark businesses are owned by people of color, yet Black- and Latino/a-owned businesses in Newark have valuations at three percent and 19 percent the levels of white-owned firms (Prosperity Now, 2019). A confluence of structural barriers inhibits the growth of Black and Brown-owned businesses. Prosperity Now reports that minority-owned firms in Newark are less likely to scale their businesses, in part stemming from challenges in accessing capital for expansion (Ibid; City of Newark, 2020). Among the factors of production required to start or expand a venture, land is a fundamental component that comes at an increasingly high cost. Rising commercial rents, which have ranged from 7 percent to up to 26 percent annually in recent years, risks destabilizing businesses and creating a barrier to entry for new firms, especially for minority-owned firms (Moe & Garneva, 2021). The Federal Reserve reported that more than half of both Black and Hispanic employer-owned firms reported rent as a financial challenge compared to 40 percent of white employer-owned firms (Federal Reserve, 2021).

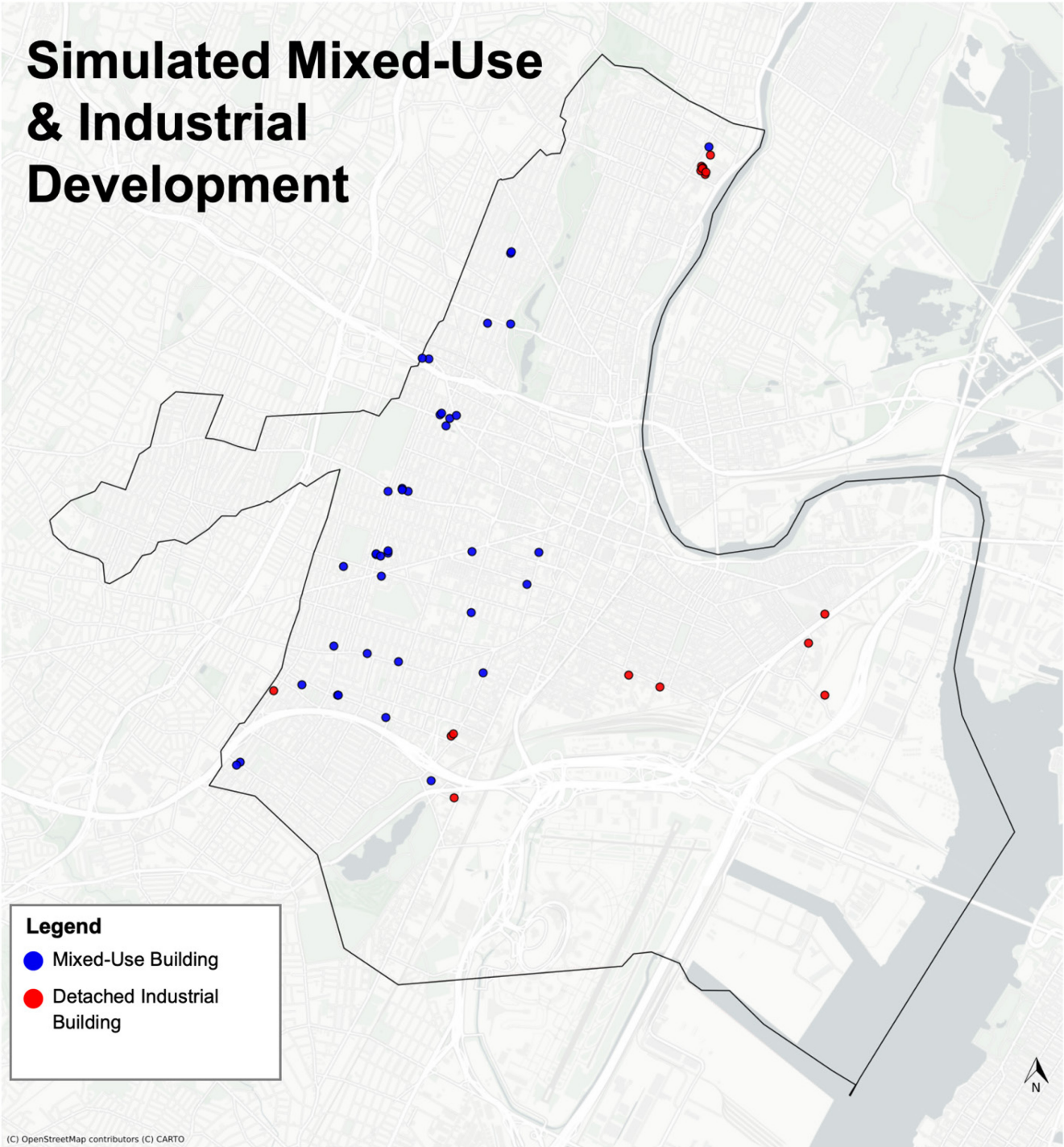
Two tranches of underutilized land present distinct economic and social benefits.

The first set of properties we highlight in this section consist of first-floor commercial space within mixed-use buildings. The affordable housing simulation in the prior section identified 38 suitable parcels for mixed-use buildings. Situated in mixed-use zoning and community commercial zoning districts, these parcels are close to residential areas and collocated with dense clusters of simulated affordable housing sites. We propose that first-floor commercial spaces in these buildings serve as affordable commercial space for essential consumer amenities that make neighborhoods healthy and livable places, such as grocery stores, daycares, cafes, and community health clinics.

The second set of properties examined in this section are located in industrial and large-scale commercial (C-3) zoning districts. These lots are located farther away from residential centers of the city and zoned for light industrial and commercial uses. We propose that these lots are used as light industrial space to support Newark's advanced manufacturing renaissance, a strategic economic sector that is uniquely positioned to support equitable development in Newark through local business ownership, living income jobs, and economic innovation. Note that all calculations are based on an assessment of inventory as of June 2023.



Figure 1





### 3.1 Affordable Commercial Space for Consumer Amenities and Livable Neighborhoods

Commercial spaces in mixed-use neighborhoods can provide healthcare and essential consumer amenities that affect the social determinants of health. The housing simulation in the prior section identified 40 city-owned lots in mixed-use and commercial zoning districts where it is possible to develop mixed-use buildings. Here, we suggest that the first floor of these mixed-use buildings is reserved for affordable commercial and community space with the remaining floors devoted to affordable housing. Potential uses in first-floor commercial space that support the social determinants of health include community clinics, grocery stores, daycares, exercise studios, and restaurants. Simulated ground floor space across these 40 buildings amounts to a total of 191,503 square feet of commercial space. These spaces are relatively small in size with a median building footprint of 3,824 square feet. If these spaces are split into small- and medium-sized suites for a range of health-oriented and community uses, these 40 sites could accommodate about 100 health-oriented tenants if floor area is split into a mix of small suites (1,000 to 1,500 square feet) and medium suites (ranging from 2,200 to 3,600 square feet).

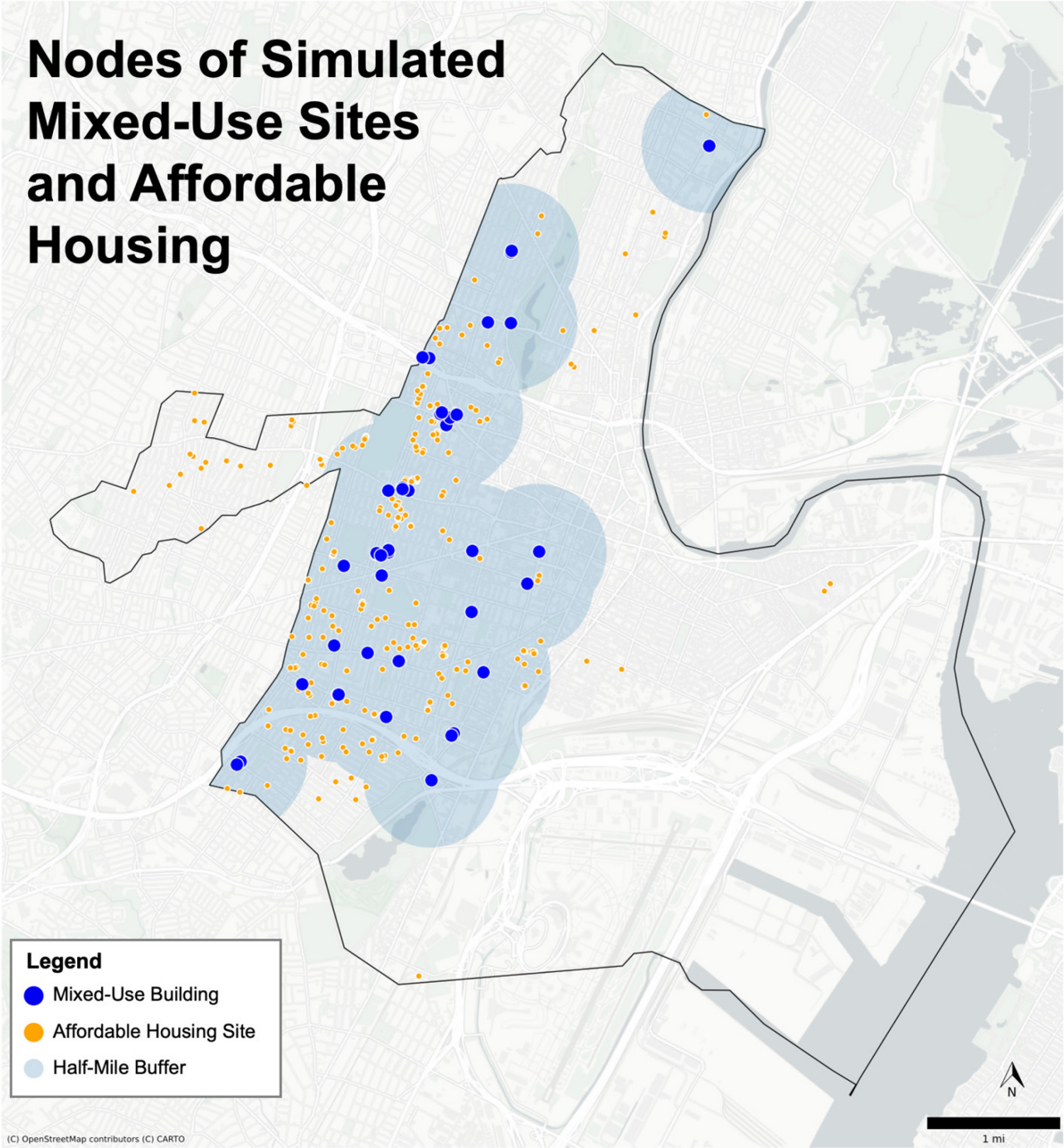
*If these spaces are split into small- and medium-sized suites for a range of health-oriented and community uses, these 40 sites could accommodate about 100 health-oriented tenants if floor area is split into a mix of small suites (1,000 to 1,500 square feet) and medium suites (ranging from 2,200 to 3,600 square feet).*

Affordable commercial space can provide multiple benefits that advance community development. Healthy food and consumer amenities in a walkable distance of one's home can advance public health and spark neighborhood life on the streets. Additionally, affordable commercial spaces provide opportunities to incubate local businesses, creating entrepreneurial and job opportunities for Newark residents. Consumer stores and health clinics can become multifunctional spaces that embeds community development services in neighborhoods.

**The proximity of consumer and healthcare amenities to large clusters of proposed affordable housing units makes these sites optimal vehicles for placemaking and community development.** About 2,500 simulated affordable housing units representing approximately 90 percent of all simulated housing units are located within a ten-minute walk or half-mile radius of a first-floor retail site (see **Figure 12**). Nearly 80 percent of these sites are in the South and West Wards. Almost 15 percent of simulated sites are in the Central Ward while only about 3 percent of sites are located in the North and East Wards, respectively.



Figure 2



### 3.2 Why Creating Affordable Space for Amenities Matters for Community Development

Creating affordable space for essential neighborhood amenities can help transform neighborhoods into healthy places of belonging. Several clusters of proposed affordable housing and mixed-use sites are located in areas with high poverty and vacant property rates. High concentrations of vacant city-owned lots in predominantly Black neighborhoods in the West and South Wards constitute one of many forms of deep socioeconomic disadvantage fueled by segregation and structural racism.

The 2,500 proposed affordable housing sites from the first simulation are located in neighborhoods that exhibit dire levels of social vulnerability according to the CDC’s Social Vulnerability Index<sup>4</sup> (Center for Disease Control, 2020; see **Figure 13**). Access to quality health care is also limited in these neighborhoods. About 44 percent of the proposed housing sites are more than a half-mile distance from a community health clinic, a mission-driven health care setting that provides on average have exhibited superior performance in delivering quality care to low-income communities of color relative to hospital settings (U.S. Department of Health and Human Services, 2021; Shi et al, 2001). These neighborhoods also have limited access to basic consumer amenities that make neighborhoods livable. About 16 percent of proposed housing units are located within a food desert designated by the USDA as a low-access food area<sup>5</sup> (USDA, 2020; see **Figure 14**). Grocery stores with fresh food, daycare centers, and other general consumer goods are in short supply in neighborhoods with high concentrations of vacant property.

#### Community Health

Creating affordable commercial space for health-oriented uses creates opportunities for local entrepreneurship and community development. Oasis Fresh market, a Black-owned grocery store in Tulsa, Oklahoma exemplifies how mission-driven commercial real estate development can make a grocery store more than a place to buy fresh food in a food desert. In partnership with the local economic development authority, Oasis Fresh Market’s 1,000 square-foot grocery store became a “community hub” where people came to buy fresh food and take advantage of services in designated space for credit counseling, housing assistance, and mental health services (Hamer, 2023). In Newark, affordable commercial space for health-oriented uses creates multiple benefits, including local business ownership and jobs and essential consumer amenities.

<sup>4</sup> The CDC Social Vulnerability Index reflects population and housing characteristics that indicate social vulnerability, including socioeconomic status (high poverty, high unemployment, low income, no high school diploma); household characteristics (age 65 and older, age 17 or younger, disability, single-parent households); minority status and language (minority, speaks English “less than well”), and housing type/transportation (multi-unit structures, mobile homes, crowding, no vehicle, group quarters). (CDC, 2020).

<sup>5</sup> We use the U.S. Department of Agriculture Economic Research Service’s variable for low-income and low-access with a vehicle variable. This variable includes census tracts where “more than 100 housing units do not have a vehicle and are more than one-half mile from the nearest supermarket, or a significant number or share of residents are more than 20 miles from the nearest supermarket” (USDA, 2020).





Figure 3

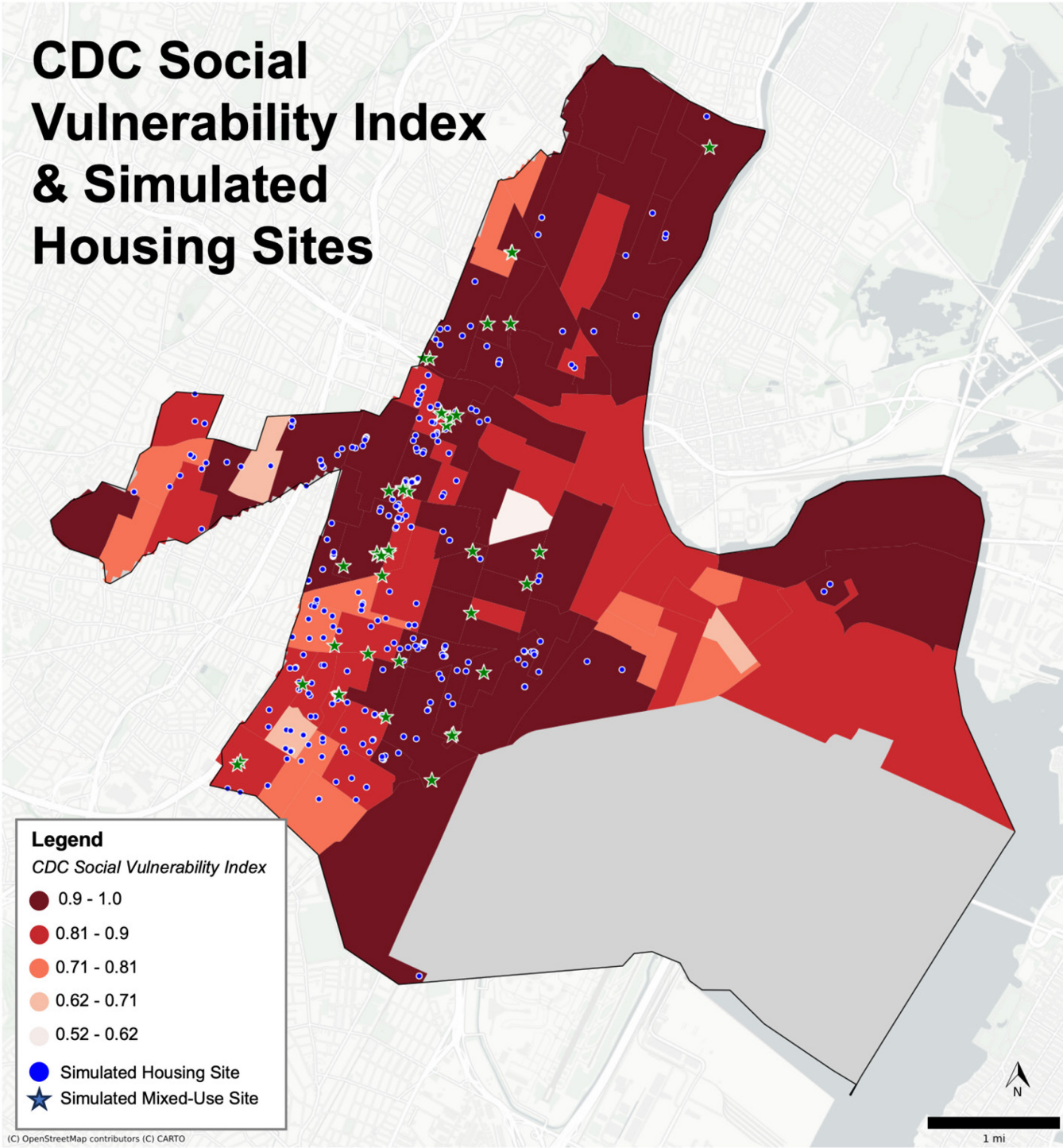
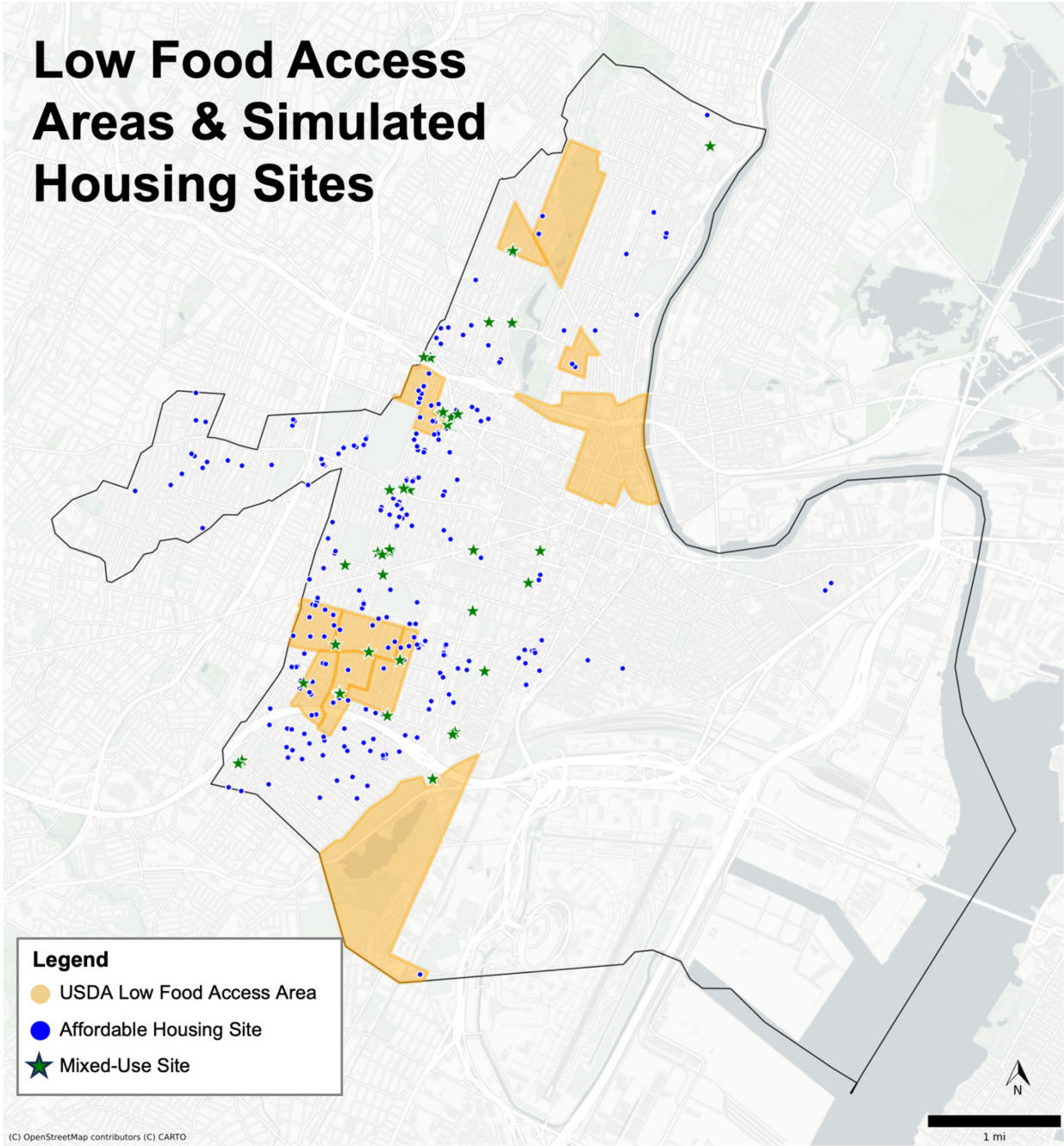


Figure 4





### 3.3 Sparking Equitable Economic Development: Setting the Foundations for Newark’s Advanced Manufacturing Renaissance

Developing light industrial space with below-market rent to support advanced manufacturing can help drive equitable economic development in Newark. Using available industrial-zoned city-owned land to create affordable industrial space for multisectoral clusters of production, research, and design businesses could potentially support 800 growing businesses. Examples of advanced manufacturing subsectors include “support manufacturing” that creates component parts for maritime, aviation, and logistics industries associated with Newark’s largest anchor: the Port Authority of New York/New Jersey. Other types of advanced manufacturing that fits within existing local strongholds include medical supplies for Newark and New Jersey’s hospital systems as well as offshore wind technology for the burgeoning green economy.<sup>6</sup>

*Using available industrial-zoned city-owned land to create affordable industrial space for multisectoral clusters of production, research, and design businesses could potentially support 800 growing businesses.*

Advanced manufacturing can help Newark promote equitable growth by creating local entrepreneurial opportunities, providing quality jobs for workers with vocational training, and driving economic innovation through cross-sectoral collaboration with research-oriented anchor institutions and creative industries. Modern manufacturers in the early to mid-phases of business development need small spaces at an affordable price point, which is in very short supply in Newark where the large-scale logistics industry competes for coveted industrial land close to the port (Author’s Interview; Mistry et al, 2013). They also would greatly benefit from proximity to research institutions and creative industries.

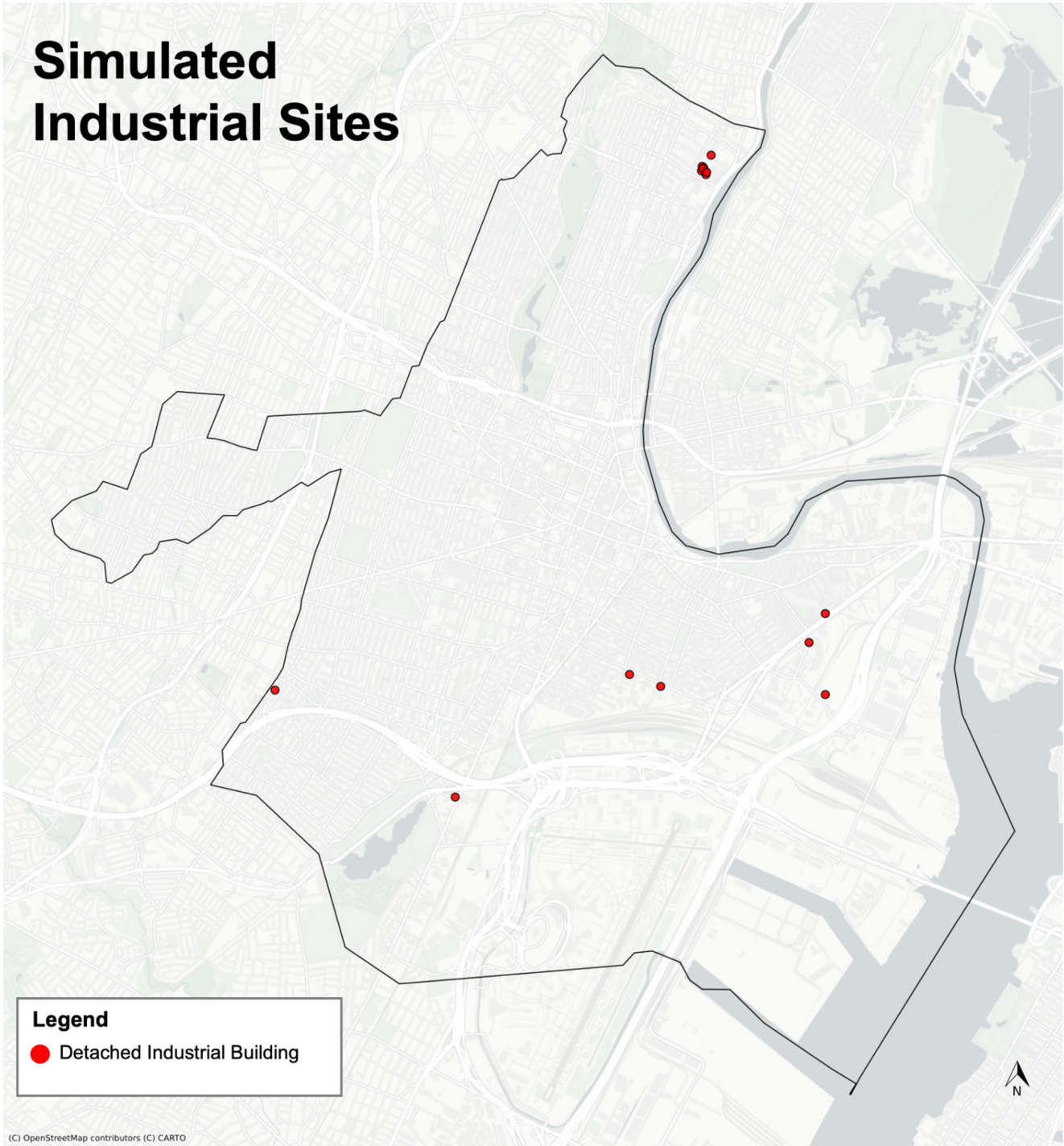
**Nine industrially-zoned city-owned sites provide an opportunity to create nearly 4.2 million square feet of building space in six- to eight-story modern light industrial buildings.<sup>7</sup>** Almost all parcels are located in the eastern-half of the city across the East, South, and North Wards. Together these parcels have a total land area of about 716,457 square feet. There are two large parcels in the North and East Wards with land areas of about 392,000 square feet and about 178,000 square feet, respectively.

<sup>6</sup> (Author’s interview).

<sup>7</sup> There are 14 parcels that make up 9 sites in industrial zoning districts under the proposed 2023 zoning ordinance. Six contiguous lots were merged for the purpose of simulating development potential. The simulation assumes that sites will be developed to the maximum permitted density (6 or 8 stories depending on the zoning district). We also assume that 70 percent of land area will be used for the building, which is less than the permitted building footprint area of 85 percent of land area in light of requirements for parking and loading docks for trucks. Notably, 3 out of 16 of the selected sites are on the NJDEP Known Contaminated Site list and would require significant environmental remediation to activate as viable commercial use (NJDEP, 2023). See **Appendix A** for a full discussion of the simulation methodology.



Figure 5



We simulate light industrial buildings composed of a mix of spaces for multisectoral economic uses across production, technology, and design industries. In the simulation, light industrial space is 65 percent of total building area and office space is 10 percent of total building area. Industrial and office space is divided into small and medium-sized suites to accommodate demand for smaller space among early and mid-stage manufacturers. For two of the largest sites, we also include two large light industrial spaces at 75,000 square feet to draw an anchor manufacturing tenant. Another 5 percent of total building area is for shared equipment such as 3D printers, computers, and robotics to help early-stage advanced manufacturing firms access new technology while reducing production costs. To help facilitate cross-sectoral relationships among tenants, five percent of total building area is used for shared amenities, such as lounges, cafes, and food halls. The remaining 15 percent of total building area is non-rentable building space (e.g., hallways, elevators, and mechanical areas). Additional site-specific research is required to determine how building space should be allocated according to planned uses.

*Based on the hypothetical allocation of uses in the simulation described above, the simulation shows that potential development on available sites could accommodate about 660 tenants in light industrial space and about 140 tenants in office space.*

Based on the hypothetical allocation of uses in the simulation described above, the simulation shows that potential development on available sites could accommodate about 660 tenants in light industrial space and about 140 tenants in office space. If 70 percent of all usable industrial and office space is leased and rents are priced between \$10 per square foot and \$20 per square foot,<sup>8</sup> revenue could range between about \$20.8 million to \$41.7 million. Additional revenue could be generated from tenants providing on-site amenities such as cafes and food halls as well as fees for using shared equipment.

**Strategic planning for tenant selection and coordination with economic development organizations will be crucial to activate light industrial space for Newark’s equitable development goals.** Local, minority-owned firms and businesses that hire Newark residents for technical production jobs should be prioritized in affordable leasing. For example, mission-driven industrial real estate projects offering below-market rent in legacy cities such as Pittsburg, Indianapolis, and St. Louis evaluate potential tenants and establish rent based on local hiring practices and estimated job density (Urban Manufacturing Alliance, 2019). Workforce development

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<sup>8</sup> There is not a well-established formula for “affordable” commercial rent. Below market-rate commercial rent is relative to market rate rents and the greater the difference, the greater the subsidy given to the business. We present a range here that is between 23 percent to 62 percent lower than market rate. In 2023 industrial rents in Newark ranged from about \$19.50 per square foot to \$26 per square foot, which is among the most expensive industrial rents in New Jersey (CBRE, 2023).





and small business development organizations can also contribute to project goals by leasing space. The Brooklyn Navy Yard has an on-site workforce development intermediary connecting residents to job opportunities with more than 500 employers across production, design, and administrative occupations (Brooklyn Navy Yard, 2023). Additionally, a 150,000 square-foot industrial project in Pittsburgh managed by a Community Development Financial Institution curated space for Black-owned manufacturing businesses that grew out of their financing and technical assistance program (Urban Manufacturing Alliance, 2019). There is a need to define an evaluation criterion for filling space and establishing below-market rent that reflects the project's equitable development goals.

### 3.4 Governance Systems for Commercial Development

The possibility of planning, developing, and maintaining affordable commercial space to provide consumer amenities and community benefits elevates the need for a governance and public management structure to drive this vision. The City of Newark could transfer ownership of the sites to another quasi-public sector entity such as a redevelopment authority, neighborhood redevelopment district, or a Community Land Trust. A governance entity would be responsible for leading a community planning process to understand needs and envision possible health-oriented uses on the sites. Key stakeholders in a community planning process include residents, small business representatives, and community-based organizations and churches. There is also a need to determine which entities will be charged with redeveloping the land, which may involve a combination of non-profit developers, minority-owned businesses, and other development entities. The redevelopment entity must also have the capacity to play a property management role, holding the land to maintain affordable rents and match potential community uses with available property.

Yet numerous governance and public management questions remain. What entities are best equipped to own, redevelop, and manage affordable industrial space? As in the case of the Brooklyn Navy Yard, the City could remain the owner of the land while transferring property management to a non-profit entity or public authority. Retaining City or non-profit ownership of the land is advantageous because the property does not incur property taxes that are passed down to tenants in the form of higher rents. The entity would also be responsible for a community planning process that engages multiple stakeholders, including residents, industry leaders, higher education and

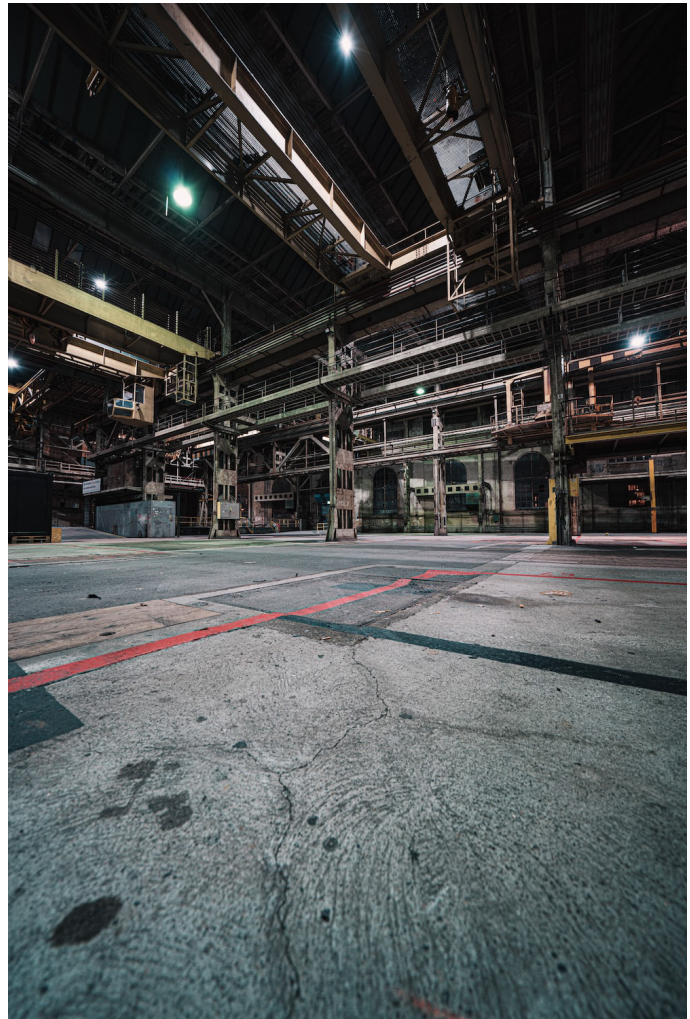


research institutions, and workforce training organizations, and small business technical assistance organizations. It's crucial that whatever entity is charged with managing the space has strong internal capacity for economic development planning and is well-coordinated with Invest Newark, the city's economic development agency, and other workforce development intermediaries, small business development organizations, and technical assistance organizations. Further, there is a need to determine which entities will be responsible for brick-and-mortar development. Constructing a modern industrial facility is complex and requires a specialized developer that understands the structural characteristics of a modern industrial building, such as ventilation, loading dock angles, and electric wiring for production equipment, among other issues (Urban Manufacturing Alliance, 2019).

### 3.5 Financing Development

Financing an industrial project that provides below-market rent requires a stack of tax credits, grants, and philanthropic support to make the project financially viable. The cost to redevelop these 10 sites into 8- to 10-story light industrial buildings for advanced manufacturing uses would be extensive. Three sites are on the NJ Department of Environmental Protection Known Contaminated Site list and require significant environmental remediation to make the site safe for use (NJ DEP, 2023). Other anticipated development costs include demolition, community planning, site feasibility analysis, architecture and engineering expenses, and construction. A stack of subsidies would be required to support the project in providing below-market rent to industrial tenants.

The general composition of the capital stack for commercial and industrial development should mirror housing development (65 percent senior debt; 15 percent subordinated debt or gap financing; and 20 percent equity, see **Table 8**). Capital sources for commercial and industrial projects differ based on program requirements. New Jersey Redevelopment Authority's tax-exempt Bond Program targets industrial and commercial projects, (NJRA, 2023). The \$100 million program offers below-market





interest rates and issues loans up to \$750,000 to non-profits (Ibid). Another state source for senior debt is the NJ Economic Development Authority (NJEDA)'s Standard Assets Repositioning Investments, a \$25 million state fund to invest in commercial, industrial, or mixed-use real estate projects to reposition abandoned property (NJ EDA, 2023). Additionally, New Markets Tax Credits, a federal tax incentive program administered by the CDFI Fund, can provide gap financing for commercial real estate projects. Certified community development entities submit proposals to the CDFI Fund to receive credits that can function as equity or flexible loans. Certified entities in New Jersey have received more than \$1.4 billion of New Market Tax Credit funds since the onset of the program, including a 2021 allocation of \$40 million to New Jersey Community Capital, a regional CDFI loan fund (CDFI Fund, 2023).

Further, projects on brownfield sites that require environmental remediation can seek funding for pre-development costs from NJEDA's Brownfield Incentive Redevelopment Program (NJEDA, 2022). There are five simulated industrial and industrial sites collectively making up nearly 615,000 square feet of land area that are on the NJDEP Known Contaminated Site list at the time of writing. Commercial and industrial projects can receive tax credits for 50 percent of costs or up to \$4 million. Funds can be used for a number of pre-development activities, including remediation and demolition (NJEDA, 2023).

### **3.6 Why is advanced manufacturing right for Newark? Why is affordable industrial space needed to make it happen?**

Newark's locational advantages position the city to grow a competitive advanced manufacturing sector that creates business ownership and quality job opportunities for Newark residents. Newark's proximity to the largest port on the East Coast and other major transportation infrastructure – from interstate highways to a national airport – creates a unique competitive advantage for manufacturers (Mistry et al, 2013). Newark is also a state-wide hub for higher education with two major research universities within city limits, positioning advanced manufacturing firms for economic innovation with local knowledge leaders pushing research and development (Ibid).

Although Essex County has a high concentration of advanced manufacturing firms that invest heavily in R&D and create production jobs with above-average wages, few are located in Newark even with the city's locational advantages (Mistry et al, 2013). The 2021 launch of the 60,000 square-foot HAX headquarters established a "hard tech" investment and business startup program in Newark, representing a meaningful first mover in local advanced manufacturing investment (State of New Jersey, 2021). While HAX provides crucial support for start-ups, there is a need to establish a foundation to retain growing firms. Numerous ventures that were established at HAX have outgrown



their space and relocated to other cities in the metro area in search of more affordable rent and greater amenities.<sup>9</sup>

Keeping advanced manufacturing businesses in Newark is crucial to prioritize residents in quality job opportunities and create a local economic culture of innovation. Industrial space in Newark on the real estate market is not oriented toward modern manufacturers that need smaller spaces at an affordable and stable price point. Existing industrial buildings on the rental market often exceed 100,000 square feet or are larger in size (LoopNet, 2023). Industrial rents in Newark are among the most expensive in the metropolitan region. Commercial landlords unconcerned with the economic productivity of the city lack an economic incentive to curate their space for small manufacturers whose buying power is overpowered by large-scale logistics firms. Asking rent for industrial space in Newark ranged from about \$19 to \$26 per square foot in the first quarter of 2023, which is among the most expensive in the state due to the presence of the port (CBRE, 2023).

Advanced manufacturing can benefit Newarkers by creating living-income jobs that provide benefits and opportunities for career mobility. The average annual wage for all production workers in the New York-Newark-New Jersey Metropolitan Statistical Area is 14 percent higher than the median household income in Newark (Bureau of Labor Statistics, 2021; U.S. Census Bureau, 2021). For production occupations in advanced manufacturing subsectors, average annual wages range between about \$57,000 to \$77,000 or 37 percent to 86 percent higher than the city's median household income (Ibid).<sup>10</sup> Significant interventions in education policy and investments in workforce development are needed to open local pathways toward technical production jobs. The K-12 education system in the Newark metropolitan area is among the most racially and economically segregated in the country (Potter, 2022). Segregated schools in New Jersey have significantly lower levels of enrollment in subjects that prepare students for STEM jobs, including technical production careers (Campbell, 2023; Kim & Campbell, 2022; Mistry et al, 2013). Investments in physical infrastructure for advanced manufacturing is just one part of the equation – there is need to invest resources in people as well.



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<sup>9</sup> Author's interview.

<sup>10</sup> Newark is best positioned to specialize in “support manufacturing” for local industries such as aviation, logistics, maritime, and medical supplies. Examples of production occupations in these manufacturing subsectors are machinists (\$56,540 average annual wage), welders (\$59,950 average annual wage), aircraft structure, surfaces, rigging, and systems assemblers (\$76,960 average annual wage). (Bureau of Labor Statistics, 2021).

## CONCLUSION & POLICY RECOMMENDATIONS

This report reflects a partnership between a university research center and a city government as well as an experiment in public scholarship. Most U.S. cities own some property that does not have a municipal use. Most face challenges providing enough affordable housing, stimulating wealth and job creation through business development and dealing with the unpredictable and unprecedented effects of climate change. Newark is different only in the relatively large amount of land it owns and the urgency of need among its lower-income residents. The City required a clearer picture of its inventory. This report began as a project to increase the City's property data organization and interpretation capacity. We then showed through three simulations how the property in the City's inventory could be a critical tool in advancing policies to build affordable housing, economic development and green infrastructure. The goal was not to offer all the answers but to present research that promotes better questions and deeper discourse. We conclude with the following policy recommendations.

- 1. Build institutional capacity for data literacy within and across local government, civic organizations, and educational institutions to support civic engagement with city policy.**
  - Resource data infrastructure at City Hall by investing in training for staff, hiring additional staff where there are gaps in key roles, and investing in hardware and software that enables effective and secure data integration across departments.
  - City government should commit to a high standard of transparency and accessibility for users inside and outside of government. Select datasets, such as the dataset of city-owned property, should be published on a regular basis with an accompanying data user guide that helps the public understand what the fields and values represent.
  - Establish programming to create and sustain cross-sectoral partnerships between civic organizations, educational institutions, and city government to promote a civic culture of data literacy. Examples of programming include class projects and studios with schools and universities; partnerships between civic organizations and city government; public events and conferences such as “Open Data Week”; and interdisciplinary data literacy trainings for staff in city government and civic organizations.

### *Rationale:*

This project originated as a collaboration between CLiME and the City of Newark's Department of Economic and Housing Development to build the City's capacity for data management and analysis. Our initiative represents one step in a much larger transformation that is needed to reorient how the City of Newark, local civic organizations, and the public engage with city-generated data and urban policy.



**Newark needs a cross-sector data literacy initiative to improve how the City and the public engage with data to develop, implement, and evaluate urban planning and policy.**<sup>11</sup> If data was left to data analysts and technologists alone, Newark would risk minimizing its democratic potential. Public administrators in local government, civic institutions, and residents all have important roles to play as users of city-generated data.

**City government** needs adequate resources in the form of staff and information technology infrastructure. There is also a need to establish institutional norms for data production, management, and analysis grounded in collaborative workflows between public administrators, data scientists, and information technology professionals to ensure that data is accurate, reliable, and accessible for users inside and outside of local government.

**Educational institutions and civic organizations** that engage youth and adults should train and empower all residents to become responsible data users who can interpret, process, and question public data. Educators and civic leaders can guide participants in understanding why reading and working with data is relevant to their daily lives and the challenges facing their community.

**Members of the public** can exercise data literacy through advocacy, civic engagement, and when interfacing with government services. Using data to build or question a narrative during a public forum is an example of how data is embedded in everyday practices of civic engagement.

## 2. **Maximize the use of city-owned land as a public resource for affordable housing.**

- 100 percent of city-owned land suitable for residential uses should be dedicated to affordable housing at Newark income levels.
- Institute 99-year affordability restrictions on affordable housing constructed on city-owned land, most likely in the form of deed restrictions. Establish mechanisms within city government or a municipal redevelopment authority to oversee compliance with affordability restrictions.
- Align affordable housing development with community needs by creating housing with varying forms of tenure (limited equity cooperative, owner-occupied, rental) and of larger sizes to accommodate families of all kinds.

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<sup>11</sup> Data literacy is a multifold and involves several capabilities – in some contexts, select skills may be more applicable than others. Data literacy involves “reading data” (understanding how data represents the world); “working with data” (acquiring and processing data); “analyzing data” (describing, aggregating, and manipulating); and “arguing with data” (using data to construct a narrative) (D’Ignazio and Bhargava, 2016).



*Rationale:*

City-owned land is a public resource, and its use should be maximized to generate the greatest public value. Requiring all housing constructed on city-owned land be made affordable to moderate- and low-income Newark residents would expand the city's affordable housing stock. Further, expanding the duration of affordability requirements would significantly increase the total number of Newark households served over time. Finally, it is crucial that the characteristics and design of housing (e.g., form of tenure, size, rate of rent) aligns with the needs and income levels of Newark residents.

**3. Leverage city-owned land as a channel for equitable economic development.**

- On city-owned lots suitable for mixed-use development, create first floor commercial space with below-market rents to support tenant businesses that provide healthcare and other essential consumer amenities. The municipal redevelopment authority or other entity managing commercial space should strategically curate a mix of businesses that aligns with neighborhood needs. Locally owned businesses that employ Newark residents in quality jobs should be prioritized as tenants.
- Redevelop industrially zoned lots into light industrial space for advanced manufacturing, design, and technology businesses. The managing entity should have in-house expertise to curate a space that attracts and retains multisectoral clusters of high-tech production and design businesses.
- Establish a rubric to set below-market rental rates that proportions subsidies in relation to demonstrable community benefits and prioritizes businesses owned by Newark residents.
- Invest Newark and small business technical assistance intermediaries should coordinate with the managing entity to connect emerging local entrepreneurs with real estate opportunities that help them seed and expand their business.
- Connect commercial and industrial redevelopment opportunities to equitable workforce development goals. The managing entity of light industrial space should partner with workforce development intermediaries to prepare the Newark workforce for quality jobs in the advanced manufacturing, design, and technology sectors. Workforce intermediaries could have an on-site office, work with tenant businesses to hire Newark residents, and partner with tenants to establish apprenticeships and other training programs that prepare Newark residents for career opportunities.

*Rationale:*

CLiME's simulation of redevelopment on commercial and industrial-zoned land demonstrated that there are opportunities to redevelop up to 21 acres of commercial and





industrial land. Transferring ownership of the land to a redevelopment authority or other entity with capacity to strategically curate commercial space can potentially create economic benefits for Newark in the form of local jobs and business ownership opportunities. Generating economic benefits for Newark residents would require close and effective coordination with small business development and workforce intermediaries to connect Newark businesses to suitable space and prepare workers for quality job opportunities.

**4. Creatively use non-buildable lots for green infrastructure to support climate resiliency and community development.**

- Use lots that are not suitable for residential or commercial development as potential sites for green infrastructure. The city should commission feasibility studies to refine the list of potential sites that can effectively absorb runoff. Additionally, the city needs to commission an impact analysis to quantify how potential sites could reduce flooding volume, reduce combined sewage overflow volume, and generate other public health benefits such as improved air quality and lowered surface temperature.
- Use green infrastructure planning as a vehicle for neighborhood placemaking and community development. Residents should have a voice in determining what form green infrastructure should take in their neighborhood to align green infrastructure with community needs. For example, neighborhoods with young families may wish to see playgrounds with pervious sidewalks; a neighborhood with limited access to grocery stores may desire urban agriculture on their block; others may wish to see sites used as space for public art to express and build connection to place.

**5. Establish governance systems to create community leadership roles in the disposition and management of city-owned land.**

- Establish Community Planning Boards to create a leadership role for Newark residents in redevelopment decisions affecting city-owned land in their neighborhoods.
- Transfer ownership of clusters of residential, mixed use, and green space property to a Community Land Trust to preserve long-term affordability and establish a governance system with board leadership roles for tenants, neighborhood residents, and civic leaders.
- Create a strategic plan to convey property from the City to the Newark Land Bank.
- Establish a municipal redevelopment authority -- within or independent of Invest Newark -- to efficiently and equitably manage the redevelopment of multifamily residential, mixed-use, and industrial property at scale.



*Rationale:*

CLiME's simulations have demonstrated that there is potential city-owned land at a substantial scale that encompasses up to 27.1 acres of land for affordable housing, 21.3 acres of land for commercial and industrial development, and 17 acres of land for green infrastructure. Redevelopment at this scale begs the question of who makes decisions about the use of public resources. How can available public assets be optimally aligned with a range of pressing community needs? It is crucial to create leadership roles for Newark residents in redevelopment planning on city-owned land to ensure that residents have a voice over changes in their neighborhoods. Governance entities such as Community Planning Boards and Community Land Trusts that create leadership roles for neighborhood residents and for tenants are compelling models that elevate neighborhood decision-making.

Further, CLiME's simulations raise the question as to what entities are best equipped to carry out redevelopment and management of city-owned property. Governance of public assets should be effective and efficient. Newark could establish a centralized body in the form of a municipal redevelopment authority -- that is either housed in or separate from Invest Newark -- to streamline redevelopment processes and align property management with public goals.

**6. Organize capital to enable the redevelopment of city-owned land at scale.**

- Establish a bridge fund dedicated to supporting the redevelopment on city-owned land in Newark. The fund can be sourced by a mix of public and private grants alongside patient investment capital. The bridge fund should be administered by a local CDFI or other financial entity with capacity fundraising, underwriting, and oversight.

*Rationale:*

There are numerous established public and private sources of senior debt to finance pre-development and development costs. Senior lenders -- namely, banks, regional and national CDFIs, and select state agencies with loan products -- have capacity to issue loans in large volumes, but will typically issue loans that cover 65 percent of the cost of the project. Creating a bridge fund dedicated to redevelopment projects on city-owned land in Newark would help the City leverage these senior debt capital sources and close the financing gap.



## APPENDIX A: METHODOLOGICAL NOTES

### 1. Policy Simulation Methodology

This report developed three simulations to estimate the maximum development potential for residential, commercial/industrial, and green infrastructure development under development rights encoded in the City of Newark’s proposed 2023 zoning ordinance. Two limits are taken into consideration in the simulation to estimate maximum development potential: the inventory of available land and development rights. In actuality, there are many additional limits and trade-offs that inform development trajectories. For example, environmental constraints are a significant factor of the predevelopment process. About 3 percent of the inventory or 59 parcels are on NJDEP’s list of contaminated sites that require environmental remediation (NJDEP, 2023). Additionally, development rights are potentially adjustable when landowners receive a variance in the land use review process. Other limits include financial and organizational constraints to implement potential development plans. While CLiME’s estimate of development potential on city-owned land takes available land and development rights into consideration, only a portion of estimated development may be viable when taking these additional limits into consideration.

**The simulations define the universe of property as all available city-owned land in standard zoning districts under the proposed 2023 zoning ordinance.** City-owned property located in Redevelopment Areas are not included in the simulation because development rights are specific to the block or parcel level and are difficult to simulate. Additionally, public land is limited to property that is available for conveyance (i.e., property without a municipal use, property that is not in the disposition pipeline, and property without a municipal use managed by the City). We removed an additional 28 property records because the records are missing from the parcel map which impedes our calculation of lot area.

We estimate development potential by joining the zoning spatial layer to a parcel spatial dataset of city-owned property. The City’s 2017 zoning spatial layer was manually updated to reflect changes in the March 2023 proposed zoning ordinance by georeferencing PDF maps released by the City’s planning department (City of Newark, 2023). After linking parcel records to the proposed 2023 zoning map, the simulation assesses whether the parcel meets minimum requirements for development and quantifies maximum development potential on the parcel in terms of number of housing units or square feet of commercial and industrial space.

**Parcels are not “repurposed” across simulations.** If a lot is used in one simulation, an alternative use of the same space is not re-simulated in a subsequent simulation. In some zoning districts, it may be permissible to construct either residential or commercial uses under the zoning code. The simulations are sequential and prioritize the use of land in the order that the simulations



are presented. First, we consider all available city-owned land that is suitable for housing in residential, mixed-use, and commercial zoning districts. Then, we simulate economic uses in mixed-use buildings as well as industrial buildings in mixed-use, commercial, and industrial zoning districts. Finally, we simulate potential green infrastructure sites on lots that are not suitable for residential and commercial development because the lot is below the minimum required size or is oddly configured.

The only case where there is overlap between parcels across simulations are mixed-use buildings. The housing simulation identifies lots suitable for mixed-use buildings, proposing that all but the first floor is dedicated for residential uses. The economic development simulation takes those same mixed-use buildings and suggests that the first floor is reserved for commercial uses. There is an overlap in parcels but not in simulated space.

### **Simulation 2: Mixed-Use and Industrial Development**

The second simulation examines the potential for economic uses in mixed-use buildings and industrial development. Any parcels that are part of the first simulation about affordable housing development are excluded from the universe of potential parcels. The simulation considers mixed-use buildings with residential and commercial uses in commercial (C-1, C-2, C-3) and mixed-use (MX-1, MX-2, and MX-3) zoning districts. The simulation considers detached industrial buildings in industrial zones (I-1, I-2, I-3). Parcels located in areas zoned for the port or airport are not included in the simulation. The simulation identifies lots as candidates for mixed-use or industrial buildings based on parcel features regardless of the type of structure on the lot.

For mixed-use buildings, the simulation shows that commercial uses will only be designated on the first floor of the building. For industrial buildings, the simulation shows industrial buildings will be constructed to the maximum number of stories permitted by the zoning code. Although the zoning ordinance requires that the maximum lot coverage by an industrial building is 85 percent of lot area, we estimate that the building footprint is 70 percent of lot area to acknowledge additional space needed for loading docks and parking for industrial buildings.



Table 1

COMMERCIAL / INDUSTRIAL USES	C-1				C-2				C-3			
	Permitted Use	Min. Lot Area	Max Lot Coverage	Max stories	Permitted Use	Min. Lot Area	Max Lot Coverage	Max stories	Permitted Use	Min. Lot Area	Max Lot Coverage	Max stories
Mixed-Use Building	Y	3,500	90%	5 stories / 60 feet	Y	3500	90%	8 stories, 96 feet	Y	3,500	90%	8 stories, 96 feet
Makers Space	N	-	-	-	N	-	-	-	Y	5,000 SF	85%	8 stories, 96 feet
Flex Space, Light Industrial	N	-	-	-	N	-	-	-	N	-	-	-
Manufacturing, Light	N	-	-	-	N	-	-	-	N	-	-	-
Manufacturing, Medium	N	-	-	-	N	-	-	-	N	-	-	-
Manufacturing, Heavy	N	-	-	-	N	-	-	-	N	-	-	-

COMMERCIAL / INDUSTRIAL USES	MX-1				MX-2				MX-3			
	Permitted Use	Min. Lot Area	Max Lot Coverage	Max stories	Permitted Use	Min. Lot Area	Max Lot Coverage	Max stories	Permitted Use	Min. Lot Area	Max Lot Coverage	Max stories
Mixed-Use Building	Y	3500	90%	6 stories, 72 feet	Y	3500	90%	8 stories, 96 feet	Y	10,000 SF	-	145 feet, 12 stories
Flex Space, Light Industrial	N	-	-	-	Y	5,000 SF	85%	8 stories / 96 feet	N	-	-	-
Manufacturing, Light	Y	5,000 SF	85%	8 stories / 96 feet	Y	5,000 SF	85%	8 stories / 96 feet	Y	5,000 SF	85%	8 stories / 96 feet
Manufacturing, Medium	N	-	-	-	N	-	-	-	N	-	-	-
Manufacturing, Heavy	N	-	-	-	N	-	-	-	N	-	-	-

