Governing the Urban Innovation Economy: Trade-offs Between Equity and Growth

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Abstract

The corporate expansion of technology companies offers cities attractive promises of innovation-driven economic growth and job creation. These promises land in the built environment as plans for mixed-use, real estate projects that provide job opportunities and living accommodations close to transportation hubs. This thesis examines two master plans: Cambridge Crossing, a biotechnology innovation destination in Cambridge, and Downtown West, Google's transit village in San José.

Each case study begins with a comparison between the city's master plan language and the proposed development's master plan language to examine how real estate and technology companies cater to a city's hopes for economic growth. Findings from these case studies reveal potential trade-offs between equity and growth experienced by surrounding neighborhoods and communities. Corporate and real estate interests give insight into the unprecedented growth of innovation and employment districts, while community organizations bring to light the equity concerns around housing affordability, job access, public space, and access to transportation. Tensions between perspectives supporting and opposing these master plans bring to light what is at stake with plan implementation. Finally, community resistance and advocacy efforts provide an initial blueprint for how collaboration between corporations, city governments, and community-centered coalitions can bring back a right to the city that enables more inclusive economic growth.

Thesis Advisor: Karilyn Crockett, Lecturer of Public Policy and Urban Planning, MIT
Thesis Reader: Jason Jackson, Ford Career Development Assistant Professor in Political Economy and Urban Planning, MIT

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To my DUSP colleagues, thank you for pushing me to learn from perspectives, places, and ideas that I would never have come across. Two years ago, I entered DUSP with limited exposure to planning practice; your rich experiences and reflections both inside and outside the classroom are invaluable. I could not have done this without your loving support and guidance in person, and over Zoom.

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Last but not least, to my parents and grandparents, thank you for sacrificing all that you have so I could grow up reaching for the stars. Your healthy questioning and tough love have shaped me into the student, daughter, and urban citizen that I am today.

Land Acknowledgment

The two case studies discussed below are both built upon the violent removal and erasure of indigenous peoples who preceded Spanish explorers, the British, and modern-day Americans. This thesis is intended to build upon current efforts to prevent displacement and removal of longtime residents who have contributed to building community within settler-colonial cities. My project is unfortunately limited to the political dynamics of a recent American history.

Chapter 1: Introduction

This project is motivated by the Deja vú I experience when walking through *innovation districts* across the country, and around the world. Whether it is Cambridge's Kendall Square, Boston's Seaport District, or San Francisco's Embarcadero District, I am always struck by how similar buildings look and feel. Even passersby go about their routines similarly, especially during the workday. Why do these innovation economies lend themselves to sterile districts? Why do tech companies attract the same kinds of urban dwellers?

A recent announcement alludes to how tech companies shape our current and future urban landscapes and lives. On May 6th, 2020, New York Governor Andrew Cuomo announced that Eric Schmidt, former CEO of Google will "chair a commission tasked with 'reimagining' the state's relationship with technology post-pandemic."[1] It is now commonplace for political leaders to rely on technology-driven imaginations to solve urban problems. While visions of incorporating technology into our social and urban fabric offer alluring solutions, perhaps our leaders are too eager to relinquish decision-making to companies whose primary business is producing software and hardware products. The uncomfortable truth is that the very technology companies revered by our city agencies to dream up futures in mobility, finance, travel and tourism, and social connectivity, are the same ones who create platforms displacing longtime residents, automating workers out of their manufacturing jobs, and placing uninsured gig economy workers at the front lines of the COVID-19 service economy.

Business interests have a history of shaping the growth of American cities. Railroad tycoons, followed by industrialists, manufacturers, and now high technology companies are defining how we live and conduct business. Further expansion and densification of our cities involves a diverse set of actors invested in generating economic value from real estate. Increasingly, innovation economy companies like Sidewalk Labs or Amazon exert undue influence over what the future of our cities look like by enticing local governments with the number of jobs or transformational benefits they will bring to urban residents.

Technology company imaginations for repurposing formerly industrial or underdeveloped land manifest as mixed-use corporate campuses meant to attract and retain talent for their employees. Master plans for these projects make grand promises about the amenities and experiences. Once constructed, only a select few get to enjoy these amenities and

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[1] Sonnemaker, "New York Gov. Cuomo Just Tapped Former Google CEO Eric Schmidt to Help Invent a More Tech-Focused Future for the State Post-Pandemic."

experiences. Soaring rent, traffic congestion, a growing digital divide, and income inequality all seem to follow these tech companies wherever their headquarters or campuses are. Inequality that appears to be inseparable from tech company presence informs my central research question: What are the trade-offs between equity and growth in governing the urban innovation economy?

I begin by comparing city master plan language to proposed master plan language to see how tech companies or real estate developers are catering to a city's hopes for economic progress and prosperity. I then pose trade-offs between equity and growth caused by these transit-oriented developments. Technology companies and real estate developers give insight into the unprecedented growth of the innovation economy they are contributing to the city, while community organizations bring light to the equity concerns around housing affordability, job access, public space, and access to transportation. The tensions in perspectives and vested interests bring light to what is at stake around these developments. Following and understanding why these conflicts arose, gives an initial blueprint for what collaboration between corporations, city governments, and community-centered coalitions could entail. Each case study section concludes with an example of development gone wrong and what they expose about local governance challenges. This includes Boston's Seaport District and Cupertino's Apple Park. This thesis concludes with the implications of case study findings.

Chapter two discusses the context and content analysis methods used to research this project. It also discusses the limitations on intended research imposed by COVID-19 and areas of further study.

Chapter three explores the literature to understand how scholars have written about the growth and governance of our cities. Then, it captures how technology companies rely on imaginations for the future of cities they want to hire and retain talent in. These imaginations land in the built environment as mixed-use, transit-oriented development projects, often marketed using an ambiguous concept of an "urban village." This section concludes with a pick-up soccer confrontation in San Francisco's Mission District that demonstrates how the innovation complex threatens longtime residents' right to the city.

Chapter four examines a few of the players involved in the Cambridge Crossing master plan development at the intersection of Cambridge, Somerville and Boston. This chapter discusses biotechnology-oriented developers and business associations with a vested interest in maintaining the prowess of Cambridge's biotechnology innovation complex. Particularly vulnerable to the affordability pressures and other growing pains are east Cambridge residents.

Cambridge Residents Alliance and A Better Cambridge, community coalitions working to reassert the right to the city, advocate for more inclusive policies for local transit-oriented real estate projects like Cambridge Crossing. It concludes with how nearby Seaport District speaks to a long history of opaque governance and planning practices that continue to preclude equitable development, despite recent planning efforts through the city of Boston centered on racial and economic equity.

Chapter five explores San José's innovation complex that forms around Google's Downtown West master plan. I document how Bay Area business councils and real estate interests contribute to the "Google Effect" by capitalizing on San José becoming the innovation capital of the South Bay. The economic opportunities presented by Google's transit village threaten to displace longtime San José residents. Silicon Valley Rising brings well-researched policy demands articulating the need for housing affordability, living wages and workers rights, and equitable mobility protections. Finally, the chapter ends with some learning lessons from Apple's Cupertino headquarters and discusses the promises of Silicon Valley Rising's proposed Community Benefits Agreement with Google.

Chapter six concludes this project with the implications of innovation complexes in light of COVID-19 and a just recovery. In the pursuit of economic democracy and the right to the city of urban inhabitants, our elected officials need political courage, and a dedication to reframing public-private-partnerships to protect residents most vulnerable to the physical and social footprint of the innovation complex.

As public-private-partnerships are formed to build and operate our cities, how can we ensure that the future of places we call home offers equal opportunities for economic advancement and well-being? How can all inhabitants of a city decide who gets to build, and what they build? How can the value and benefits generated from what's actually built, be shared evenly? Who governs and enforces economic democracy and "right to the city?"

This thesis intends to start a conversation about how community resistance addresses the questions posed above by identifying how innovation complexes undermine social, economic, and spatial equity in our cities. Moving forward, community resistance gives clues for how public-private partnerships between city governments, developers, and technology companies can address uneven access to economic, housing, and workforce development. The tragedy of inequality, displacement, and cultural erasure cannot define urban economic and real estate development. We can draw inspiration from local advocacy that provides new ways for the

public, private, and civic spheres of cities to collaboratively imagine more inclusive urban development and urban life.

Chapter 2: Methodology and Research Limitations

Project Limitations

Given the constraints presented by the COVID-19 pandemic, I drew from a variety of my own lived experiences to frame the research process. Growing up in the backyard of Google, in Mountain View, I took Google's preeminence in shaping both suburban and urban development for granted. My critique of tech influence in urban economies and their negative social footprint stems from the moral and cognitive dissonance I experienced as an employee at an advertising technology company. I bring the perspective of a long-time Bay Area resident and former technology worker deeply concerned about the health of urban democracy to my research.

My initial intention for this thesis project was to conduct an ethnography of the growth interests and advocacy coalitions spearheading the development of San José and Cabmbridge innovation complexes. Ultimately, I was not able to visit either case study site to observe how daily rhythms of local small businesses, multi-modal transportation, and events constitute the social fabric of these places. Insights gathered from site visits, interviews, and observations would have helped me devise an inclusive development framework that technology companies and real estate developers alike can tailor to local community needs and existing conditions.

Many of my interview requests were not answered or fielded in time to schedule, conduct, and process results that could be incorporated into this project. As a continuation of this project, I would interview planning commission officials directly involved in the approval of these development projects. For example, John Tu and James Han are the supervising planners for "Google Project" within San José's Planning Commission. Their perspectives about the trade-offs associated with Downtown West master plan approval and the factors influencing San José's business development strategy would greatly enrich this study. City council priorities and Mayor Liccardo's approach for future planning would also help inform my understanding of the city's priorities in balancing real estate development, business incubation, and community concerns around affordability and sense of belonging.

Further research, site visits, community meetings, interviews, and oral stories will help flesh out ways in which planning decisions are complicated by tensions between equity and growth interests in constructing mixed use, transit-oriented development. Attending planning meetings

would animate community sentiment around Cambridge Crossing's development, and help identify champions of inclusive development within city offices and divisions. Additional interviews and shadowing workforce training programs like work2future's certification programs and the Just-a-Start's Biomedical Careers Program would inform how to articulate funding and capacity needs of these organizations to technology as a form of community benefit.

For a fuller understanding of the economic growth interests at play, I would interview the executive directors of the business associations and understand how they allocate their operating budget and prioritize their programming or policy and advocacy efforts. Hearing Silicon Valley Leadership Group member company perspectives would provide finer-grained insights into motivations for joining, benefits of membership, what constitutes a business-friendly environment, and what economic growth means for their businesses, small or large, to grow.

Exploring the perspectives of organizers from the Cambridge Residents Alliance, A Better Cambridge, and Silicon Valley Rising will offer insights into location specific coalition-building and organizing strategies. How organizations prioritize which aspects of the right to the city are most threatened by real estate development and unaffordable standards of living is also of interest to me. Reflections on the policy and planning levers will serve a much-needed complement to the official planning documents and policy memos. Documenting power and capacity-building strategies offers useful precedents for communities across the country facing the same pressures from burgeoning innovation economies.

This project is constrained in its ability to provide a full equity analysis or impact assessment of the affordable housing, inclusionary zoning, and workforce development programs. It is an initial step in exposing how city governments actively seek out technology companies "place entrepreneurs" for public-private-partnerships. I highlight the potential temptation that planners, city councilors, and mayors may have when they see their hopes for job growth and prosperity reflected in the lofty language of these master plans seeking intensified land use. It poses how the opportunity to put one's city on the map may undermine social equity.

Methods

Despite these limitations and setbacks, I proceeded with the thesis as follows. I selected the two following case studies to showcase how biotechnology companies and Google imagine their roles in the future of cities they seek to expand and grow in. These respective innovation

complex master plans are located in two cities that house vulnerable populations and threaten to bifurcate our cities along the lines of those who work in the innovation economy, and those who do not. These headquarter and corporate expansion projects are subject to media and public commentary that raises concerns about how they benefit the residents around them. I will conduct a contextual and content analysis on these mixed-use, transit-oriented master plans to examine how innovation economies manifest physically and socially.

Contextual analysis situates these two case studies in the physical, political, and social spaces they are located in. I first analyze the existing conditions of the neighborhood. I then document the concerns that community groups and residents have said in response to the presence of technology companies moving into their cities. Next I provide examples of the different growth coalition stakeholders relevant to the local context of greater Boston or downtown San José. Based on my exposure to and understanding of pertinent planning issues and local politics, verified by local news coverage, I will hypothesize what is at stake for them and offer potential partnership opportunities in providing affordable housing, workforce development, and equitable small business incubation solutions more in line with the vision of equity that city governments have the charge to promote.

Content analysis identifies the extent to which Downtown West and Cambridge Crossing's development proposals and marketing materials cater directly to the language of city government master plans for creating more prosperous and vibrant future iterations of their cities. I use the language within these plans and proposals to examine the type of place they are trying to create and the intended people who will use this site. Language from news coverage, community meeting notes, community organization authored advocacy reports, and organization websites are juxtaposed against master plan materials. My intention is to demonstrate how different perspectives and opinions animate the trade-offs that mixed-use, transit-oriented development poses for vulnerable and marginalized residents.

Chapter 3: Literature Review

Technology companies are urban citizens as much as their employees are urban citizens. They are shaping the ways in which we govern, the way we move about space and place, and the way we connect with each other. We increasingly see that large technology companies exert a social, physical, and economic footprint in neighboring or even regional communities.

This thesis will not be able to focus on the technological impacts of the corporate and international growth of technology companies. It cannot adequately address the specific social outcomes related to automation, as devastating as the outsourcing or loss of jobs due to technology upgrades. Instead, this thesis focuses on how plans to build new corporate headquarters of tech companies affects the neighboring communities of these proposed developments. The following literature review discusses how to approach the impact that these tech companies are exerting on our communities and our cities.

"Growth Machines" Fuel the Innovation Economy

Since President Ronald Reagan pegged the government as "the problem" in this 1989 inaugural address, there has been a walking back of federalism. This sounded a death knell for sorely needed funding for social programs. Local governments are increasingly constrained in resources and capacity to create conditions for a healthy economy that supports the most vulnerable urban residents.

Geographer David Harvey explains how this walking back of federalism transformed urban governance. Local governments moved away from the "managerial" model of a nation-state that redistributes services and certain goods to local residents relied on increasingly entrepreneurial means to promote economic and real estate development by commodifying places and spaces. He animates the politics of urban governance, emphasizing the action of governing over government itself, by listing out the "coalition politics" that involved local chambers of commerce, financiers, and real estate developers that actively seek friendly business environments.[2] These actors, despite their different motives, all seem to converge around a growth consensus that tries to maximize the value of the urban places they operate in. John Logan and Harvey Molotch's work on the "urban growth machine" captures the essence of how the shape of cities, distribution of people and resources is not based solely on endogenous or existing geographic characteristics.[3] In *Urban Fortunes: The Political Economy*

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[2] Harvey, "From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism."
[3] Logan and Molotch, Urban Fortunes.

of Place, they outline how political and economic interests land in a particular geography. The political economy of place, shaped by powerful local interests undergirds how our cities have transformed physically, socially, and economically over time.

Today's growth coalition and growth consensus is spearheaded by technology companies like Alphabet Inc, Amazon, Facebook, or Uber. In light of this, urban sociologist professor Sharon Zukin lays out how technology companies rose up to run the technological-financial growth elites. This modern-day elite is composed of venture capital investors, prestigious research universities, local government officials, local newspapers, and commercial real estate companies that cater to the leasing needs of expanding technology companies. In fact, Silicon Valley owes its rise to universities like Stanford forming a "triple helix" partnerships with businesses and local government in the Bay Area, that pioneered and sanctified the "organizational landscape of innovation" that cities and entire nations attempt to recreate.[4]

City governments perform many functions across different departments. A host of scholars spanning city planning, urban sociology, geography, political science, and economics have sought to study the challenges that arise in urban governance. The definition and practice of governing American cities are dependent on a host of endogenous and exogenous factors, including local politics, the interaction between federal and local jurisdiction, fiscal stability, and local engagement. This thesis project considers urban governance to be loosely defined as how governing bodies and various groups in society make decisions and serve the needs of people within city boundaries. Rules are made, enforced, or tailored to plan, finance, manage urban areas.[5]

A sampling of the Housing, Planning and Urban Design and Economic Development Division descriptions from the City of Cambridge gives insights into main responsibilities:

- "The Housing Division works to promote and maintain the socioeconomic diversity of the city by managing and implementing the City's efforts to meet the housing needs of low-, and moderate-, and middle-income residents, and develops initiatives to preserve and expand the City's stock of affordable rental and homeownership housing." [6]

- "Planning and urban design staff members work on many fronts to help the Cambridge community—residents, businesses, and institutions-- prepare for future growth and change. Initiatives include near-term projects, such as review of buildings seeking

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[4] Zukin, The Innovation Complex.
[5] "What Is Urban Governance?"
[6] "Housing Division - CDD - City of Cambridge, Massachusetts."

special permits from the Planning Board… Planning initiatives include multi-purpose planning work for major projects such as the Kendall Square/Central Square project, with outcomes such as master plans and rezoning proposals. The urban design staff works to improve the quality of Cambridge's built environment and preserve the human scale of the city's neighborhoods and commercial districts. Tools used in this endeavor include"[7]

- 'The Economic Development Division (EDD) is responsible for a wide range of activities designed to meet the City's need for a diversified and thriving economic base. EDD does this through promoting thriving commercial districts; cultivating a supportive environment for small, women and minority-owned businesses; marketing Cambridge as a location for business and maintaining a supportive business climate."[8]

Balancing fiscal budgets and finding a steady stream of revenue to fund vital social services has become an increasingly difficult task. With the reduction of federal funding and rise of private philanthropic funds, city governments have turned to the policy and planning levers at their disposal. Economic development policies serve two broad functions relevant to fostering an innovation economy: regulatory and business attraction policies. Examples of regulatory policies include: land use designation, permitting for business that can be streamlined depending on use, special development zones such as enterprise zones, employment requirements for local residents, required training or linkage fees, investment in physical and cultural infrastructure. Business attraction, assistance, and retention programs and policies include tax incentive packages, business tax rate determination, underwriting and grants for labor training, business incubators, leaseback and public investment in land for specific types of uses (e.g. sports stadium, hospitals, etc).[9]

A team of political economy scholars, Da Cruz, Rode, and McQuarrie conduct a survey of the governance challenges presented by academic literature and find that democratic participation and decision-making are common challenges cities face against the backdrop of non-governmental actors providing social services and community benefits are courted with tax incentives and business-friendly policies.[10] Nonlinear policymaking occurs with a diverse and expanded set of actors involved, further complicated by the territoriality of public agencies staking claims to what falls under their jurisdiction. Finally, the privatization of urban services

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[7] "Planning & Urban Design - CDD - City of Cambridge, Massachusetts."
[8] "Economic Development Division - CDD - City of Cambridge, Massachusetts."
[9] Storper et al., "The Rise and Fall of Urban Economies: Lessons from San Francisco and Los Angeles."
[10]Cruz, Rode, and McQuarrie, "New Urban Governance."

and infrastructure improvements complicates urban governance. Some of these urban challenges shared by governments across the world will be addressed in the case studies to follow.

Who Governs the Innovation Economy?

Sociologist C. Wright Mills and political scientist Robert Dahl contributed greatly to thinking and writing about power, governance, and representation. Mills animates this question of power and governance by unpacking how political, economic, and military elites in 1950s American society made decisions with consequences reverberating around the world. Political scientist Robert Dahl posed the question of "who governs?" in societies with widespread inequality. The challenge of promoting democratic participation despite widespread inequality insinuated in Dahl's question anchors my thesis. Dahl studied 1950s New Haven to understand how interest groups exert their influence in governing and how the polity and its diverse set of preferences is represented by politicians. Sharon Zukin applies Dahl's question to contemporary America, by asking "who governs innovation?" in her examination of how a new techno-financial elite is shaping New York in a way that is not undergirded by democratic participation. Subsequent pages take Zukin's question further by asking how to recenter the right to the city as a part of governing innovation economies.

Urban governance involves negotiating how different groups, be they public or private, create power dynamics by influencing local politics to address their needs. Harvey speaks to these political dynamics in an urban context stating how urban governance stems from "the power to organize space derive[d] from a whole complex of forces mobilized by diverse social agents," not a monolithic technocratic public sector. [11] He problematizes urban governance by highlighting how a cross-sector coalition of actors has grown more diffuse and opaque in how they make decisions affecting the city inhabitants, rendering these decisions less accountable to democratic participation. This provides a starting point for how inequality has run amok in some of the most prosperous cities.

Tech Imagination as Governance

What makes the promise of innovation economies so compelling to local governments? I draw upon Sheila Jasanoff and San-Hyun Kim's work on "sociotechnical imaginaries" to understand how modern-day tech behemoths imagine the futures of place and cities. In *Dreamscapes of Modernity,* Jasanoff and Kim study how scientific and technological progress shapes social

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[11]Harvey, "From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism."

order, exposing how these breakthroughs are inherently political. From the case studies they examine, different imaginations of the goals of social life are constructed and produced by governments and companies alike on the national and global scale.[12]

This thesis explores how the imaginations of how biotechnology research companies and startup-turned-technology giants shape neighborhoods and cities. There is something unique about the ethos of startups and technology companies, which necessitates the research of communications professor Fred Turner to explain. Turner describes the utopian and sweeping language companies use to imagine futures as a "marketing strategy" and "policy operation of the first importance" so that "the Valley can convince Washington that the Valley is the home of the future and that its leaders see things that leaders back in stuffy old DC can't see, then they can also make a case for being deregulated."[13] Thus, tech companies are in the business of convincing governments their visions are viable, and offer some of the best solutions to pressing problems.

Furthermore, engineering culture informs many aspects of technology company operation, including interaction with the physical world. Turner explains that the ethics of engineering are an ethics of: Does it work? If you make something that works, you've done the ethical thing."[14] It is this kind of ethos that motivates much of the Smart City narrative of being able to use cutting-edge technology to *hack poverty* and other complex urban issues as if a solution could be neatly devised as elegant code, with some semblance of quality assurance determined by how city officials receive this technology. Given recent blunders in respecting the needs and histories of surrounding communities where tech companies are building their campuses, a moment of reckoning presents itself. Technology companies are in the business to iterate, and must improve the way they inhabit and rely on cities to meet their corporate expansion needs.

Turner concludes that technology companies are struggling to understand the "politics of infrastructure" that constitute the political and social footprint that technology companies exert on neighboring communities. This seeks recognition that "the built environment, whether it's built out of tarmac or concrete or code, has political effects, in that designing corporate expansion involves political ideas about how the infrastructure's impact on the political possibilities of the communities that engage it.[15] Thus, tech companies have inherently political physical and social footprints. Under this reasoning, simply building a corporate campus while

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[12] Jasanoff and Kim, Dreamscapes of Modernity.
[13] Turner, "Don't Be Evil."
[14] Ibid
[15] Turner, "Don't Be Evil."

carefully following a master plan is not enough, there are social and economic consequences that affect local residents differently, and in many cases, disproportionately and negatively.

How do we develop institutional settings for how we grow and develop these technologies and their byproducts? From Turner's perspective, technology is not neutral. There is a need for the institutional scaffolding to think about how the deployment of the technology and the real estate that fosters the rise and growth of these companies. The innovation economy shapes democratic participation, given many of these technology companies are re-organizing how we approach urban life and engage with local governments and the policies they legislate.

An overview of how modern governments and industry leaders have imagined past innovation involves a changing cast of players. From the 1950s to the 1970s, futurologists imagined a "post-industrial" transformation privileging automation over polluting smokestacks when research universities rose to ascendance, amassing and exerting influence through their endowments.[16] This ultimately resulted in the knowledge economy "trope" that Zukin refers to, where research universities in conjunction with tech companies funded major research and technological breakthroughs. Several decades later in the 1990s, there was a shift from knowledge on print media to information on digital media, which led to the conception of the information economy. Following the dot com boom and bust, human-centered design and playful creativity dominated the emergence of social media giants, that constitute the major players of the, "cognitive-cultural" economy, also referred to as the "new economy."[17]

Within the New York innovation economy ecosystem, Zukin's study of how venture capitalists, hackathon organizers, universities, startup incubators, and New York City Economic Development decision-makers contribute to the "innovation complex." Zukin argues that "tech leaders have undeniably become political actors in the city." Many of their meetings and fundraising dinners and roundtables with city officials involve discussions and negotiations around lower taxes and fewer regulations on their digital platforms, for example with ride-hailing and short-term rental.

Various case studies of real estate development by technology companies in industrial waterfront buildings inform Zukin's urging of those interested in operationalizing inclusive development should examine "directly and critically at how the real espatial forms of the city change as a result of investment in innovation. These spaces embody fictional narratives of

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[16] Zukin, The Innovation Complex. 6
[17] Zukin, The Innovation Complex. 5

economic growth shared by venture capitalists, economic development managers, university presidents, and real estate developers, the people who form a city's "growth machine."[18]

Zukin finds that "in New York, these people have created an innovation complex in the most unlikely, but also the most typical urban setting: old industrial buildings on the Brooklyn waterfront." Because the imaginations of these technology companies are being mobilized in our cities, they create a "new product for the real estate industry. Real estate developers create the material forms of the innovation complex, construction workers hammer them together, and building owners rent them out. When land is used to build the innovation complex, these important groups get something of value."[19] Zukin's research and insights about the innovation complex growth machine uncovers the players and actors that stand to profit from their imaginations for the innovation economy being built.

I intend to uncover the parties who have vested business interests in the innovation economy. Their ability to win approval for rights to develop land and convince local city agencies to upzone entire districts threatens the existence of the most vulnerable Cambridge and San José residents, those who are rent-burdened, low-wage workers, unsheltered, and differently-abled.

How Does the Innovation Complex "Land" In Our Cities?

The imaginations and political nature of the innovation complex has physical and social consequences. Technology companies invoke an imagination of urban villages to sway local governments to approve transit-oriented, mixed use projects that bring the innovation economy to life. It is necessary to bring in scholars Bridget Franklin and Malcolm Tait who study how notions of an "urban village" entered planning discourse and why the ambiguity of its definitions and completed form makes it so easily employable by technology companies as a discursive tool to generate buy-in for their master plans.

Franklin and Tait explain how "urban villages" evolved from a social to a physical construct. "Urban village" went from a concept that derives meaning from the "social life of people, and not be qualities of place or space" to a mixed-use neighborhood in an urban area at a "maximum of 100 acres so structures are within walking distance, pedestrian-friendly with access to public transportation, offer mixed-income housing, possess a sense of place through an interesting streetscape, and finally, foster "community commitment."[20] Broadly speaking, urban villages are supposed to bring back nostalgic feelings of a walkable and sustainable

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[18] Zukin, The Innovation Complex. 138
[19] Zukin, The Innovation Complex. 26
[20] Franklin and Tait, "Constructing an Image."

village that fosters a sense of belonging, human-scale buildings, and high-quality urban design. These benefits are not enjoyed by all, as Tait and Franklin find that recently developed urban villages in the United Kingdom speak only to the "affluent and urbane" seeking to find a new urban refuge away from suburban sprawl.

In essence, many newly conceived and constructed transit-oriented projects serve as a playground for the wealthy, providing high-end retail, curated amenities, and public spaces that are inviting for some but not others. The oxymoronic characterization of "urban village" "employ[s] the powers of metaphor and irony with their attendant cultural and historic referents. Thus the appeal is not to the rational mind but to the imagination and to unconscious thought processes."[21] Many proposed design interventions seem performative or contrived because they either treat the site they will inhabit as a tabula rasa, constructing a sense of place and community from thin air, despite the longstanding history, culture, and civic fabric that have shaped the neighborhood into what it is today.

The case studies below show how technology companies invoke an imagination of urban villages to sway local governments to approve transit-oriented development and mixed use projects that promise to bring the innovation economy to life. Designers of urban villages tout the completeness of design principles that focus on connectivity, community, and comfort. Master plans for transit-oriented urban villages as proposed today are evocative of a certain value-laden brand of sustainable urbanism with pre-supposed intentionality towards including and honoring local people and places. It is this strange appeal that is made both to "rationality and to romanticism" that allows the notion of an urban village project to assume any narrative it wants. Both case studies will show how real estate developer and technology company imaginations for transit-oriented development as urban villages are questioned by community organizations as they threaten the right to the city of the most vulnerable.

Henri Lefebvre's "right to the city" rings all the more true now but because local spaces and rituals of community life have increasingly been commodified. Mark Purcell posits that "Lefebvre's right to the city is an argument for profoundly reworking both the social relations of capitalism and the current structure of liberal-democratic citizenship." Purcell does not think that existing fragmented or patchwork resistance or workarounds satisfies the reordering needed to introduce democratic deliberation. Instead of democratic deliberation limited to state decisions, Lefebvre imagines it to apply to all decisions that contribute to the production of urban space. The right can be further distilled into "participation" and "appropriation."[22]

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[21] Ibid 261
[22] Purcell, "Excavating Lefebvre."

Urban inhabitants exercise their right to participation by playing a central role in deciding how urban space is produced. Exercising the right to appropriation involves physically accessing, occupying, and using urban space in a meaningful way. Instead of focusing on extracting the most value out of a space, there would be reorientation towards democratic processes to co-design the 'full and complete usage' of urban space in the course of everyday life.

The Innovation Complex Goes Awry on a Soccer Field

I conclude this section with a confrontation of race, place, and space on the soccer fields of San Francisco's Mission Playgrounds. Mission Playground is a park in a historically Latinx neighborhood that has experienced acute gentrification and displacement of longtime residents from San Francisco's tech boom, losing over half of its Latinx population over the past two decades.

A group of primarily white male Airbnb and Dropbox employees confronted a group of Latinx teenagers playing pick up soccer during a time slot they had reserved on the Parks Department website. When the teens asked the group of tech employees how long they had lived in the neighborhood for (essentially a rhetorical statement about them violating neighborhood pick-up soccer rules,) a disgruntled and entitled Dropbox employee waved a printed reservation confirmation in the teens' faces and remarked, "Who gives a shit? Who cares about the neighborhood?" [23]

Figure 1. Confrontation on Mission Playground. Source: The New Yorker

Journalists and community activists have likened this to longtime residents being handed an eviction notice by the forces of tech. The act of refusal by local teens vividly encapsulates modern-day resistance to the tech way of doing things, of steamrolling over longtime residents

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[23] Wong, "Dropbox, Airbnb, and the Fight Over San Francisco's Public Spaces."

and their right to shape local decisions and participate in urban life. At a public rally a few days later, Kai, one of the teenagers speaking on behalf of his friends, asks several incisive questions: "Who is making the policies that are encouraging tech workers to move into communities? And how are those spaces being emptied in the first place?"[24] Questions like these underscore how tech companies and their employees threaten the right to public space and the civic commons, the right of those who have shaped the neighborhoods they want to live in and locate their companies to.

In response to the negative press surrounding the widely circulated video of this heated exchange, Airbnb and Dropbox issued public apologies on behalf of employee behavior in flouting neighborhood rules. While Airbnb issued a polished public relations apology statement, it was hypocritical for Airbnb to chide its own employees about disrespecting neighborhood rules, despite owing approximately $25 million in unpaid hotel taxes to the City of San Francisco. In fact, Airbnb's mission statement around belonging points to the performative tendency of these companies to advertise lofty mission statements ultimately their impact on local communities. The entitled conduct of Airbnb's employees and hubristic corporate approach of flouting hotel regulations are inconsistent with the stated values below:

"At the heart of our mission is the idea that people are fundamentally good and every community is a place where you can belong. I sincerely believe that [discrimination] is the greatest challenge we face as a company. It cuts to the core of who we are and the values that we stand for."[25] -- Brian Chesky, Airbnb CEO

Similarly pressured by public outcry, San Francisco's Parks and Recreation Department decided to remove the online reservation system to honor long standing neighborhood rules. This is a small victory for the neighborhood against the backdrop of widespread displacement and erasure of families in the neighborhood. Small victories like those on Mission Playground begin a conversation about designing a blueprint for re-centering and reorienting governance of innovation economies toward more inclusive policies and plans.

As tensions between corporate growth and social equity arise, city departments will continue to think about whose rules to enforce that may or may not honor longtime residents and their ways of life. There are no protections in place for public life, for housing, for living wages that enable hard-working families to live in neighborhoods they have helped build the civic and physical infrastructure for. Cities experiencing tech boom-induced gentrification are filled with

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[24] Wong, "Dropbox, Airbnb, and the Fight Over San Francisco's Public Spaces."
[25] "Diversity at Airbnb."

daily encounters like the one from above. At the core of this conflict is how tech company presence in our cities threatens the right to the city of long time residents, specifically the right to participation and right to appropriation that are vital to a healthy democracy.

Chapter 4: The Cambridge Crossing Innovation Complex

This case study details how the biotechnology innovation economy is imagined in Cambridge Crossing. The growth elite at play involves real estate developers that cater to the commercial office and lab space needs of biotechnology and scientific research companies. Real estate developers like DivcoWest and Alexandria Real Estate Equities Inc cater to the needs of biotechnology companies seeking office, residential, and public space for their research and development or regional headquarters. Finally, the organizations that convene the various corporate and private interests include the biotechnology councils such as MassBio and neighborhood business associations like the Kendall Square Business Association and the East Cambridge Business Association.

The trade-offs of Cambridge Crossing stem from displacement pressures on residents and small businesses in nearby East Cambridge, the neighborhood directly adjacent to the transit-oriented project. Additionally, the lack of diversity within biotechnology means that under-resourced Cambridge residents lack clear pathways to securing biotechnology jobs. Local advocacy coalitions and groups like the Cambridge Residents Alliance outline a clear case for resisting developments like Cambridge Crossing because of how it impacts residents' right to remain and right to the city. Using their policy and planning platform, I identify how the Just-A-Start's workforce training program invites collaboration opportunities between city government, longtime residents, developers, and biotechnology companies in Cambridge Crossing's innovation complex to ensure biotechnology innovation creates career paths that provide more access to employment opportunities.

The Rise of Cambridge's Biotechnology Innovation Hub

Boston's economy and cityscape has been shaped by biotechnology companies and real estate developers providing lab and office space. Boston's growth origins begin with its founding in 1630 as a port city.[26] Using its strategic location, Boston specialized as a maritime trading port, expanding into shipbuilding and fishing.[27] The wealth amassed from exports and shipbuilding fostered the rise of banks, insurance, and financial companies. From the 1800s onwards, these established financial institutions funded Boston's textile manufacturing sector

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[26]Lewis, Avault, and Vrabel, "History of Boston's Economy." 2
[27] Ibid

for local economic independence from British rule. Amidst these developments Boston expanded through population growth and sprawl, man-made in-fill, and annexation of nearby towns. Following World War II, Boston's publishing industry thrived and manufacturing transitioned to primarily financial and professional services, with an emphasis on healthcare and medicine due to a concentration of hospitals and universities in Boston.[28]

Neighboring Cambridge was a blue-collar Boston suburb in the mid-20th century and witnessed a transformation into a biotechnology hub largely due to the vision of Joe Marcus, co-founder of Alexandria Real Estate Equities in the early 2000s. Marcus identified an opportunity to build laboratory space near academic and research facilities in California. Across the country, when Swiss pharmaceutical giant Novartis announced moving its research headquarters to Kendall Square to locate closer to academic research institutions and private equity, Marcus knew he could replicate his Bay Area successes in underdeveloped Kendall Square.[29] Pairing technology and lab tenants turned out to be a "winning combination" and by honing this model for the biotechnology needs in Kendall Square, Marcus created a nineteen billion real estate empire renting out office and lab space to companies in the *most innovative square mile* on earth.

Cambridge Crossing Overview

Cambridge Crossing sits on a uniquely triangular rail yard site, untouched for over three decades. It sits at the intersection of three cities, Cambridge, Somerville, and Charlestown. Real Estate Developer HYM Group secured development approvals for the site but sold it to DivcoWest, a real estate developer.[30] The City of Cambridge describes the North Point neighborhood as a "revitalizing mixed-use neighborhood transitioning from industrial sites and a former railroad yard" in close proximity to the Charles River and nearby Boston's North Station neighborhood.[31] Large apartment complexes, the headquarters for EF Education and Hult International School of Business surround the site.

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[28] Ibid
[29] Spalding, "How a Rundown Square Near Boston Birthed a Biotech Boom and Real Estate Empire."
[30] Milman, "The Creation of a New Neighborhood."
[31] "Toward A Sustainable Future." 20

Figure 2. North Point at the Intersection of Three Cities, Source: HYM Investment Group.

The Gilmore Bridge, Glassworks Avenue, Monsignor O' Brien Highway, Water Street Street, and the Green Line Extension right-of-way bound the site.

The city of Cambridge anticipates that when complete, Cambridge Crossing "will create an entirely new core for the neighborhood and will encompass 2.2 million square feet of commercial/R&D and retail space and an additional 2,400 to 2,700 housing units."[32] Cambridge Crossing is designed to be a retail, dining, and shopping destination, helping to reimagine this former rail yard in the North Point neighborhood. But some questions linger: will this be an amenity-rich and program-filled place dedicated to biotechnology workers and millennial professionals? Will it be welcoming to nearby residents from east Cambridge, Somerville, and Charlestown?

DivcoWest: Catering to Biotechnology Office Space and Talent Needs

In nearby Kendall Square, biotechnology research and development space is a hot commodity, and real estate developers capitalize on the biotechnology innovation by building office and lab space. DivcoWest, the developer constructing Cambridge Crossing and coordinating the programming of it, is what Logan and Molotch describe as a "structural speculator," extracting

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[32] "North Point - CDD - City of Cambridge, Massachusetts."

more value out of the land through biotechnology office and lab space. DivcoWest's entrance into Boston's market as a west coast outsider has to do with its overflowing portfolio of biotechnology office buildings on the west coast.

From their website, DivcoWest describes its approach and scope of work as:

> "Weathering some of the most unpredictable market conditions in history, DivcoWest has consistently focused on a defined strategy of acquiring quality well-located office and research and development (R&D) properties that serve technology-oriented tenants throughout the U.S. Our team is located in San Francisco and Boston, allowing us to maintain longstanding relationships with top-tier technology firms, venture capitalists, real estate and business leaders and tenants across our target markets."[33]

An interview with Mark Johnson, Director of Real Estate at DivcoWest, animates this perspective. When asked if DivcoWest is helping build the innovation economy, Johnson enthusiastically spoke to how exciting it was to pioneer the residential and commercial designs for the innovation economy.[34] He added that DivcoWest increasingly works with the Human Resources departments at biotechnology companies to design office plans, lab spaces, residential, and retail features that help these companies recruit and retain talent.[35] These developments are intended to create a work environment that retains top biotechnology talent just as much as they accommodate office space in short supply.

Speaking Cambridge's Growth Language

The following section demonstrates how Cambridge Crossing's mixed-use, transit-oriented development offers much-needed research and lab space for biotechnology and pharmaceutical company giants speaks directly to the City of Cambridge's vision of growth for formerly industrial uses of East Cambridge.

In the 2007 update to its 1993 Growth Policy, titled "Towards a Sustainable Future," Cambridge's Planning and Urban Design Division envisioned its "evolving industrial areas" in east Cambridge to follow a "new pattern of mixed-use development."[36] Areas like North Point are

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[33] "Divco West."
[34] Johnson, Director of Development at Divco West Boston.
[35] Ibid
[36] "Toward A Sustainable Future." 20

"generally freer from the constraints of nearby residential neighbors, lacking a pervasive historic context requiring preservation, and frequently close to public transit or to the vehicular entries into the city from the suburbs, these extensive districts would help both to meet new business and housing demands, as well as to harness the income potential of development that could financially support City services."[37]

The site of Cambridge Crossing is celebrated in the 2007 Growth Policy Update to contain "two miles of new roads, ten acres of large and small public parks, a relocated and enhanced Lechmere Station on the Green Line, and access to the Community College Station on the Orange Line, North Point will be a place to live and work for thousands of people. The intent is for North Point to become a destination for many in the region seeking to enjoy the last link of parkland along the Charles River now emerging along the waterfront of North Point after more than a decade of planning."[38] There are opportunities for Cambridge Crossing to generate tax revenue and produce more housing supply, but little guidance is given for affordability and accessible considerations, let alone mitigating the displacement of local residents from developing industrial areas.

Furthermore, the City of Cambridge elaborates on a vision for North Point as a connector and destination:

"With the guidance of a master plan that will create about two miles of new roads, ten acres of large and small public parks, a relocated and enhanced Lechmere Station on the Green Line, and access to the Community College Station on the Orange Line, North Point will be a place to live and work for thousands of people. The intent is for North Point to become a destination for many in the region seeking to enjoy the last link of parkland along the Charles River now emerging along the waterfront of North Point after more than a decade of planning. "[39]

Many elements of the growth policy planning efforts have come to fruition, but with mixed results. More recently, Envision Cambridge was a participatory planning process conducted to address the growing pains in Cambridge, acknowledging the "strains felt by a community coming to terms with demographic, economic, and physical transformations." This speaks to the growing and pervasive inequality that Cambridge faces as a result of the growth policy that the City of Cambridge crafted in the mid-1990s.

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[37] "Toward A Sustainable Future." 20
[38] Ibid
[39] Ibid

In an effort to reorient towards more inclusive growth management, Envision Cambridge calls for "taking advantage of transit proximity, and positively transforming areas characterized by surface parking lots, automobile-oriented uses, and obsolete commercial buildings" in evolving mixed-use districts like North Point/Cambridge Crossing.[40] Core values of Envision Cambridge include fostering a sense of belonging, providing economic opportunity with living wages that support economic security for residents, and ending race-based disparities to achieve racial equity.[41] From a small business and entrepreneurship standpoint, the plan seeks to "encourage a business climate that prioritizes local, independent businesses and enables inclusive entrepreneurship by "making investments in social and economic inclusion that support equity, Cambridge's long-term economic competitiveness, and its vibrant quality of life."[42] The explicit framing around equity and inclusion lays bare the existing inequality that growth has brought about in Cambridge.

In line with the City of Cambridge's vision for the North Point neighborhood, Cambridge Crossing aspires to be a livelier Kendall Square, filled with "eclectic retail."[43] Given Kendall Square does not attract a diverse set of shoppers, workers, and residents, how does this bode for Cambridge Crossing as a neighborhood? Managing Director of DivcoWest, Mark Roopenian envisions Cambridge Crossing channeling the "innovation for which Kendall Square is known," but differentiating itself by emulating the community and neighborhood experience of Davis Square.[44] Fostering a sense of community associated with a town square is difficult to imagine in the context of Cambridge Crossing, since the proposed office and residential buildings are large steel and glass structures, ten to twenty stories in height.

While Cambridge Crossing certainly envisions North Point as a vibrant, mixed-use neighborhood, the intended audience of its marketing language certainly does not satisfy the criteria around furthering equity or inclusion based on the Envision Cambridge objectives mentioned above. The typical Cambridge Crossing biotechnology employee or resident falls under a narrow category. In promotional material to biotechnology companies looking to hire, DivcoWest imagines that Cambridge Crossing will provide "access to top talent with a robust pipeline fueled by the intellectual capital of MIT, Harvard, and Kendall Square and surrounded by a high density of educated millennials."[45] The brochure speaks directly to the biggest players in the innovation economy and their needs to "attract and retain employees in an

[40] "Envision Cambridge: A Plan for the Future of the City." 12
[41] Ibid 15
[42] Ibid 12
[43] "Cambridge Crossing Digital Brochure."
[44] Milman, "The Creation of a New Neighborhood."
[45] "Cambridge Crossing Digital Brochure." 8

innovation community designed for live, work, and play with easy access with multiple transportation modes including two MBTA stops"[46]

Figure 3. Snapshot of Cambridge Crossing Promotional Brochure

"People First. Buildings Second."[47]

Cambridge Crossing, abbreviated as *CX,* put forth advertisements to potential office and residential tenants with the following pitch:

"So for those ready to dream bigger than big, welcome to a place to call your own, welcome to a connected innovation community... Thinkers. Doers. Makers. Builders. Because some of the smartest people in the world deserve to have a place to call their own. We are building one."[48]

Cambridge Crossing's selling point is providing biotechnology companies with a headquarters or campus filled with design interventions to attract well-educated recent graduates from prestigious universities like neighboring MIT and Harvard. These amenities and conveniences offered include public space, proximity to transportation, trendy dining and retail, and housing options, all onsite, as demonstrated by the site plan below.

[46] Ibid 9
[47] "Cambridge Crossing."
[48] Ibid

Figure 4. Cambridge Crossing Site Plan from Cambridge

This messaging appears to sell ample office space. Vice president of the French-owned pharmaceutical giant Sanofi, Bill Sibold announced that it would move 2,700 of its employees into two Cambridge Crossing office buildings, stating that its

> "new Sanofi site will further anchor us in this unique ecosystem of innovators for years to come. Cambridge Crossing is a critical investment in our infrastructure and our people, and the move will allow us to reimagine the way we work together to develop transformative treatments for patients."[49]

The job growth targets and opportunities for headquarter space for biotechnology companies speaks to local governments and their job growth targets that are easy wins for driving more local economic growth.

Philips moved its North American headquarters to Cambridge Crossing along the same logic, stating the proximity to Interstate 93, the MBTA Orange Line and the future MBTA Green Line extension was a benefit to the 2000 employees spread out across 243,000 square feet of office

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[49] Logan et al., "Sanofi Signs Megalease at Cambridge Crossing - The Boston Globe."

space. "There are going to be a lot of shops and amenities for our employees, as well as being conveniently located," she said. "It just made a lot of sense for us."[50]

From the above, Cambridge Crossing appeals to Cambridge planning vision for North Point, and the talent retention needs of companies like Philips and Sanofi. But, the imagination of glassy towers filled with destination dining, retail, and residential apartments that encircle open space, only benefits a narrow sliver of the local population. Certainly, biotechnology companies receive large grants from the National Institute of Health to engage in research and pharmaceutical discovery that saves lives through scientific advance. Despite the societal benefits that these efforts bestow, the neighboring vicinity of these technology companies may bear the brunt of the biotechnology innovation complex, to be detailed later on.

Business Associations in Cambridge's Innovation Complex

Before diving into the trade-offs presented, it is necessary to introduce the business associations of the biotechnology innovation complex: the Kendall Square Association and Massachusetts Biotechnology Council. Invested in fostering a strong business climate for the cluster of biotechnology companies in Cambridge, these business associations serve as the glue that connects the active place entrepreneurs, such as the real estate developers and biotechnology companies with academic institutions, local business newspapers, and contractor services for office needs.

The Kendall Square Association describes its role as serving the needs of "Kendall companies [who] are solving today's problems with the technology and science of tomorrow. It is our privilege to steward this dynamic community, and we are grateful for your organizations' contributions to the local and global innovation ecosystem."[51] Particularly emphasized on their website is the scientific and job creation benefits that its member companies bring.

To join, organizations and companies pay an annual membership fee, ranging from $500 to $20,000, the types of organizations are listed below:

- Tier 1: Retail, Charitable, Startups: $500
- Tier 2: Government, Foreign Consulate, Hotels, Venture Capital, Professional Services, Financial Institutions: $3,000

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[50] "Philips to Move North American Headquarters to Cambridge Crossing - CDD - City of Cambridge, Massachusetts."

[51] "KSA – Kendall Square Association."

- Tier 3: Incubators, Research Institutions, Construction: $5,000
- Tier 4: Tech, Life Sciences, Real Estate Manager & Brokers: $10,000
- Tier 5: Real Estate Owners & Developers, Higher Education:$ 20,000

All the influential and moneyed players invested in the development of Kendall Square and surrounding Cambridge are members of the Kendall Square Association, notably ranging from mom-and-pop stores like Al's Cafe to established companies and institutions, like DivcoWest, Facebook, Philips, Sanofi Genzyme, and MIT Investment Management Company. With the tagline of "the Future lives here," KSA actively promotes the highest and best use and further development of Kendall Square to create a business-friendly environment that helps member organizations and companies effectively thrive in place. However, even among their members, who gets to benefit from the innovation economy? Is it the mom-and-pop restaurants that must compete with Facebook's gourmet cafeteria offerings?

In fact, there is a "Planning and Development" aspect to the work they do that features how KSA has convened community members, Cambridge Redevelopment Authority, real estate developers, and companies interested in contributing to the innovation unfolding in Kendall Square. KSA's website features proposed and completed office and residential projects that are products of years-long planning and development processes that make Kendall Square a desirable place to "live, work, and play."

88 Ames Street is a featured development that provides 31 affordable units out of 280 units, which translates to 11.7% affordable units in total. To meet the true needs of under-resourced Area Four residents, these units would have to be affordable at 30% of AMI, and luxury units within 88 Ames Street seldom are. Furthermore, the studio, one, and two-bedroom configurations are unsuitable for the needs of families, which goes to show that the affordability and design features of these proposed developments exclude residents living in the shadow of Kendall Square. This begs the following questions: Who does the Kendall Square Association imagine to enjoy a neighborhood built upon innovation? Do these imaginations include people who do not wish to work in the innovation economy?

Another business association worth highlighting is the Massachusetts Biotechnology Council. It exists to

> "advance Massachusetts' leadership in the life sciences to grow the industry, add value to the healthcare system, and improve patient lives: We represent the premier global life sciences and healthcare hub, with 1,300+ members dedicated to preventing, treating,

and curing diseases through transformative science and technology that brings value and hope to patients."[52]

MassBio takes a highly specialized and specific approach to providing its member companies with benefits and services, of which include health insurance and discounted office supplies, office management services, and lab equipment given the large purchasing power of its member companies. They organize trade shows, networking events, and business roundtables, having a pulse on the most promising business opportunities for member companies, immense procurement power, and financial resources to mobilize. There is something to be said about creating collective purchasing power, but what holds these companies accountable to preventing displacement or excluding local businesses from procurement or residents from employment opportunities? There is a compelling case to encourage member companies to consider how their social and physical footprints contribute to social determinants of health in neighboring communities.

East Cambridge Bears the Brunt of Innovation

Cambridge Crossing shows promise of regional mobility and connectivity, a public realm, and a mix of retail options for its residents and visitors. However, it is vital to ask for whom it is designed for and what is at stake in terms of accessibility and affordability of nearby residents. Real estate business magazines like Curbed and BizJournal have touted east Cambridge as a *red hot* real estate market; however, this kind of language often foreshadows speculative real estate and subsequent gentrification and displacement of longtime residents.

For good reason, east Cambridge residents and small businesses are concerned about residential and commercial gentrification pressures. Income, education, and food security disparities are concealed by a large well-educated and high-earning tech employee worker population from nearby Kendall Square. A community needs assessment report prepared by Technical Development Corporation (TDC) bolsters the fact that Cambridge faces a growing income divide. The report finds that "there is a sizable number of people living in poverty within an overall environment of affluence. These data imply that there is a higher rate of income inequality in Cambridge than the state."[53]

Furthermore, the Cambridge Needs Assessment highlights that

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[52] "About Us - MassBio."

[53] Milman, "The Creation of a New Neighborhood."

"the themes of displacement and gentrification were prominent in the Forum discussions and focus groups. Participants felt that long standing community bonds were fracturing… [and there] are some populations that face specific barriers to civic engagement and building social capital, including immigrants, seniors, people of color, and low-income residents."[54]

Food insecurity in east Cambridge is also a concern, which provides a potential opportunity for Cambridge Crossing's curation of retail and dining tenants in their ground floor spaces. Specific to East Cambridge, non-student poverty stands at 14%, the fourth highest poverty rate in Cambridge's thirteen neighborhoods. East Cambridge has the third-highest number of SNAP households while also facing disproportionately fewer stores in the neighborhood that accept SNAP benefits. The perspectives presented above expose the vulnerabilities that exist in east Cambridge. Challenges and needs as stated above likely will not be the first to be considered and addressed as DivcoWest designs programming and retail offerings for Cambridge Crossing. As a result, the open space programming, and dining amenities offered by Cambridge Crossing may be inaccessible to east Cambridge residents.

In the Boston Globe, Katie Johnson interrogates who innovation is designed for, based on the negative social impact these technology companies exert. A longtime resident who relies on local Cambridge food pantries to make ends meet asks "The city's plans are all for people who aren't even here yet...Why don't they plan for the people who are here now?" Johnson finds that between 1984 and 2012, Cambridge's real estate tax collection increased 750%. With consistent increases in tax revenue, how can the spending and creation of programs address diverse hiring and procurement.

Former vice mayor Dennis Benzan asks the incisive question around not holding developers and companies more responsible for economic growth they contribute. Benzan reflects regret over favoring real estate growth that does not center equity and inclusion:

"When a lot of these developers came before the council over the last decade for special zoning requests, the number- one question really should have been, how many construction jobs are you committing to people in the neighborhood? How many locals will be hired by companies that lease your building? And that's where we missed the boat."[55]

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[54] TDC, "Cambridge Needs Assessment."
[55] Johnson, "'Area Four' Residents Live in the Shadow of the Future."

From the workforce development perspective, Susan Mintz, Cambridge's Director of Workforce Development further elaborates on the missed opportunity for inclusive hiring. Mintz says that the common practice of hiring temporary workers for lower-level lab workers and outsourcing food and security positions to low-wage contracted workers prevents biotechnology companies from engaging in inclusive economic development through local hiring.

Blindly constructing the next biotechnology innovation hub creates economic growth that is not aligned with equity and inclusion considerations for local residents. The perspectives above detail the lost opportunities to include residents in designing affordable housing, accessible retail, and promising employment opportunities that provide a career ladder for financial mobility and professional development.

Seeking True Connectivity

Cambridge Crossing risks becoming an isolated island of development. The large boulevards and freeways surrounding the area are further complicated by urban design challenges of a former rail yard site. Various plans from the City of Cambridge and Somerville surface the need for more pedestrian connection between North Point and the rest of Cambridge across Monsignor O'Brien Highway and access to the Orange Line across the GIlmore Bridge. Clifford Cook, Senior Planning Information Manager at the City of Cambridge comments that Cambridge Crossing runs the risk of being "more physically isolated" from the rest of the neighborhood and the rest of Cambridge. Cook is "not sure to what extent it's going to have an effect on the overall metrics of that neighborhood." "How do you take 43 acres and knit it into the existing East Cambridge neighborhood? Because if it becomes just its own separate thing, off on an island, it's a failure."[56] Isolating high-earning biotechnology employees on a former rail yard, bounded by highways has many negative implications on the inclusion of nearby residents. If cafeterias in these office buildings are serving free food and hiring contracted workers, or using a subcontractor, this is a missed inclusive procurement opportunity for nearby east Cambridge restaurants, cafes, and grocers.

Pedestrian access to the site remains a challenge for DivcoWest. During our interview conversation, Mark Johnson, the Director of Real Estate Development at DivcoWest, expressed that there is a need to build a bridge across Monsignor O' Brian way to allow for pedestrian accessibility for nearby neighborhood residents. Even so, a pedestrian bridge may still impose challenges to those who face mobility challenges and for the elderly. Currently,

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[56] Milman, "The Creation of a New Neighborhood."

ease of accessing the actual development is geared toward MBTA, Go Bike commuters, and private, company-chartered bus riders.

Calls for Housing Affordability and Accessibility

Cambridge Crossing exacerbates a pre-existing housing crisis in Cambridge. This section will bring in the platforms, strategies, and recommendations that the Cambridge Residents Alliance and A Better Cambridge offer specific policies and pathways to reduce displacement pressures.

For context on acuteness of Cambridge's housing shortage, the following snapshot from the Cambridge Community Needs Assessment demonstrates the severity of the housing crisis in Cambridge. For more than 50% percent of Cambridge households, the average one-bedroom apartment is unaffordable.
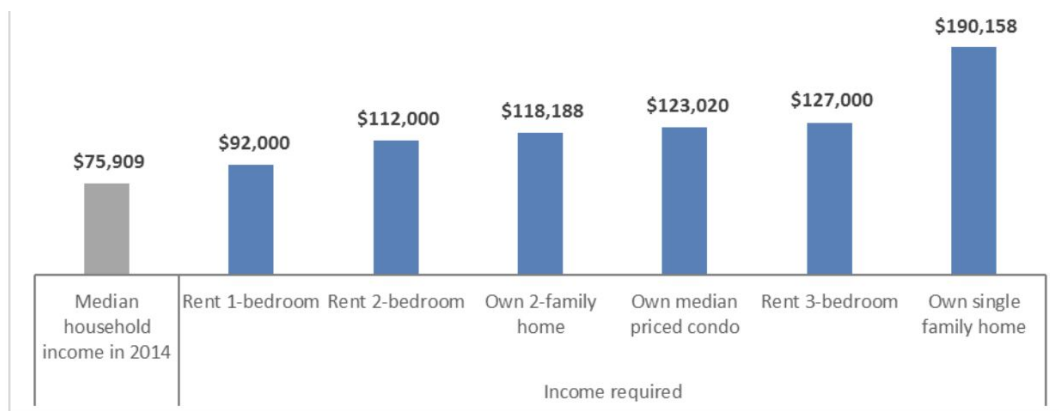
Sources: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates (2014); Cambridge Community Development Department, Cambridge Housing Affordability Gap Chart (2015).

Figure 5: Shortage of Affordable Housing in Cambridge

The wealth created by biotechnology companies does not trickle down to longtime neighboring residents. The Cambridge Residents Alliance position summarizes the threats imposed to Cambridge's sustainable community, economic, and physical development and what a more inclusive future looks like:

> "We believe the innovative and creative character of the Cambridge economy derives in part from the multicultural, cooperative and inclusive social fabric of our city, which needs to be protected, not dissolved.

We support preserving, enhancing and expanding our public and affordable housing."[57]

Without the ability to interview their members and the work they engage with, Cambridge Residents Alliance's 2019 Platform gives insights into their platform across many aspects of policy and planning. They articulate what is at stake with the rate of real estate and corporate development unfolding in Cambridge that is erasing its working-class root, by fleshing out a Cambridge-specific right to the city and equitable outcomes that future real estate development should be evaluated against. This is a clear articulation of what is at stake for housing, employment opportunities, and transportation connectivity if future development only serves the needs of those working in the biotechnology innovation economy. Their key tenets include:
- The Right to Remain in a Stable Community
- The Right to Democratic Participation
- The Right to the Public Good
- The Right to Equity and Justice
- The Right to a Healthy, Sustainable Environment
- The Right to Transportation, Transit, and Mobility"

A Better Cambridge comprises a cross section of Cambridge residents and adds richness to proposals to increase affordable housing stock in Cambridge, including mediation and legal services for those vulnerable to displacement. Specifically they make a compelling case for the 100% Affordable Housing Overlay which failed to pass a Cambridge city council vote in 2019. Their strategies for inviting community participation in addressing Cambridge's Planning Board and Ordinance Committee, as well as strategic endorsements of city councilors in favor of the Affordable Housing Overlay creates clear strategies to gain city councilor sponsorship according to their right to the city platform. Other notable demands include increasing housing supply around public transportation, increasing minimum zoning heights to allow for triple-deckers, and reducing parking requirements to lower development costs. Directly related to Cambridge Crossing's impact on east Cambridge, A Better Cambridge endorses planning and organizing efforts around establishing an East Cambridge Neighborhood Conservation District.

The platform laid out above by Cambridge Residents Alliance and A Better Cambridge provides a blueprint for inclusionary zoning, value capture mechanisms, and communications for community benefits. In the case study to follow, local advocacy coalitions propose a detailed affordable housing impact assessment that estimates the number of units needed to

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[57] "About The CRA."

offset proposed development in San José. The Cambridge Residents Alliance would benefit from partnering with the City of Cambridge and local policy and planning schools to produce a housing impact analysis from the influx of biotechnology jobs created by Cambridge Crossing.

Just-a-Start Community Development Corporation: a Right to Employment Opportunity

As both a workforce training program and an affordable housing developer, Just-a-Start offers a blueprint for establishing and preserving economic democracy that Cambridge Crossing lacks. In partnership with faculty at nearby Bunker Hill Community College, Just-a-Start operates an IT Careers and Biomedical Careers Program. Program participants participate in a 9-month program worth 19 college credits and graduate with a certificate in biomedical sciences. Adults with GEDs are eligible to participate, which helps position them competitively in entry-level lab positions with cleay advancement and promotion pathways to in careers in the life sciences, biotechnology and medical research industries.

There is room for collaboration between Just-a-start and MassBio's equity and inclusion initiatives. MassBioEd, which is MassBio's education arm, seeks to "increase opportunities for women entrepreneurs, boost funding for nonprofits that assist students who are first-generation college attendees and expand internship opportunities that can help graduates make the transition to full-time employment."[58] Funding from MassBioEd could open new doors for Just-A-Start graduates, not to mention adding other apprentice-to-hire programs through the many member companies throughout Massachusetts.

Divco West could also partner with and fund programs and workshops at Bunker Hill Community College. It would make sense to allow students taking biology and science courses to be able to shadow research scientists and lab technicians at a Sanofi Genzyme or Philips. In Kendall square, "Vertex Pharmaceuticals launched a comprehensive STEM program, including a 3,000-square-foot classroom and laboratory for Boston students, high school and college internships, a science fair mentorship program and partnerships with local organizations like Bottomline, Hack.Diversity and i2 learning."[59] Unfortunately, these diversity and inclusion initiatives are a rare occurrence and many of these corporate programs have trouble casting a wide net for adult trainees and instead tap into existing pools of talent on college and graduate

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[58] "Women And People Of Color Are Underrepresented In Mass. BioTech. That Has To Change."
[59] Ibid

campuses. Organizations like Just-a-Start have the know-how, track record, and understanding of local needs to broaden that pipeline.

Biotechnology has a severe diversity problem that awards privileges to a select few to experience innovation as an opportunity for skill advancement and professional development. Only through carefully and thoroughly designed procurement and workforce training programs can the prosperity generated by biotechnological advances be more broadly shared by all. This translates to a need for including local residents in hiring and providing more economic and physical opportunities for them to determine what types of amenities, retail, and dining experiences that occupy the ground floors of newly constructed, mixed-use office buildings.

Boston's Seaport District As Admonition

Across the Charles River sits a gleaming Seaport District, testament to how developers seized a rare waterfront opportunity to create a playground for the wealthy through luxury hotel, residential, office, and retail space. In a scathing exposé of Boston's Seaport district, Andrew Ryan from Boston Globe offers stern admonition about mixed-use innovation districts gone wrong. According to Ryan, "the population is 3 percent black and 89 percent white with a median household income of nearly $133,000, the highest of any Boston ZIP code, according to recent US census estimates."[60]

The article poignantly argues that major developers operating in Seaport repeatedly tapped by Boston Planning and Development Agency for major projects lack Black leadership and do not solicit meaningful engagement from nearby communities of color. This lack of representation results in a limited imagination of who can live and work in Seaport, epitomized by advertisements on construction scaffolding boasting only white faces. Careful reporting identifies how developers exact density concessions and move affordable housing requirements outside of the district, which speaks to deeper, pernicious problems that the Boston Planning and Development Agency is plagued with.

Change is slow to come, as the BPDA is a relic of the Boston Redevelopment Authority (BRA) that razed one-third of Boston's neighborhoods in the 1950s and violently removed thousands from their homes in the name of urban renewal. The BRA reviewed and profited from construction projects, effectively functioning as a developer and landlord itself, collecting fees and rents on the properties it owned, and selling land to developers acquired by eminent

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[60] Ryan, "A Brand New Boston, Even Whiter than the Old."

domain, at times without a public bidding process. Calls to end the opaque development review process and add accountability mechanisms to the planning, zoning, and development are long standing. Recently, Councilmember Michelle Wu renewed calls to abolish the BPDA after senior official John Lynch pleaded guilty in federal court for bribery, indicative of how the BPDA favors profitability over citizen participation in shaping the skyline.[61]

Without incorporating the right to the city and meaningful opportunities for community input, developers cannot be held accountable to provide community benefit. This means remaining developable land in gentrifying Boston neighborhoods can fall prey to future incarnations of the Seaport. Despite the intentions, strategies, and imagination of plans like Imagine Boston 2030 that call for equity and inclusion as lenses to assess the impact of municipal investments and policies, future construction may continue to look like Seaport. Anti-displacement development mechanisms to create affordable units like inclusionary zoning and density bonuses have to work even greater miracles to produce the necessary low and moderate income housing that Boston so desperately needs.

Findings

Cambridge has a reputation for being a hub of scientific research and innovation, bolstered by biotechnology companies and real estate developers that address companies' need for laboratory and office space. Unfortunately, the marketing language of Cambridge Crossing is narrowly catered to innovation economy workers who lack the diversity reflected in the broader Cambridge population. It will be difficult to achieve Cambridge's 2007 Growth Policy vision and recent Envision Cambridge goals to balance community benefit with densifying formerly industrial areas. Growth management is not about slowing down growth, but rather about ensuring that it is informed by democratic participation and that the benefits of innovation can be more evenly shared.

Biotechnology companies spearhead life-saving discoveries, but also contribute to local housing challenges and hiring bottlenecks. In creating business environments that nurture the formation and growth of these biotechnology companies, business councils like KSA and MassBio get to shape who builds and benefits from the innovation economy. Despite scientific and pharmaceutical breakthroughs that these companies contribute, their unfettered growth puts vulnerable neighbors at risk. Nearby Kendall Square demonstrates how longtime residents live in the shadows of biotechnology companies. The East Cambridge Needs Assessment laid

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[61] Buell, "Michelle Wu Wants to Take a Wrecking Ball to the BPDA."

bare often-hidden inequalities of under-resourced families living in neighborhoods with high median incomes. Food-insecure and rent burdened residents face displacement pressure from the thousands of biotechnology employees and potential renters that DivcoWest anticipates Cambridge Crossing will attract. The current trajectory of Cambridge Crossing's construction and programming positions it to be an isolated island of biotechnology innovation. In fulfilling its promise to be a vibrant destination in Cambridge, concerns around pedestrian access, job access, transportation connectivity, and affordable retail offerings must be addressed.

A Better Cambridge and the Cambridge Residents Alliance have platforms that challenge the rampant real estate development currently being developed. These advocacy organizations seek to reestablish the right to city, articulating outcomes, policy proposals, and strategies for more equitable development. Motivated by Cambridge-specific right to the city these organizations put forth, this thesis also proposes a few ways in which business associations like MassBio and Just-a-Start Corporation can collaborate to broaden a local pipeline to biotechnology jobs and provide accessible housing, retail, and public space amenities.

Finally, my research into comprehensive plans like Somervision 2040, Envision Cambridge, and Imagine Boston 2030 show cross-agency and cross-city recognition that the greater Boston area suffers from a legacy of displacement, disinvestment, and redlining. Contained in these plans are stated intentions to incorporate more equity and inclusion in all aspects of planning and policymaking. In fact, the City of Boston even has the Mayor's Office of Resilience and Racial Equity to address the persistent disparities like the racial wealth gap. It goes without saying that these initiatives are sorely needed and that designing more inclusive development will require wide scale coordination between all stakeholders of the biotechnology innovation complex. Despite these plans, luxury towers are still being constructed. I hope that the exercise of identifying growth interests and equity interests and the respective trade offs they present initiates honest conversation about how comprehensive plan intentions for equity and inclusion are not being translated into current development projects in the greater Boston area, as the Seaport District has shown. If biotechnology companies continue to displace and price out communities of color, what good is it to build them more state-of-the-art office and research lab space?

Chapter 5: The Downtown West Innovation Complex

Google's Downtown West "Transit Village"

San José's future innovation complex takes form as an 85 acre, mixed-use "transit village," home to Google's next campus. The tech giant's announcement to put San José on the map as the capital of the Silicon Valley spurred unprecedented real estate investment and international attention. Google's vision for building an inclusive transit village are lofty and high-minded without much direction for how they can come to fruition. Fortunately, Silicon Valley Rising, consisting of workers rights, housing, and neighborhood associations has risen to the occasion. Silicon Valley Rising's advocacy platform presents a challenge to the Google innovation complex through detailed demands and a proposed Community Benefits Agreement. Their organizing and research efforts serve as a blueprint for cities around the country that face the same growth pressures from the innovation complex.

Google was founded as a search engine and has expanded its product offerings to software-as-a-service, hardware products, and most recently, *city-making*. Google's vision for Downtown West further underscores how San José's Planning Commission and city-councilors are ceding governance and control over a mile-long stretch of real estate in the heart of San José and signing off the ability to regulate economic growth in the mile-long stretch in return for community benefits articulated in an MOU signed with the City of San José. Bringing San José out of San Francisco's challenges the right to remain for longtime San José residents.

San José's Desire to be Capital of the South Bay

Until World War II, the 120 square miles that constitute the modern-day San José were agricultural farmland. During wartime, Industrial manufacturing and defense contracts lead to an economic boom in San José. From this, IBM established its West Coast headquarters and Ford Motors moved its automobile manufacturing plant from Milpitas to San José. The 1950s and 1960s resulted in a suburbanization building boom in the region and saw the regional economy blossom with the rise of high-precision manufacturing, only to see many of those jobs move overseas with globalization. When the Dotcom boom occurred, companies like

Adobe, located their headquarters in San José, along the vast expanses of freeway connecting cities up and down the valley.

Turning San José downtown into a vibrant destination has been an elusive vision for San José city officials for many decades. The Downtown Area Station Plan (DSAP) adopted by the City of San José in 2014 envisions a future for the Caltrain commuter rail station as a transit employment center, where "Ground floor retail should be integrated in mixed-use buildings that take advantage of maximum heights and densities."[62] The plan further elaborates on how the area should be redeveloped for highest and best use around innovation economy jobs: "notification of new commercial and research and development facilities to significantly increase the employment base in this district. The target sectors for new development in this area will be innovative office environments, product research and development, emerging 'green' businesses, and incubator space for high-tech startup companies, to help promote this district as a high-profile hotbed of innovation."[63]

In direct response to DSAP language, Google seeks to develop up to 6.5 million square feet of office space, some of it as brand new construction, and other adaptive reuse of the historic San José Water Building across 85 acres. Google promises to bring up to 20,000 new jobs to downtown San José. Preliminary plans discuss building 3,000 - 5,000 units of housing, of which Google strives to achieve 25% affordable housing in new units built. For broader civic and cultural use, 15 acres of parks, plazas and green space, and 500,000 square feet of retail, cultural, arts, education, hotel and other active uses.
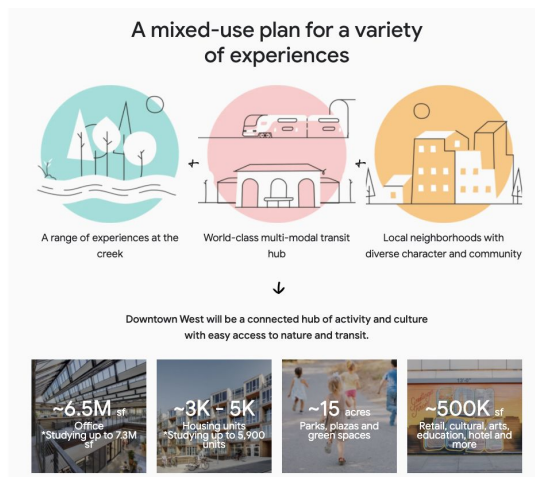

Figure 6. Schematic Representation of Downtown West

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[62] "Diridon Station Area Plan." pg 6
[63] Ibid. pg 22

It is important to mention that Google hired Heatherwick Studios, the architecture firm behind mixed-use, transit-oriented project envisioned to be the "heart" of a formerly industrial district close to London's King's Crossing Station, shown below:

Figure 7. Coal Drops Yard Shopping Center. Source: Dezeen Magazine

Despite the promise for vibrant public space, reports upon opening show that Coal Drops Yard is "a dream that's not materialised" as they struggle with "bleak" levels of footfall six months after it opened in London's King's Cross.[64] How does this bode for Google's Downtown Crossing? Futuristic imaginations that lend to luxury retail and dining experiences as manifested in Coal Drops Yard foreshadows potential equity, affordability, and accessibility challenges for Google's Downtown West master plan, given the same architectural studio is behind the urban design of the buildings.

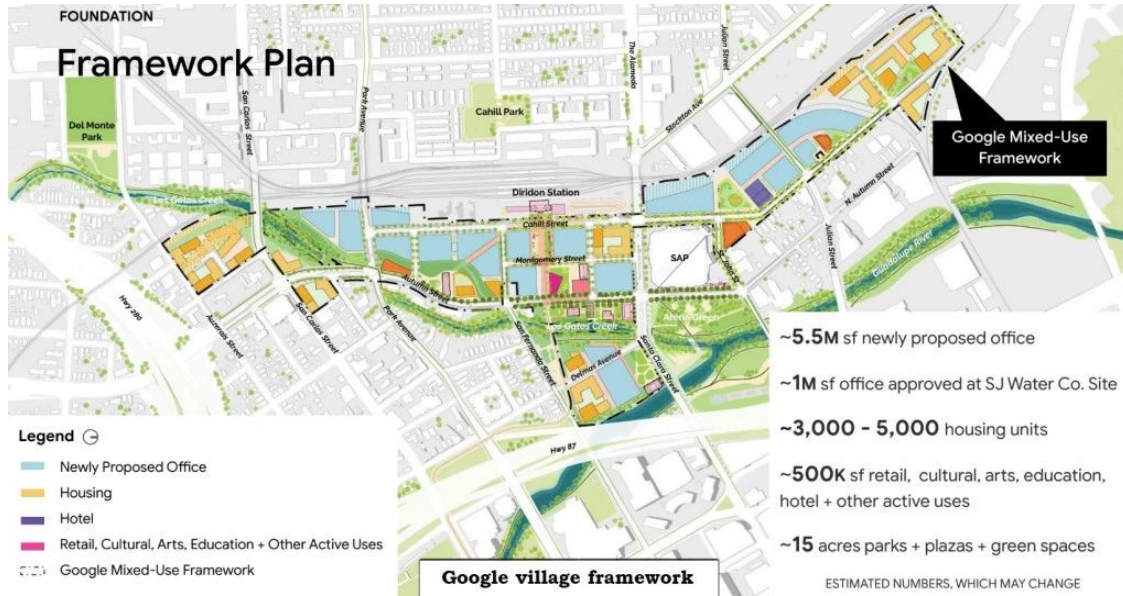[64] Whelan, "Coal Drops Yard Retailers 'horrified'' at Footfall.'"

Figure 9 . Land Use Plan for Downtown West

Particularly noteworthy is how Google articulates initial objectives to "realize the project's potential and address local concerns" articulated in its master plan:
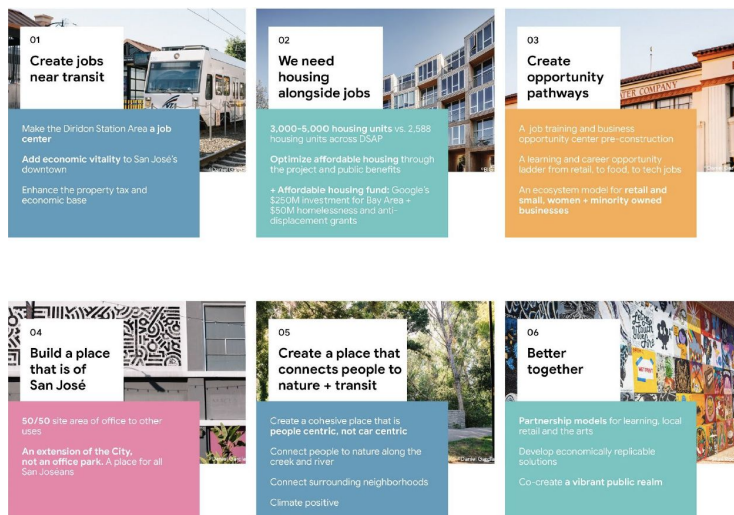

Figure 8. Downtown West Mixed Use Plan pg 5

These objectives are striking because they read as if they belonged in the executive summary of an equitable development strategy. On the other hand, they provide language and intention for community groups to engage with and hold Google accountable to in pursuing development of Downtown West. Unlike Cambridge Crossing, which clearly speaks to attracting millennials and graduates of universities like MIT and Harvard, Google appears to possess some awareness of local challenges, but gives no concrete implementation plan for

how it intended to address them. In a later section, this thesis identifies how demands by a local advocacy coalition offer concrete ways for the city and Google to work towards these objectives.

Google's San José Campus Announcement Triggers The "Google Effect"

Following Google's announcement of its intention to build a new campus, real estate development activity has greatly burgeoned in San José. The title of the San José Mercury News article captures it all with, "Google Effect: Search giant spurs downtown San José boom." According to the article, "Over the 12 months that ended in September, tech companies and realty investors mounted a $1.43 billion shopping spree for downtown properties, far outpacing the $484 million buyers spent on downtown properties over the prior one-year period that ended in September 2017.[65] Large developers like Boston Properties and Colliers International are building several office towers each. Growth interests, those that have not existed until Google's announcement, are betting on returns on investment from Google putting San José on the map as a result of the Downtown West proposal.

A quote of the week article published on March 2nd, 2018 highlights how Bob Staedler, former real estate manager of San José's Redevelopment Agency views Google's Transit village proposal:

> "The Google development is a complete game changer. It introduces San José to the world. The transit, the development, Google's plans will make people look at San José the way they look at Barcelona and other major cities around the world. Transit-oriented development makes sense. Google is a leader. We don't go to a dictionary anymore, we Google it. Google is being innovative in placing workers near transit. They say that luck is where chance meets opportunity, and that is what's happening."[66] -- Bob Staedler

For lack of a better word, Google's announcements will always be met with *hype,* generating interest from those who stand to benefit from increased real estate value and increased business activity. Google's public announcement of its transit village demonstrated the "Google Effect," where up to $1.483 billion in hotel, housing, hospitality, and office space

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[65] Avalos, "Google Effect."
[66] "Quote of the Week."

investments in downtown San José poured, compared to development proposals from 2016 and 2017.[67]
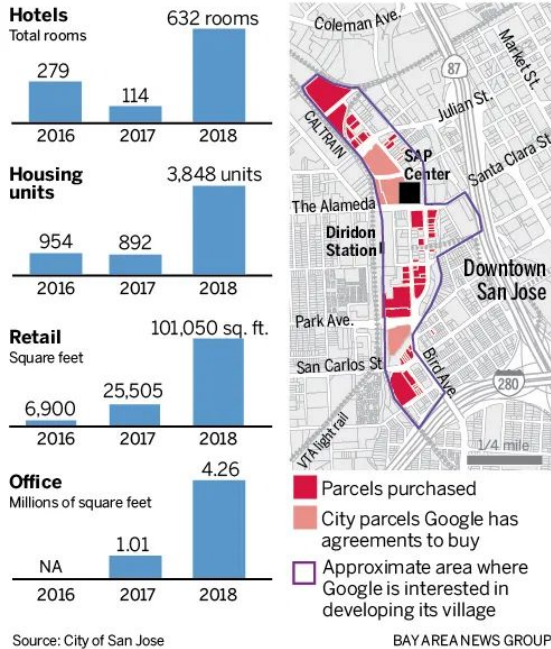

Figure 10. The Google Effect

Development Approval Hinging Upon Community Benefits

Since 2016, Google and its affiliate shell companies have acquired properties in San José, beginning with an old telephone company building, and subsequently fifty-six residential properties with the help of real estate company, Trammell Crow, total expenditure of property acquisition at $386.8 million. The search giant also has bought numerous properties previously owned by the city of San José and an affiliated government entity. These public agency deals also included some parking lots, a Fire Department training center, along with the land beneath popular watering hole Patty's Inn and the well-known Stephen's Meat sign. Google also has obtained an option to buy the big parking lots next to SAP Center, a large convention and concert venue. This land acquisition strategy breaks from the tradition of leasing office space to allow for flexibility to grow and expand. For better or worse, Google is here in San José to stay, and earn a return on its investment.

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[67] Ibid

On November 16, 2018, Google signed a Memorandum of Understanding (MOU) with the City of San José, with Kim Walesh, the Deputy City Manager and Director of Economic Development. The MOU include the following planning objectives and community engagement priorities summarized from community meetings conducted by Google from 2018 - 2019 include:

MOU with City of San José Objectives in 2018	2018 - 2019 Master Plan Community Input Priorities
- Optimize density and its mix of uses - Increase housing - Be designed for human scale - Enhance and connect the public realm - Achieve excellence in design - Maximize use of public transit and minimize parking - Pursue excellence in transit access and operations	- Create jobs near transit - Provide housing alongside jobs - Connect people to nature and transit - Build a place that is of San José

San José seeks to make clear that its "expectation of a community benefit contribution will be premised on, among other factors, the additional value Google receives as a result of the legislative changes that may be approved by the City Council that enhance the value of both the City/SARA properties and the private properties acquired by Google, as well as the certainty that could be provided to Google through a Development Agreement."[68] If development approval hinges upon a public benefits package, it may lead to a performative or perfunctory design and delivery given MOUs lack binding legal enforcement.

The above understanding begs the question, if Google stands to enjoy the benefits of a Silicon Valley campus, what is at stake for the existing community? Which other players from the San José innovation complex stand to profit off San José's announcement without having to contribute commensurate community benefits?

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[68] "City of San José - File #: 18-1595."

Pro-Growth Business Advisory Councils: Well-Oiled Machines

It is no surprise that business associations welcome Google's plan to move into San José. Perhaps one of the most established business councils in the San Francisco Bay Area, Silicon Valley Leadership Group plays an important behind-the-scenes work for large investments, real estate development projects, and business incentive negotiations. According to their website, the Silicon Valley Leadership Group (SVLG) has over 350 of the largest technology employers in the Silicon Valley. First founded by David Packard of Hewlett Packard, SVLG:

> "is a diverse public policy association... shaping the future innovation economy of Silicon Valley, the Bay Area, and the nation. The Leadership Group's strength is the breadth of its membership ranging from influential technology name brands, start-ups, civic organizations, and others who, together, account for nearly one of every three private-sector jobs in Silicon Valley and contribute more than $3 trillion to the worldwide economy. Through collaboration, we work to find solutions to issues affecting the Bay Area's economic vitality and quality of life."[69]

Google is a member company of Silicon Valley Leadership Group, which could explain Silicon Valley Leadership Group President Carl Guardino's eager endorsement of Google eyeing San José for a new corporate campus. Negotiating for business-friendly real estate and job creation policies from city hall is a core expertise, as one of SVLG's primary values includes "cost-effectively driving proactive public policy, program, and project solutions at the national, state, regional, and local levels of government and for the Bay Area communities in which our Member Companies conduct business."[70] SVLG's reach also extends to the nonprofit and community development world through their philanthropic arm, the Silicon Valley Foundation. An example of this is the Silicon Valley Competitiveness and Innovation Project, which in essence, lobbies for a policy agenda that ensures the region maintains a healthy business climate:

> "The region's history has been characterized by successive waves of paradigm-shifting technological innovations. The health of these innovation industries affects the entire regional economy…Silicon Valley Competitiveness and Innovation Project (SVCIP) was developed to proactively identify a data-driven public policy agenda to enhance and reinforce the region's competitive advantages in innovation… SVCIP is a collaboration

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[69] "About Us - Silicon Valley Leadership Group."
[70] Ibid

of the Silicon Valley Leadership Group and Silicon Valley Community Foundation. In this analysis, the Silicon Valley region."[71]

SVLG helps its member companies bring innovation to market, and at scale, effectively as public advocates for the innovation economy that makes Silicon Valley stand out as a region. Member companies of the SVLG constitute some of the most prominent developers and technology companies that have profited from San Francisco's real estate and software platform boom. It is no surprise these growth interests would actively seek real estate and stock market windfalls in store for San José. SVLG identifies as a public policy group that contains members contributing up to $3 trillion in the worldwide economy.

A membership roster as such equips SVLG with political and economic clout in any conversation or negotiation it enters. SVLG represents the business interests of Fortune 500 companies. When they refer to "community," it is the business leader community that they advocate for and build partnerships around, not local, longtime residents of San José. This small semantic distinction has perhaps undermined balancing of equity and growth by local governments, since the constituent communities have such divergent vested interests.

Similarly, San José Downtown Association (SJDA) is a non-profit membership-based organization engaged in tourism attraction and creating a friendly downtown shopping, dining, and entertainment. SJDA represents business and property owners working to enhance the vitality and livability of downtown San José. In fact former SJDA President Stan Vucovich wrote "As the Google development progresses… high-density housing in our city's core will undoubtedly multiply, creating the true urban center we have all dreamed about and an amazing new skyline for downtown San José. Ultimately, local restaurants, bars and shops will feel the impact as thousands of new workers call downtown San José their home and/or office." [72] Vuckovich's letter is titled "Google Plans Shift Earth on Downtown's Westside," encapsulating the anticipation of Google's arrival. Since the SJDA has smaller mom-and-pop establishments as part of their membership rosters, they could be stronger advocates for advocating for protections against the inevitable commercial rent increases that Google's presence may bring.

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[71] "Home."
[72]"Google Plans Shift Earth on Downtown's Westside | Downtown San José."

Silicon Valley Rising's Demands: Asserting a Right to Remain and Thrive in San José

Heightened real estate investment from the Google Effect is in-line with the growth machine politics of business and real estate players providing grounds for the highest *and best use* of real estate. In March of 2019, San José City Council voted to approve raising downtown San José height limits to maximum allowable heights according to Federal Aviation Administration regulations.[73] In response, Google suggested more square footage for both residential and commercial development in response to upzoning.
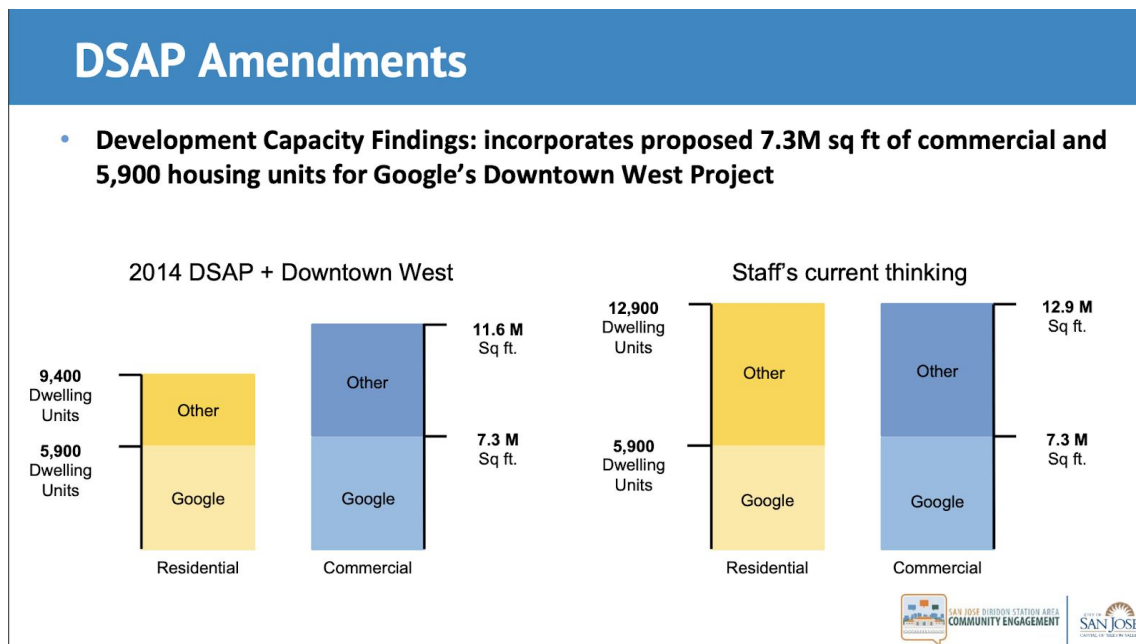

Figure 11. Zoning Height Increases to FAA Maximum

As an expression of unaddressed community concerns around backroom dealings precisely between business and real estate interests, Serve the People San José protested during the meeting, stating that Google and other business councils purportedly struck a series of backroom deals. To expose these backroom dealings and their undermining of participation and transparent communication of San José residents, the First Amendment Coalition and Working Partnerships USA filed a lawsuit in November 2018. The petition documents several closed sessions and non-disclosure agreements that several city councilors signed, raising community concerns of backroom dealings. While NDAs are common to the daily business

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[73] Hase, "San José Lawmakers Approve Taller Buildings in Downtown."

operations of tech companies to maintain technological advantages, they certainly threaten principles of transparency and public disclosure that our democracy and urban governance depend on.

In response to the community concerns around Google's presence, San José City Council created the Station Area Advisory Group (SAAG,) which brings together the San José Innovation complex players over monthly meetings. It consists of city official members, business advisory groups, neighborhood associations, open space preservation groups, labor rights organizations, and mobility justice organizations. Stakeholders within the San José innovation complex bring their respective corporate growth, real estate, labor rights, residents, sustainability, and affordable housing concerns to light.

Ahead of the city council's final approval of Google's master plan in early 2021, there will be many negotiations between business and community, labor rights, and housing rights interests that play out during SAAG meetings. Listed on SAAG's websites, the key issues and objectives that the Diridon Station Area Advisory Group addresses in light of Google's Downtown West Master Plan include:[74]

- Housing and Displacement
- Revitalization of Downtown and the Diridon Station Area
- Job Opportunities and Social Equity
- Expectations of Google and Others
- Community Benefits
- Growth Impacts and Public Services
- High-Speed Rail Impacts
- Safety and Homelessness
- Environmental Sustainability
- Effects on San José's identity

In their public comments to the SAAG, community members have expressed their fears, mistrust, and anger over Google's delayed engagement process that felt performative, directly threatening their right to participation and a sense of belonging in San José. In a public comment from a SAAG meeting from January 16, 2020, a community member articulates how the Downtown West does not meaningfully engage San José residents who have contributed to the neighborhood long before Google announced its arrival:

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[74] "Building Upon Previous Community Engagement Input."

"I have lived in SJ for 40 years and live in Downtown San José. For some of you, it may be easy to dismiss the history, resiliency, culture, beauty and community. Those who come and 'wanna make it better', it sounds like privileged arrogance and violence. You want to break it. Last night, a couple of Google staff talked at us about building 'character zones' and added that they wanted to be the heart of San José. We already have a heart: the hardworking people that have been here for generations. You never talk to the people of San José. Hidden behind non-disclosure agreements, fake promises of community benefits, and the promise of shiny new housing and buildings for your benefit. You set up fake community engagement and feedback sessions and took note of what you wanted to hear while dismissing voices of communities of color, youth, elderly and the unhoused."[75] -- SAAG meeting attendee

Another meeting attendee summarizes the lack of protection against displacement and erasure that vulnerable residents facing decades of disinvestment experience:

"I was born in Valley Medical Center and grew up in the Horse Shoe area being discussed. To Harvey and Kevin's point, the houses to the north of tracks have been given historical landmark status. The ones on the horseshoe have not. Mexicans are on the horseshoe side and whites are on the north side of tracks. Quoted Aldous Huxley's Brave New World (1931) book about technology, power, and democracy. The author knew that something like this (Google Project) would happen here in San José. The redlining, discrimination, segregation, marginalization, and exploitation of this project has not been tabled."[76] -- SAAG meeting attendee

The Station Area Advisory Group may be one of the few forums where business leaders invested in the Google Effect can reckon with the community's anguish and outrage over what is at stake for their right to determine how economic growth and development takes place. Station Area Advisory Group created a Housing and Displacement Subcommittee that worked closely with San José's City Council to adopt a city-wide Anti-Displacement strategy. It is heartening to see this type of coordination, but further research and interviews are needed to understand the legal enforceability mechanisms and tools available for setting targets around the goals above and monitoring the attainment of these goals.

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[75] Station Area Advisory Group Draft Meeting Notes | January 16, 2020
[76] Ibid

Standing Up to Google: Silicon Valley Rising's Platform

In direct opposition to the pro-growth interests of SVLG, stands Silicon Valley Rising (SV Rising.) Silicon Valley Rising is a workers' rights and living wage campaign spearheaded by "an unprecedented coalition of labor, faith leaders, community-based organizations and workers." [77] This campaign has produced a set of policies, planning, and corporate social responsibility demands that address the threats to economic democracy and the right to the city that Google-led innovation complex imposes. This coalition of organizations seeks to "creat[e] a new economic model that rebuilds the middle class," "raise wages and standards for all workers so they can live and thrive here," and build housing that is affordable and accessible.[78]

Silicon Valley Rising sheds light on what is at stake for the most vulnerable residents of San José who stand to be displaced, invisibilized, and ignored if the Downtown West master plan is ultimately approved. The various organizations that comprise Silicon Valley Rising's coalition articulate how Google enjoys a two-fold benefit by locating to San José: 1) immense taxpayer spending on improving public transportation connecting the Bay Area and 2) much higher property value resulting in the city rezoning the Station Area plan, effectively doubling allowable density for Google to build.

As a promising roadmap for other cities to follow, Silicon Valley Rising clearly outlines the trade-offs between equity and growth in affordable housing, public education, mobility, and living wage considerations. Threats to the right to the city and inclusive development are addressed through specific Community Benefits Agreement demands, and the agreement itself is proposed as a binding document that Google and downtown San José community groups co-sign. The CBA is framed in a productive manner, inviting Google to provide community benefits that recognize the social and cultural assets that longtime Silicon Valley residents have to offer. In the event that Google receives approval for the Downtown West Master Plan, Silicon Valley Rising brings leverage to a negotiation for holding Google accountable for building a transit village that is *of San José* in the way that the master plan languages promises to do

Addressing Google's Diversity Issue

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[77]"Silicon Valley Rising | Inspiring an Inclusive Tech Economy."
[78] Ibid

Confronting Google's lack of diversity and representation is a necessary starting point. If the San José campus is intended to attract or retain talent through existing hiring practices, the talent pool likely will not reflect San José's rich diversity. Silicon Valley Rising's research sheds light on the disparities between salaried and contract workers at Google. Black and Latinx employees are notably underrepresented, respectively comprising 1% and 2% of the core workforce based on 2014 statistics. As of 2019 the numbers have only crept up slightly, at 3.7% Black and 5.9% Latinx employees. Silicon Valley Rising notes that the representation of security guards, grounds maintenance workers, and janitors tells a different story. These positions are disproportionately represented by workers of color, and they earn a fraction of the wages from salaried employees, without the generous stock and equity programs that developers enjoy.

A lack of diversity in Google's Leadership and employee pool means that once Google sets up shop in San José, few San José residents of color without the proper educational and professional credentials will have access to the jobs that provide for the amenities, benefits, and features that the Downtown West Master Plan has to offer. Further compounding the housing affordability crisis is the stagnant wage. Silicon Valley Rising commissioned Beacon Economics to forecast Google's impact on San José, finding that between 2010 and 2017, rents increased by 69% while wages rose only 21%. Families in greater San José and the Bay Area experience high rent burdens, displacement, "super-commutes" and overcrowding in their rental units.[79]

Community Benefits Agreements and Value Capture Mechanisms

If Google is poised to become the largest employer in Silicon Valley, it will need to work closely with community members, community coalitions like Silicon Valley rising, city council, the planning commission, and the housing department to ensure that longtime San Joséans have a right to remain and belong. To do so, Silicon Valley Rising has proposed a variety of community protections to mitigate the negative economic, social, and environmental impacts on neighboring residents. SV Rising calls for signing a Community Benefits Agreement (CBA) between Google and community organizations in the greater San José region to both mitigate negative impacts of Downtown West and share the benefits of the proposed development with the broader San José community. Oakland Army Base and Facebook's CBA serve as guideposts for SV Rising, with a special emphasis on dedication to producing deeply

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[79] Beacon Economics, "The Google Rent Hike: What Google's San José Mega-Campus Could Cost Renting Families — and What Google Can Do about It."

affordable housing and a community oversight committee that devises metrics for and oversees implementation.

Facebook's CBA is titled: "Compact to Increase Equity, Opportunity, and Access in Silicon Valley" and it focuses on four elements: housing development and preservation, economic opportunity, tenant assistance and future partnerships. A key aspect of the CBA is the Catalyst Housing Fund that partners with non-profit developers like Envision Transform Build, LISC and private charities like The San Francisco Foundation (TSFF.)[80] In raising and establishing this fund, Facebook's demonstrates a dedication to working with organizations with longstanding expertise and local knowledge. However, with the disbursement of the funding which includes a $250 million partnership with the state of California for mixed-income housing on state land, $150 million for subsidized and supportive housing for unsheltered Bay Area citizens, $250 million worth of land near its headquarters in Menlo Park, $25 million for teacher housing, and $350 million in discretionary funding contingent upon initial funding performance.[81]

The devil is in the details, with many logistics to sort out. This money will be gradually dispersed over the next decade. The funding is not a charitable donation but rather an investment where Facebook expects a return, potentially on a longer timeline than traditional market rate projects. Substantial portions of Facebook's billion dollar contribution is the value of land instead of working capital that can be used to finance construction of housing. Traditional zoning may still be tied up by local homeowners who do not want to see sleepy suburbs densified. Specific accounting details like the ratio between equity and debt and interest terms have yet to be sorted out. Facebook said most of its efforts would focus on middle-income housing for people like teachers and public employees, but workforce housing is needed across all professions. These considerations all go to show that underneath the invaluable press opportunities, these 'donations' are contingent upon accounting details that greatly affect the final implementation of a Community Benefit Agreement.

Addressing Google's "Build Housing Alongside Jobs" Objective

Silicon Valley Rising's "The Google Rent Hike" report articulates the immense need for housing at the risk of widespread displacement, finding that 56.9% of families earning less than $50,000 spend over half their income on rent, and that median income of renters have declined by 2.8%, resulting in overcrowding and negative health and wellness outcomes associated

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[80] Dougherty, "Facebook Pledges $1 Billion to Ease Housing Crisis Inflamed by Big Tech."
[81] Dougherty, "Facebook Pledges $1 Billion to Ease Housing Crisis Inflamed by Big Tech."

with evictions.[82] The risk of being priced out by Downtown West is a reality for many working class families in the area. Beacon Economics created a housing development target needed to offset Google's presence in terms of affordable homes and market rate homes, at 5,284 and 12,450 respectively. This helps frame a housing construction goal for all parties within the innovation complex to work towards.

SUSTAINABLE SCENARIO HOUSING NEEDS (IN SANTA CLARA COUNTY)

5,284
Affordable homes

12,450
Market rate units

Source: Beacon Economics Analysis

Figure 10. Silicon Valley Rising Report: The Google Rent Hike

After careful research, SV Rising summarizes a few Facebook CBA provisions most relevant and crucial to ensuring a responsible physical and social footprint:
- A $18.5 million dollar "Catalyst Housing Fund" that identifies and preserves long-term affordable housing within the vicinity of the site.
- $500,000 in tenant support services for low-income community residents.

Building on the precedents established by Facebook's CBA above, SV Rising calls for specific CBA provisions: a 25% allocation for affordable housing in all of Google's proposed residential development, legal defense resources in Santa Clary county courts for community members, and an affordable housing fund modeled after the one that Facebook's created, focused on preserving existing affordable housing and combatting homelessness.

Silicon Valley Rising is well-positioned to propose a CBA ahead of final development approval in the spring of 2021. Silicon Valley Rising can present its community benefit demands specific to each city department responsible for implementation or assessment. Then, it can work with different city departments and Google's internal real estate team to establish clear recommendations and guidelines when it engages in back-and-forth communication about construction plans and procurement policy.

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[82] Beacon Economics, "The Google Rent Hike: What Google's San José Mega-Campus Could Cost Renting Families — and What Google Can Do about It."

Considering Transit Justice

Each weekday morning, an estimated 1,600 private buses — bigger than many municipal public transportation systems — fan across the Bay Area to ferry tech workers to their offices.[83] SV Rising calls for expanded public bus service and covering the fares of youth, senior and differently-abled populations, particularly on routes that stop at Diridon station. This articulates a mobility justice platform that meaningfully broadens access to the station, since much of state and city tax dollars have funded Caltrain-specific infrastructure improvements and increased service. Caltrain is more frequently used by tech employee commuters traveling between the South Bay and San Francisco, while light rail and bus service provided through VTA serves communities of color more directly. Instead of operating Google's shuttle buses for the public, funding increased service of existing bus routes better serves communities of color, as they may not be able to access information for new transportation options outside of the routes they are familiar with.

Public Space as a Corporate Perk or For the Commons?

During the 1/16/20 meeting, Deputy Director of Parks, Recreation & Neighborhood Services Nicolle Burnham mentioned that plans for a 8-acre park changed to "small interactive spaces" of trail improvements and community center space along the Guadalupe River. The below diagram from the master plan depicts the proposed open space shaded green, from the master plan. From an urban design perspective,the proposed open space from the plan is clearly designed and oriented by residential and office space buildings, serving more as courtyards or recreational space. Fragmented and scattered, the open space serves more to connect the master plan. There is a foregone opportunity in the design to create lateral porousness that provides physical entrances to the site and an invitation for residents nearby to access and use the site.

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[83]Dougherty, "Facebook Pledges $1 Billion to Ease Housing Crisis Inflamed by Big Tech"
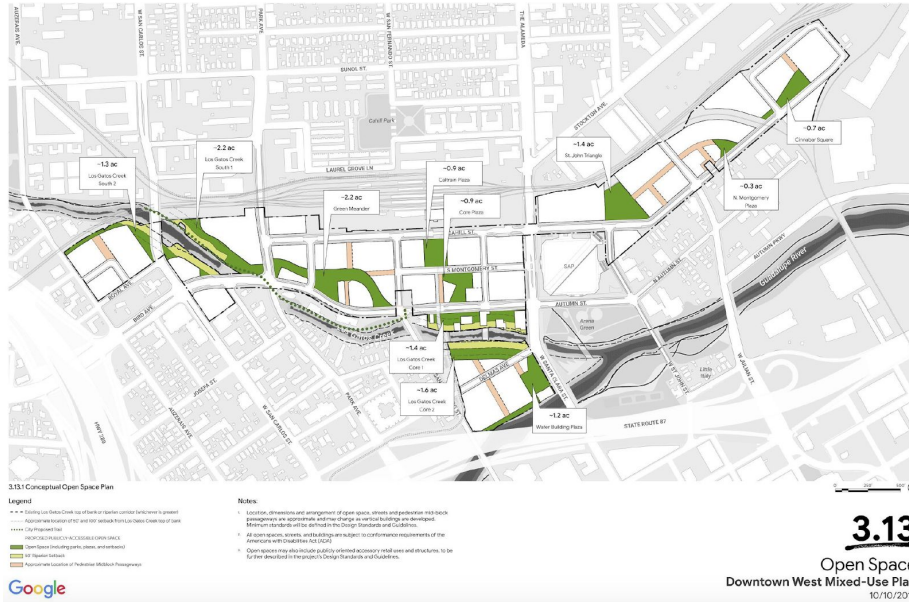
Figure . Proposed Open Space from Downtown West Master Plan

In the same meeting, community members expressed the concern of preserving public space, encapsulated by this comment: "If we have privately owned publicly accessible parkland, will it become a land bank for another entity to sell it off because we don't have a title? How do we maintain green space in perpetuity" -- SAAG Meeting attendee

Adding to the concern about long-term preservation of public space, it is necessary to consider how the public space will be monitored and programmed. Privately maintained public space often employs private security personnel and relies on video cameras, which imposes a layer of curation of who is invited to use this space. Usage and surveillance of public space risks the monitoring of bodies that do not fit a stereotypical technology employee mold.

Meeting Google's Small Business Objective

Google's entrance into San José poses risks of gentrifying existing neighborhood businesses which fall under the purview of the City of San José's Small Business Development Center. In light of changing customer tastes and preferences in addition to higher rents that may result, there will be significant technical assistance and small business financing needs. For the establishments that are less direct-consumer facing, this presents an opportunity for Google to engage local women and minority-owned businesses.

Google's intention to "create an ecosystem model for retail and small, women, and minority-owned businesses" bolsters a call for equitable procurement, keeping in mind that

gentrification often changes customer preferences and expectations. In San Francisco, many hip, destination neighborhoods have experienced the various waves and stages of retail and restaurant gentrification. In response, local coalitions have articulated strategies to preserve affordable and accessible options for community members aimed at business owners moving into a gentrifying or gentrified neighborhood. An example is United to Save the Mission and the coalition's demands for Manny Yekutiel, a café owner at one of the busiest intersections in the now-gentrified Mission District.

Noteworthy business operation and procurement principles suggested by United to Save the Mission should be applied to the ground floor retail and restaurant establishments that Downtown West will lease space to. Recommendations worth highlighting include:
- "Hire, train, and maintain a bilingual (Spanish-English) workforce and provide promotion opportunities.
- Offer food/beverage options and event programming that are affordable and accessible, including free and pay-as-you-can events.
- Host programming that amplifies the struggles of the oppressed, colonized, persecuted, and unjustly treated.
- Focus fundraising programming on local, Mission-serving organizations.
- Utilize local suppliers as food vendors.
- Honor the right to rest for our unhoused Mission neighbors and host "good neighbor" programming with homeless advocacy groups."[84]

Google has often come under fire for piloting new products like self-driving cars in the suburban neighborhoods of its tech campuses as testing out the commercialization of their software and hardware products while intruding on public and civic space. Urban planning and policy professor Laura Wolf-Powers calls for more creative usage of value capture mechanisms that furthers distributive justice, especially on public projects or public land. Equity-enhancing value capture is not as widely observed, but San Francisco city councilors recaptured value from upzoning and turning formerly industrial districts into mixed-use development by requiring 33% of their new development to low-rent "Production, Distribution and Repair" (PDR.) An additional provision included creating tenanting and marketing plans that prioritize the local residents for employment opportunities. "This requirement delivers value to industrial businesses and blue-collar employees by clawing back some of the financial value granted by the rezoning."[85] I argue that there is an opportunity for Google's San José campus to incubate home-based businesses and first-time entrepreneurs, by combining PDR with the gentrifying

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[84] Team MissionWorld, "Joint Statement from Manny's and United to Save the Mission."
[85] Wolf-Powers, "Reclaim Value Capture for Equitable Urban Development - Metropolitics."

business operations guidelines for creating more inclusive ground floor retail experiences. Downtown West wields immense buying power that needs to be reoriented and redirected to support minority and women-owned businesses. Creating a San José PDR could further capture value on what was formerly public land, with a focus on civic uses or hosting afterschool programming for nearby elementary, middle, and highschools in need of these types of resources.

Food business incubators in the region, such as La Cocina, which provide affordable kitchen space, industry-specific technical assistance and access to market opportunities to primarily women from communities of color. Google should consider incorporating commercial kitchens and retail options that center affordable offerings meeting local cultural needs and affordability standards. An open question remains, how deeply will Google engage to honor a core business practice of piloting ideas? What room is there to shift the goal of Downtown West pilots from assessing commercial monetization potential of technology to serving the needs of the most vulnerable in the neighborhood, in accordance with the right to the city platform that Silicon Valley Rising puts forward?

Opportunity Pathways with work2future and Broader Equitable Development Strategy

A primary goal of Google's office campuses is to attract and retain talent. By working with local academic institutions and workforce development agencies could meaningfully contribute to hiring talent that meets one of its key design principles of "investing in workforce development programs" and "creating opportunity pathways" by "establishing a "learning and career opportunity ladder from retail, to food, to tech jobs." Addressing immediate job opportunities and creating pathways that meet the hiring qualifications and needs of Google are a necessary starting point for creating inclusive pathways. As part of contributing economic opportunities within its CBA, Facebook committed $625,000 toward job training for science, technology, engineering and mathematics (STEM) jobs and a dedicated, full-time local community liaison connecting local residents with job opportunities. Google's San José campus could follow a similar program and establish a community liaison.

Moreover, the Silicon Valley Workforce Development Department has the work2future program that provides professional certificate programs across business and financial sectors, construction management, healthcare and social assistance, and manufacturing. Surprisingly,

work2future does not offer coding skill certification, despite software engineering being a dominant industry in the region. There is a strong case to be made for the Silicon Valley Community Foundation (the non-profit arm of the Silicon Valley Leadership Group) to raise money to provide coding bootcamp and entry-level engineer placement programs. Relatedly, existing Google programs and resources could be re-tooled. Google New York operates "Code with Google," teaching basic coding skills to youth ages nine to fourteen, and could tailor workshops to adults seeking engineering positions. Mentoring and coaching coding bootcamp attendees could be incorporated into Google's "20% Projects," where employees can allocate 20% of their time to personal passion projects.

Finally, placing workforce, apprenticeship, and skill training programs in Google's ground floor retail space could help Google articulate a dedication to investing talent from its backyard, and inviting local residents to be a part of Google's talent pool. Work2future could serve as an intermediary between community members seeking coding and engineering skills and Google's internal diversity and inclusion or human resources teams. With satellite offices throughout the Bay Area, work2future could open up a satellite center near the Caltrain station or a heavily-trafficked bus stop to make their services and workshops more readily accessible to San José residents.

Workforce development programs offer immediate and short term solutions. A longer term and coordinated equitable development strategy is also needed to address the multifaceted nature of the growing racial wealth gap that technology companies exacerbate. Oakland's Economic Development Strategy offers a notable precedent as a city council-backed equitable economic development strategy. The strategy establishes, monitors, and tracks cross-department equitable economic development goals. "City Leads" from the City Administrator's Office, Department of Transportation, Economic & Workforce Development, Public Private Development Team, Public Works Department, Housing & Community Development, Planning & Building Department would be assessed annually on their performance to achieve key dates and targets to establish greater economic security for Oakland's residents. A strategy like this fosters more inter-department collaboration and accountability. There is an opportunity for San José to complement its Anti Displacement strategy with an equitable development strategy co-authored with the Station Area Advisory Group and perhaps even include specific metrics from SV Rising's CBA proposal.

Apple's Spaceship As Admonition

Ten miles west of the proposed site for Downtown West sits Apple's futuristic spaceship headquarters. Daily, 12,000 employees enter and exit the campus aboard private shuttle buses. A staggering 9,000 parking spaces are a reminder of how parking was chosen over other uses of that land, including supportive housing, public parks, or even a museum, which Cupertino lacks. The inward-looking and circular office park, coined by observers as 'the spaceship,' hosts an on-site health clinic and counseling services, employee gym and recreation facilities, natural arboretum, cafeteria filled with heavily discounted food, and free apple products. Touting unrivaled design, Apple Park supposedly creates an idyllic work environment with a completeness of amenities, offering stark relief to the traffic congestion, housing crisis, and public transportation it generates immediately outside its walls.

Criticism of the site abounds. The National Resources Defense Council considers Apple Park as a major contributor to suburban sprawl and worsening car dependency, given the headquarters are not an efficient usage of 175 acres of land. Few opportunities for adaptive reuse arise from this circular structure due to the exacting design details catering to Apple's unique operating needs. A piece by Dan Winters in Wired magazine highlights much of what is wrong with Apple's tech elitism or technolibertarian approach to constructing campuses:

> "Apple's new HQ is a retrograde, literally inward-looking building with contempt for the city where it lives and cities in general… Apple has exacerbated the already serious problems endemic to 21st-century suburbs like Cupertino—transportation, housing, and economics."[86]

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[86] Winters, "If You Care About Cities, Apple's New Headquarters Sucks."

Figure 12. Apple Headquarters in Cupertino California Source: Wired Magazine

Apple Park poses a striking precedent for tech companies building new headquarters. For a company willing to spend $5 billion to construct this office campus, Apple was initially hesitant to contribute to community benefits. After several meetings with Cupertino city councilors, Apple agreed to contribute $8.2 million for a park originally planned for the site and $5 million in housing mitigation fee, despite local impact assessments predicting that housing demand will increase by 284%. In response to building an architectural anomaly disregarding local neighborhood context with little likelihood of future reuse, Apple paid pocket change in mitigation fees to the City of Cupertino.

Skipping one level of government, Apple partnered with Governor Newsom and the State of California to dedicate $2.5 billion to addressing the Bay Area's affordable housing crisis. This locks local Cupertino departments out of funding and resources to address local housing shortage needs. Although Apple will partner with Bay Area non-profit organizations that specialize in building affordable housing in the Bay Area's unique regulatory and political landscape, the City of Cupertino is largely cut out of decision-making in Apple Park's backyard. All in all, the development process of Apple Park serves as a missed opportunity to capture value for public transportation, local procurement, and local hiring in the $5 billion dollars poured into its creation.

Findings

Google's Downtown West Master Plan is an ambitious proposal for a massive transit-oriented project that fully entertains and seeks to operationalize the City of San José's visions for becoming the innovation capital of Silicon Valley. Station Area Advisory Group meeting notes

documenting the poignant testimonials and warnings of community members underscore how current imaginations of San José's development hold false promises to honor the contributions or lived experiences of longtime San José residents. Google's imagination stands to be broadened, as the Downtown West runs a risk of being a Caltrain-accessible playground for young Google employees commuting to and from San Francisco. Of utmost importance is avoiding the challenges San Francisco and Oakland already experience. These cities face the reality of ushering in corporate development, at the expense of displacing entire communities of color who are priced out of the innovation economy.

Silicon Valley Rising compellingly weighs the promises of Downtown West plan against the affordability and accessibility concerns of longtime residents. Devised in partnership with economic consultants, Silicon Valley Rising's research-driven recommendations on affordable housing production targets and workforce training strategies to reduce the racial wealth gap are detailed and thoughtful. Coordination between economic impact and policy reports with protests and rallies position Silicon Valley Rising to draft, propose and elicit meaningful feedback on a San José-specific CBA. On paper, many of Silicon Valley Rising's major demands for sustainable development actually align with Google's objectives for Downtown West as proposed by the master plan.

It is heartening to see SV Rising's concrete, actionable steps for both Google, city council, and city agencies to take. Quantified trade offs and presented clear targets for the needed housing to offset price increase pressures from the Google Effect. Additionally, there are many partnership and collaboration opportunities for Google to explore in workforce training, inclusive hiring, and equitable procurement that relies on anchor institutions and non-profit organizations with the know-how and track record of operationalizing inclusive economic development. Silicon Valley Rising also possesses the capacity to mobilize a diverse set of constituents, ranging from nature conservationists to church goers to pack planning meetings and challenge Google during their community meetings. Their advocacy research and organizing strategy should serve as a blueprint for how community organizations can communicate impact mitigation and community needs to tech companies like Google.

The San José innovation complex provides several venues to discuss and further negotiate between business association, city government, and community organization stakeholders. Station Area Advisory Group meetings have established a precedent for encouraging local resident input. City departments can also contribute by providing department-specific recommendations for regulatory memorandums regarding projects moving through the review pipeline. At an early stage of Google's development review process, Public Works; Parks,

Recreation, and Neighborhood Services; Housing; Community Energy Department; and Environmental Services Department submitted initial comments about potential impact fees, infrastructure improvements, regulations and guidelines for Google to adhere to.

Community Benefits Agreements and value capture mechanisms are only piecemeal solutions to a more systemic problem of permitting transit-oriented development that sounds great on paper, but has the potential to harm the most vulnerable urban residents. As Silicon Valley Rising has demonstrated, there is a great need to reorient planning and policy to ensure that economic growth does not unravel the social fabric of neighboring communities.

Chapter 6: Tech Companies as Urban Citizens

Across the world, we increasingly see resistance to technology campuses and their harmful political and social footprints. Berlin's Kreuzberg neighborhood prevented Google from opening up a Berlin office. Long Island City showed Amazon its HQ2 project and subsequent gentrification pressures were not welcome. On May 5th, 2020, Sidewalk Labs CEO Dan Doctoroff announced the termination of the Toronto project. Sidewalk Labs audaciously imagined transforming 800 acres across Toronto in a thousand-page Master Innovation and Development Plan, despite being approved to develop a 12-acre site. Block Sidewalk, a coalition of Toronto residents, laid bare Sidewalk Labs' outsize ambition to transform Toronto into an *internet city* through their presence at city council meetings and coordinated media correspondence, thwarting Sidewalk in unscrupulously profiting from data privacy violations

and speculative real estate development.

In light of successful resistance to corporate campus expansion projects, we need to be honest about the dark sides of the innovation economy. Local, longtime residents residing in the backyards of these corporate campuses bear the brunt, living in the shadows of these campuses while experiencing affordability pressures and fewer opportunities to enjoy the civic commons. Instead of focusing on job growth, increased tax revenues, and fostering a healthy business climate, city governments need to be more clear-eyed about how these developments impact a city's most vulnerable residents, and what is truly at stake from an equity perspective.

Implications

Building perk-filled, playground-for-adults urban campuses greatly enhances the worth and operational efficiency of these companies, but also generates significant social costs. This thesis contributes to the realms of planning by detailing instances where urban governance, specifically in the realms of economic development, workforce opportunity, housing, and planning cannot adequately address the challenges of the innovation economy. It identifies the tireless research and organizing efforts by community organizations to offer a path forward to design more inclusive cities.

My findings show that there are immense, inextricably intertwined housing, transportation, and employment trade-offs that tech companies and their corporate campuses impose. Redeveloping, rezoning, and upzoning underdeveloped land currently favors growth interests, causing housing affordability pressures, increased traffic, and immense bottlenecks in diverse, local hiring. Technology companies present unique challenges to local economic development and local governments must be more creative with shepherding and reining in growth.

There are several implications that arise from these two case studies. Following the resistance is key. Coalitions and community organizations like Cambridge Residents Alliance and Silicon Valley Rising identify clearly articulate the trade-offs produced. Their boots-on-the-ground approach animates the concern and outrage over the injustices that the innovation complex introduces, while also providing metrics-backed solutions forward. Balancing community input and empirical evidence helps advocacy organizations make compelling recommendations that align with local government programs and even master plan objectives, which invites collaboration.

Community benefits should not be treated as an afterthought, but rather as a central aspect of master plan design, with careful consideration of plan implementation and accountability mechanisms. Reintroducing the need for public transparency in the development approval process and reasserting the right to the city will provide a code of ethics for technology companies to follow. Community Benefit Agreements and value capture mechanisms are no silver bullet for adequate protection of longtime residents' right to remain. However, proposing and negotiating community benefits initiates a conversation and broader movement to align business interests with community interests.

Looking to the Future

City skylines and corporate campuses do not have to look and feel the same. In fact, the sameness fails to capture the people, history, and culture unique to each city. If our innovation economies are not imagined to invite democratic participation, we will continue to watch the same inequality and displacement unfold in urban settings. With the support of planners and policy makers, local resistance can facilitate collaboration that makes technology and innovation work for all.

As we emerge from mourning the devastation from COVID-19, significant rebuilding will need to take place. Innovation economy "gig workers" are more vulnerable to contracting the virus. Existing divides in the social determinants of health across neighborhoods speak volumes translate to disproportionate infections and deaths in communities of color. The politics of the innovation complex manifest in the difference in risk of exposure, for example, between a ride-share driver versus an employee with the privilege of working from home. The devastating consequences of a digital divide are more evident than ever, and will continue to be compounded by economic, housing, and transportation inequality.

We are presented with an unrivalled opportunity to reassert the right to the city. Trade-offs between growth and equity should no longer be defining features of the transit villages that technology companies build. In the future, asking the question of *who governs the innovation economy* should no longer expose imbalances in power and authority, but rather speak to collaborative governance that centers inclusion in the cultivation and construction of innovation economies.

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