

**Beyond the Core:
The Role of Co-working Spaces in Local
Economic Development**

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Abstract

By 2020, the number of independent workers and freelancers are expected to comprise 40% of the working population. This subset of the economy requires different work configurations, and as a result, co-working spaces have emerged as a new office typology. While research has been conducted on the internal dynamics and impact on the worker in the new space, there has been little study into the impact of co-working spaces on the immediate community. Reports released by municipalities recognize the potential impact that co-working spaces have on economic development - however they are policy recommendations. The purpose of this paper is to expand on the relationship between co-working spaces and its surrounding community's economic development by collecting and analyzing both qualitative and quantitative data. Co-working space users will be surveyed on their perception of the surrounding neighborhood and gauge their participation in the community events while various community members and stakeholders will be interviewed about their opinions of the co-working space and any perceived changes associated with the new neighborhood fixture. Supplementing this qualitative data, demographic data and building/construction statistics will be analyzed pre and post opening of the co-working space. As co-working spaces evolve from being an office alternative outlier to viable office option, developing an understanding of co-working spaces' impact on the surrounding community is essential – integrating co-working spaces into the urban fabric. Co-working spaces have the potential to play a significant role in local economic development but there must also be community and local government communication and commitment to provide neighborhood services and amenities in order to tap into the potential of co-working spaces.

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Introduction

Wanderlust ever just strike? The desire for weekend escape with friends to the beach, only to be squashed by reality: no one has a car large enough to fit everyone, surfboards and bikes are away in storage, you broke your speakers the other day, and there are no hotels by the beach. With each realization, the trip is becoming less and less likely. That is until your friend flipped through



An example of how the shared economy is growing.

Source: PWC

his phone, “I can get a ZipCar for the weekend that can fit all of us. And I am pretty sure there is a place on AirBnB for the six of us...” With a few more minutes browsing our phones, the weekend beach trip is revived.

The shared economy is permeating all aspects of life. Multiple factors have shifted towards community-based peer-to-peer obtaining, giving, or sharing the access of goods and services: economic downturns, demographic shifts, issue awareness, sustainability, and technological advances (Albinsson and Perera 2012). While the shared economy has always existed, technology has formalized, simplified and developed it, allowing it to become widespread (PricewaterCooper 2015). This alternative approach of sharing resources is reshaping the housing, transportation, labor and finance sectors, challenging the conventional archetype. Office space is not immune to this change, as co-working spaces have become the shared economy’s iteration of the office.

Co-working emerged in 1999 as an alternative to the traditional office and by 2013 has grown to 781 locations in the United States alone (Foertsch 2015). This exponential growth reflects the increasing demand for such work spaces. Showing no signs of slowing down, the expansion of co-

working spaces indicate that this office typology is no longer a stand-alone alternative, but a viable competitive option as an office space. Co-working spaces are generally viewed favorably as many studies have found that users of co-working spaces find the internal environment supportive – enabling them to be more productive, find greater job satisfaction, and foster meaningful professional and personal relationships (Spreitzer, Bacevice & Garrett 2015). Despite co-working rising in popularity, the research has been primarily focused on the internal co-working ecosystem.

However co-working does not exist within a bubble, these changes in physical space and demographics could have positive or negative effects on the surrounding neighborhood. The overwhelming majority of current literature hails co-working for increasing density, attracting the creative class and re-purposing buildings (Gandini, 2015). This being said, research in this co-working facet is minimal and needs to be expanded upon. By understanding the co-working model holistically, within the space itself and its impact beyond the physical building, cities and municipalities will be better informed in how to hone the externalities of co-working spaces to support economic development and stability within local communities.

In order to understand co-working spaces and its impact, I will first discuss the factors that have prompted the rise of this office typology. With a background in the changing nature and perceptions of work and the workplace landscape, the current research on co-working will be presented and contextualized. With many variables in the co-working paradigm, co-working takes many forms and is constantly evolving therefore making it difficult for academic research to keep pace. Much of the existing research is focused on the internal dynamics and benefits of the co-working. While cities and municipalities support the expansion of co-working spaces, acknowledging the existing relationship between economic development and co-working spaces – there is little analytical research that verifies this correlation or the causation, (Vaccaro 2014; Arlington Future Office Market Task Force 2015; Sonoma County Economic Development Board

and Coworking Alliance of Sonoma County 2015). With many co-working spaces expanding beyond CBDs and into neighborhoods that are in transition or on the cusp, this research will focus on how co-working spaces can contribute to local economic development.

Accompanying a review of the existing literature, this research will include qualitative and quantitative data collection at various co-working sites around the metropolitan New York City area. First, the qualitative data will comprise of conversations and interviews with co-workers and space managers about their experience and interaction in the community. There will also be conversations with local community board members and local business owners about their opinion of the new neighborhood fixture and any perceived impact. Secondly, the quantitative data portion will consist of surveys about co-workers' perceptions of their work neighborhood. This will be accompanied by an analysis of building/construction developments pre and post the opening of the co-working space. Lastly, I will suggest best practice recommendations for the integration of co-working spaces to spur local economic and community development which will foster successful live-work-play neighborhoods.

Background

The workplace is changing. It has evolved, adapting to changing times and norms (Brown 2009). Demographic shifts, technological innovations, and a growing emphasis on human psychology has forced employers and employees to re-evaluate how work is perceived and its value.

The changing nature of who is an employee is a driving force in the transformation of the workplace. The workforce is primarily dominated by millennials who place a greater emphasis on work-life balance (Deal, Altman & Rodelberg 2010). Older generations viewed work as a central defining factor of their identity, whereas work is only a factor in millennials' self-identity, and are therefore more likely to switch careers for greater work satisfaction (Smith 2010). Today's workforce is opting for careers that do not force them to choose between work and their personal lives, but rather, complement one another (Gerson 2011).

Technology is the greatest driver of the changing workplace. Technological advances have facilitated the transition of the American economy from manufacturing to the service industry. Advances in computer and communication technology have revolutionized how and where work is done (U.S. Department of Commerce 1996). The ability to telecommunicate had transformed the workforce composition and culture – paving the way for remote working and providing employers with greater access to larger labor pools (SHRM Foundation 2014). There is greater fluidity in the workplace as work becomes more flexible: work is no longer confined to the traditional work day hours nor the office; greater equality and diversity in the workforce breaks away from the formal corporate hierarchy for a more relaxed and flattened structure that encourages sharing of information and communication (Brown 2009; Morgan 2013). The most

successful companies and employees are those with the agile ability to adapt to clients' needs and existing infrastructures.

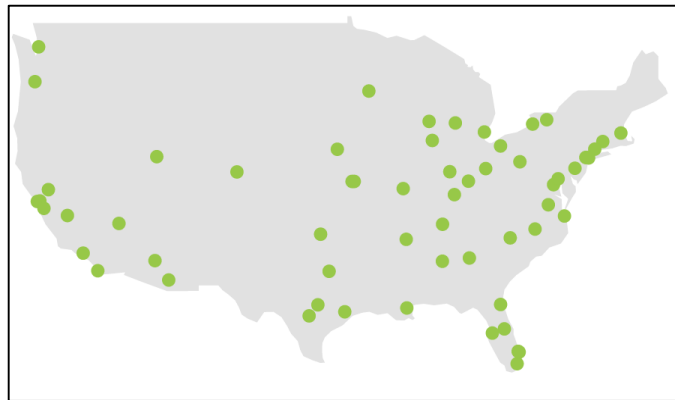
Today, more than 53 million Americans are earning income beyond the traditional confines of work, beyond the 9-to-5, beyond the cubicle. That is about a third of all workers (Horowitz 2015). Younger working populations, new technology and changing employer and employee perceptions of work are facilitating the transformation of work and the workplace. This evolution is expected to continue with The Bureau of Labor Statistics estimating that about 65 million Americans, 40% of the workforce, will be freelancers, temps, independent contractors and solopreneurs by 2020 (Henderson 2012; Lopez 2013).

A workplace model has permeated the office space real estate market is co-working spaces. Co-working spaces are defined as “workplaces diverse groups of freelancers, remote workers, and other independent professionals work together in a shared, communal setting” (Spreitzer 2015). The cubicles of yesteryear are disappearing as greater attention is given to individual and collaborative work with open floor plans and varied breakout session options.

Co-working is not just about the arrangement of a space but rather a lifestyle movement. As a new generation dominates the workforce, they bring with them new ideas and approaches to life and work. With technology freeing people from established work locations, there is a greater sense of individualism among today's workforce – there is greater autonomy and ownership of ideas and responsibilities. Yet there is also this desired sense of belonging hence the emergence of co-working spaces, as an extension of the shared economy mentality (Spreitzer, Bacevice and Garrett 2015). As a membership-based model, co-working spaces meet both lifestyle needs of the emerging workforce – flexibility, individuality, community.

With a propensity to establish themselves in dense metropolitan cities in transit-rich neighborhoods, co-working spaces have grown exponentially each year. The database, 42Floors, notes the most popular co-working space markets in the United States; San Francisco and New York are leaders in the field with over 517 and 1,817 spaces, respectively.

Most Popular Co-Working Markets in the USA in 2015



Source: 42Floors

As a relatively new concept, there are many interpretations of co-working spaces therefore it is necessary to define co-working in the scope of this research. Physically, co-working spaces are office spaces that feature a combination of shared desks, individual desks, private offices, shared offices and conference rooms. Independent individuals occupy this assortment of desk

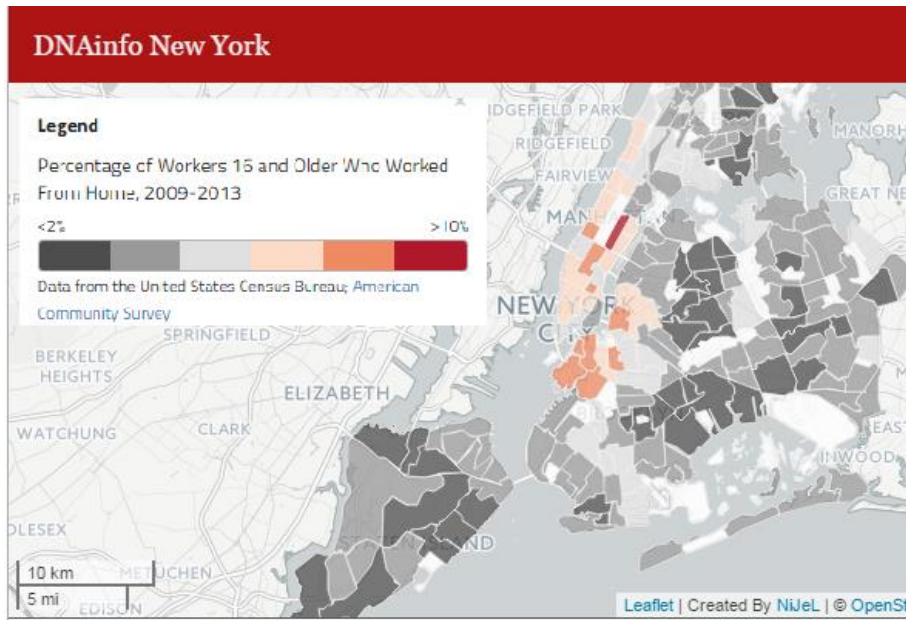


Common space in Bespoke in San Francisco.
Source: Veronica Chuah

spaces creating greater density than traditional office space. However, the most significant physical design aspect is the shared common space. This physical characteristic is crucial in the co-working paradigm as it emphasizes the social aspect of co-working spaces. Achieving a balance between openness and privacy, co-working spaces allow tenants to work independently, but at the same time, provide the opportunity to interact and collaborate with other tenants. Co-working space users tend to be college educated professionals, in their mid-20s to late-30s.

Co-working spaces are primarily home to creative industries such as technology and design (Foertsch 2010). While all co-working spaces have common areas, they are all unique – differing in interior aesthetic, reflective of the tenants, location, and degree of fostered social interactive-ness. Some examples of commons space rooms are game rooms, nap rooms, rock climbing walls, and dining rooms. Co-workings spaces function with a hybrid leasing model, offering unprecedented flexibility in the office space market with daily desk rental options along with month and year-long leases. As co-working spaces continue to grow and become a substantial part of the office market, their impact on real estate markets, along with local economic and community development must be understood.

New York City became a pioneering city of co-working. While there were “plug & play” centers in the early 1990s, where people met together and shared internet connections, the first incarnation of co-working emerged in 1999 when a software company, 42 West 24, offered flexible office space for individuals and teams that could be cancelled on short notice (Foertsch and Cagnol, 2013). The model was ideal for the fast moving pace of the tech industry of the 1990s. However, after the tech bubble burst in 2001, the company was still able to maintain desk occupancy by expanding its membership beyond the technology sector. The recovery of the first co-working space in New York City is attributed to the city’s high concentration of the creative class and the prevailing workforce preference to work independently (Center for an Urban Future, 2015; Greenstone Miller and Miller, 2012). In addition, about 10% of the working population in the metropolitan New York City area are self-employed (Florida, 2013). Below is a map indicated the percentage of workforce within each neighborhood that work from home. All of these conditions in the aggregate indicate the market gap for office space for individuals and small teams along with a sense of community (Salovaara, 2014). In the mid-2000s companies started to meet this



Percentage of workers 16 and older who worked from home
 Source: DNAINfo

market demand for shared offices spaces with a sense of community. But this new office typology didn't become mainstream until the economic crisis of 2008. The convergence of the economic crisis, countless empty office

space, workforce trends and large numbers of freelancers/startups created the perfect setting for co-working to flourish. By breaking up large office floor plates to flexible desk and office space, co-working has allowed the independent/self-employed sector to access formal offices space. In 2005, there were only a handful of co-working spaces. Today, there are 127 different co-working spaces servicing different populations and sectors in the metropolitan area, according to *New Worker Magazine*. With co-working models thriving in New York City, the city can continue to pioneer the office typology by understanding the relationship that co-working spaces and their users have with their immediate community.



List of co-working spaces
 Source: New Worker Magazine

Literature Review

The demand for co-working spaces is huge and growing. Today, about 30% of the working population are independent individuals: freelancers, temps, independent contractors and solopreneurs. This working subpopulation are the core tenants of co-working. With the heightened desire of workers to separate work and home, this subpopulation is more likely to explore co-working spaces (Arlington Future Office Market Task Force 2015; Horowitz 2015). This huge portion of the working population doesn't include another subset, employees that telecommute. Today about 25% of the workforce telecommutes (Global Workplace Analytics 2015). This means at least half the workforce could be considering a co-working place as either a primary or secondary office. By 2020, this figure is expected to comprise of at least 60% of the workforce (Global Workplace Analytics 2015; Henderson).

Co-working spaces and co-working (using said spaces) are gaining clout and garnered a great deal of academic attention, however, much of the research is focused on the internal dynamics of the physical co-working space and benefits of co-working for participants. Prior to co-working, the only feasible options for independent workers and telecommuters were working from home or working in a café/coffee shop. Both lacking a professional atmosphere, neither option were conducive to productivity due to the noise levels and potential distraction (Spinuzzi 2012; Leforestier 2009; Ross & Ressia 2015). Co-working fills that void – defined as “membership-based workspaces with diverse groups of freelancers, remote workers, and other independent professionals work together in a shared, communal setting” (Speitzer, Bacevice & Garrett 2015). Establishing themselves as an emerging anchor of a “third place” – a place outside of work and the home – co-working spaces are more than just a physical space to do work. Combating the isolation that often accompanies freelancing and independent work, co-working

spaces emphasize the importance of community, relationships and productivity (Kwiatkowski & Buczynski; Spinuzzi 2012; Moriset 2013). The careful curation of co-working space and screening of community members create a supportive internal environment that allows for clustering, uncompetitive collaboration and relationship building (Moriset 2013). For example, Bespoke is a co-working space designed specifically for retail technology based companies. The space managers screen new applicants to avoid creating an unhealthy competitive environment. Similarly, co-working giant WeWork's 60+ locations are all uniquely designed, reflective of the workers' demographics and work needs, original building layout and desired amenities. Within each site, managers' performance is based on the number of relationships they foster. Some co-working spaces recognize the importance of social interaction and collaboration, they are expanding their services and amenities: offering tailored workshops for users, fostering mentorship programs, hosting happy hours, holiday parties and networking mixers, and organizing a week of adult camp – programming that happen on and offsite. Successful co-working spaces embody this comprehensive approach in redefining the workplace to be reflective of changing work norms. Purposefully planned co-working spaces have reaped positive feedback by users, verified by research. As attitudes towards work are evolving to be more holistic and workers seek meaningful work (SHRM Foundation 2014), co-working spaces are blending the personal and professional realms as co-working space users have higher levels of self-reports professional and personal satisfaction (Speitzer, Bacevice & Garrett 2015). Co-working spaces users enjoy the social aspect, which was often lacking prior to their participation. While co-working space users are a self-selecting group, they report having greater professional satisfaction due to greater autonomy and agency in defining their work (Hamari, Sjolint, & Ukkoen 2015). The positive externalities of the personal benefits of co-working are evident in the professional sphere as the personal

relationships built in the social atmosphere evolve into professional relationships through the collaborative nature that co-working spaces encourage – creating agglomerations of interconnected and related business sector professionals co-working together, driving innovation and creativity within the field, benefiting co-working space users and their businesses (Arzaghi and Henderson 2007; Moriset 2013; International Economic Development Council; Capdevila 2015). While working alone, co-workers are still working together, harnessing their collective social capital. The breadth of research about the design of co-working spaces and its positive impact on the individual worker and the business sectors is extensive. Despite all the research on the effects of co-working on the internal community, there is little exploration into the greater impact and effect of co-working spaces beyond their physical structures and on their surrounding neighborhood. Academics, planners and local governments are struggling to keep pace with the expansion of co-working spaces.

Thus far, local governments are the leaders in exploring the relationship that co-working spaces have with their surrounding community. Based on basic planning principals, municipalities through the country are generally in favor for co-working spaces due to their potential ability to contribute to local economic development: increasing density, attracting highly skilled workforce, utilizing and repurposing alternative/Class B office space (Sonoma County Economic Development Board and Coworking Alliance of Sonoma County 2015; Arlington Future Office Market Task Force 2015). Municipalities of all sizes throughout the country are offering resources for co-working spaces such as creating co-working spaces (directly and indirectly), compiling current available co-working spaces for the public and the forming of task forces to better understand the concept and practice of co-working: Sonoma, Los Angeles (CA), Asotin,

Columbia, Whitman (WA), Montgomery, Arlington, Hanover (VA), Steuben (IN), Pinellas (FL), La Plata, Denver (CO), Evansville (IL), New York City (NY), Madison (WI).

While local governments recognize the opportunity that co-working spaces present for economic development, they also acknowledge that the space itself cannot and will not be the only driver of local economic development. Municipality task forces around the country are developing recommendations to harness the potential transformative power of co-working spaces: diversifying building and office stock, ensuring varied street-level activity, and leveraging public transportation networks. However, in order to better understand the full effects of co-working spaces, drawing on existing research is necessary. The literature draws parallels between the rise of co-working spaces and the creative class (Ericson 2015; Florida 2002; Moriset 2013). While the creative class referred to artists and writers in the past, in the post-industrial economy the creative class has expanded to include programmers, designers and information workers. Ultimately, the creative class are knowledge-based professionals that innovate, create, and problem solve (Florida 2012). This is manifested in today's average co-worker – a college educated professional within their mid-twenties and their late-thirties, “primarily working within the creative industries, such as web developing, graphic design and programing, or new media” (Foertsch 2015). The two groups share near identical core values of individuality, meritocracy, collaboration, diversity and openness. On the same note, the creative class has been a proponent of loosening work norms, pushing for flexible schedules, relaxed dress code, greater autonomy, and more open office layouts – a few of the defining of co-working (Florida 2002; Golinski and Mosebach 2010; Spreitzer, Bacevice and Garrett 2015). Given the similarities between co-workers and creative class, exploring the research about the creative class' lifestyle preferences and drivers can provide insight on co-workers. The creative class is attracted to high quality amenities and experiences, a driving factor in their

lifestyle preferences. They enjoy stimulating environments that will encourage their own creativity: a diverse educated and talented population, walkable and transit-oriented cities, areas with a vibrant cultural scene, communities with varied multi-use street-level activities (Florida 2002, 2004).

The places that the creative class desire to live are the definition live-work-play communities – dense, diverse, connected places that support mixed-use and offer amenities, allowing community members to live, work and play locally (Malizia 2015; King et al. 2010). Diversity is key in achieving LWP places, permeating all aspects of the community: the people, the buildings, and the uses. The LWP concept encompasses mixed-use developments meet the basic requirements of “affordable and accessible housing, transport, healthcare, education and training, leisure and recreation facilities, other public amenities, and opportunities for social interaction” (Insch and Florek, 2008). Interactions and the atmosphere brand a community, making local stakeholders its ambassadors. Therefore, when stakeholders are satisfied, they relay a positive image of the area. When community members can live, work, and play in the same area, there is a greater sense of community.

Further refining the concept is the innovation district model which emphasizes economic development, placemaking and networking. Innovation districts require the convergence of social and monetary capital, infrastructure along with spaces in the public and private realms that encourage interaction, and relationships among community members and institutions (Katz and Wagner 2014). The success of innovation districts pivot upon compactness of all services and amenities – walkability and transit options are essential. Proximity fosters interaction leading to civic engagement and increased economic activity which cultivates a sense of community coupled with the desire to engaging with neighborhood – creating a cyclic effect (Hracs and Massam 2008).

In addition to creating a sense of community, the LWP model diversifies the uses within a neighborhood, driving local economic development. In homogenous communities, single use developments bring a predetermined amount of residents and create a set number of jobs. These neighborhoods are active only during work hours or home hours in the evening. But in a LWP area, the conglomeration of the different uses serves as its own economic engine. The neighborhood is activated – not limited to work or home hours – becoming a round-the-clock multi-use neighborhood. With growing community needs, new jobs are created; new jobs draw new residents; new residents will further grow community needs. In the LWP model, the sum is greater than its parts.

Sharing the similar goals of community building it is intuitive that co-working and LWP places would go hand in hand. Both are dependent on the conglomeration and interaction of varied types of people to be successful. With the co-working population primarily consisting of the creative class, there is a natural draw to LWP places. Whereas LWP places want to incorporate co-working spaces due to the clout that comes with them – it is a new buzzword that is often used in branding and marketing (Gandini, 2015). Co-working spaces serve as an essential third place in communities – they serve as a place for people to work that is outside of home and the traditional constraints of the office typology. By incorporation a co-working facility, LWP communities have provided an affordable venue for at-home workers and potential start-ups to be visible and more opportunities to interact with the surrounding neighborhood. With both programs are dependent on density and interaction, the collaboration of the two is only natural to drive local economic development.

While prior literature provides insight on the creative class' lifestyle and work preferences along with the economic potential of the places that attract the creative class, they are explored

separate from each other. The goal of this paper is to bridge the literature, specific to co-working space users' work and lifestyle preferences can be leveraged to economic development for urban planning applications.

Research Methodology

As co-working spaces continue to expand, they are venturing beyond CBDs and into surrounding communities. Many of these areas outside of the CBD are in transition or on the cusp, therefore co-working spaces establishing themselves in these locations may have the potential to impact the type and pace of change in the neighborhood. In order to understand the big picture and nuances of co-workings spaces' impact, a case study research design with both qualitative and quantitative methods was utilized for this research – focusing on economic and community development indicators.

Case Selection

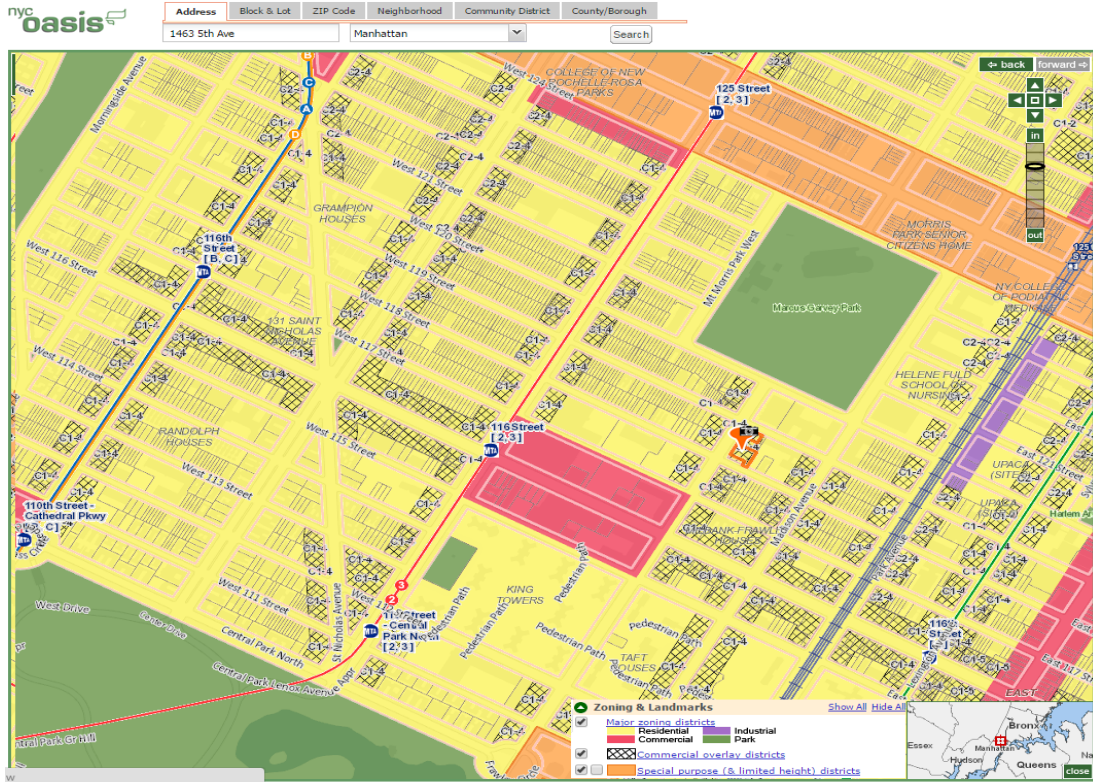
The criteria for determining the population were:

- Location – beyond the Manhattan CBDs but within the metropolitan NYC area. Within the CBD, the sense of community is already established – diversified and already economic hubs. The Manhattan core has no issues attracting employers, workers, or local spending. When co-working spaces establish themselves within the core, they introduce little impact to such an established area. However outside of the Manhattan core, neighborhoods are beginning to diversify and rebrand themselves to strengthen their community and spur economic development. It is in these communities that co-working spaces have the greatest potential impact since they attract a new population and new use, creating a new urban fabric.
- Definition – the co-working space must have a social and collaborative aspect within the internal environment. Using these parameters, 42Floors and Google were used to filter through existing co-working spaces in the metropolitan area. This narrowed the study population to 33 co-working spaces.

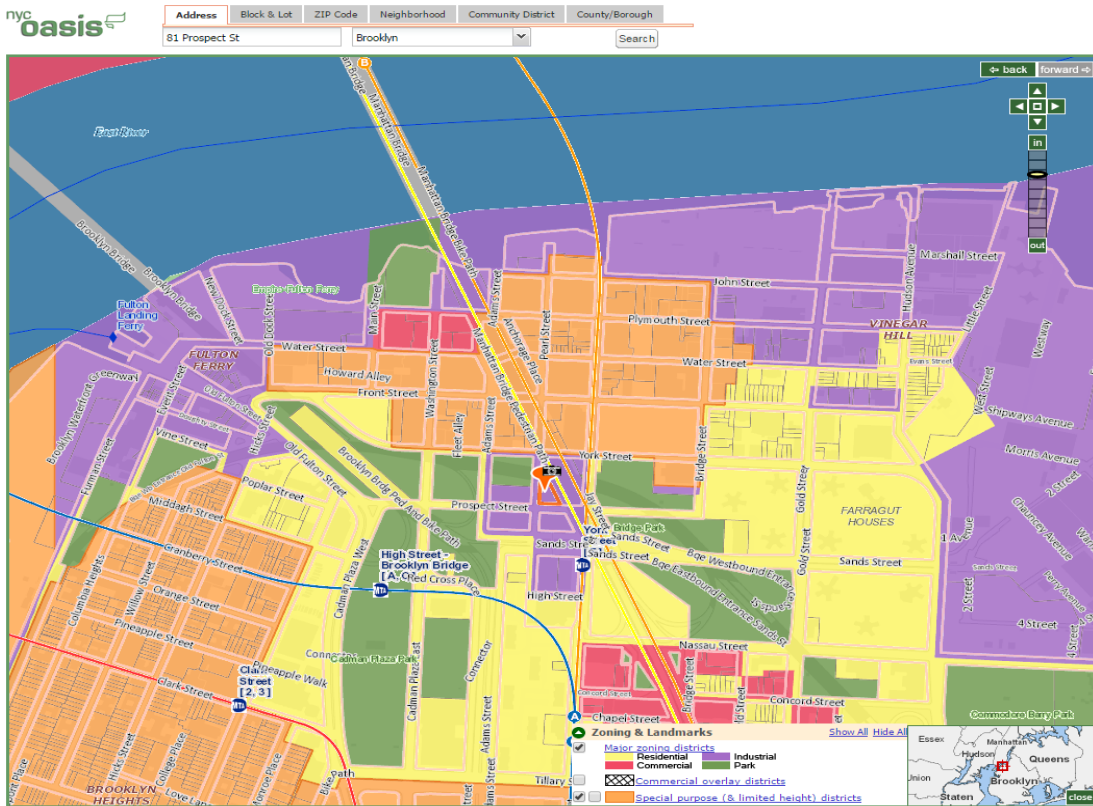
Since the start of the research on September 2015, this number has grown. Of the established population, locations were selected randomly to be included in the research. However, some co-working spaces were unresponsive or reluctant to partake, consequently, another site was selected randomly from the remaining population until 2 co-working spaces that fit the above criteria agreed to participate. The 2 sites ultimately part of the case study analysis were WeWork in Dumbo and TEEM Coworking in Central Harlem (near Fredrick Douglas Blvd). Both of these neighborhoods have recently been rezoned by the Department of City Planning rezoning, in 2009 and 2003, respectively. Dumbo, a formerly manufacturing district, was rezoned with the goals of promoting mixed-use development through increasing density and residential stock while maintaining the unique commercial aspect of the urban fabric.¹ Meanwhile the goals of the rezoning of Fredrick Douglas Blvd in Central Harlem were to foster new opportunities for residential development and encourage ground floor retail and service uses.² WeWork lies within a rezoned Dumbo area while TEEM is on the peripheral of the Central Harlem rezoning. Both neighborhoods' rezoning reflects the city's effort to spur growth and community development. The major difference in the rezoning of the two neighborhoods is the emphasis on residential growth in Central Harlem. The different zoning provides an opportunity to observe how well the co-working spaces have integrated with neighborhoods with different development goals.

¹ <http://www.nyc.gov/html/dcp/html/dumbo/dumbo3.shtml>

² <http://www.nyc.gov/html/dcp/html/fdb/fdb1.shtml>



TEEM Coworking is located in Central/East Harlem, areas that have been recently rezoned to support residential development.
Source: OASIS NYC



WeWork Dumbo is located in Dumbo which has been recently rezoned for greater mixed-use developments.
Source: OASIS NYC

While WeWork Dumbo and TEEM are relatively new – opening in 2015 and 2014, their operating model and scale are the major differentiating factors. WeWork in Dumbo is one of the locations that WeWork offers. The company is the largest co-working provider in the world with over 54 locations and over 15,000 member-users globally (Torrance, 2015). WeWork’s model is to design and build a physical and virtual community through the common space in their locations and on their members-only social networking site. The online platform allows members from all the different and specific WeWork locations to connect. There are weekly workshops and networking events are geared towards the population of each site along with regional social events. The WeWork Dumbo location spans two formerly manufacturing buildings, totaling 162,000 square feet -which could accommodate up to 800 members. At the time of the data collection, WeWork Dumbo has been functioning for 6 months and still renovating the second building in its complex – therefore not occupied to capacity but membership is growing. The space is managed by a team of 10 WeWork employees. Monthly memberships at WeWork Dumbo range from \$500 - \$800, depending on the type of desk and office space. WeWork Dumbo is staffed during typical business hours 8am to 6pm on weekdays with security at the front desk 24hours however members have access to the building 24/7 with their access card. On the other end of the spectrum is TEEM Coworking, a co-working space based in one location – the ground floor of a residential building totaling about 13,000 square feet. In addition to being a co-working space, TEEM offers its venue for private events. The space can accommodate up to 100 people, however on a typical day about 30 members use the space. Membership packages range from \$200 - \$400 depending on access and type of desk space. Without the same economies of scale of WeWork, TEEM doesn’t have much of a digital

presence but still offer monthly workshops/webinars. The space is owner managed. Access to the TEEM space is limited to typical office hours – 8am to 6pm on weekdays. The range between WeWork Dumbo and TEEM Coworking will offer greater insight in the case study analyses – bringing to light similar successes/issues and scale/model specific matters.

Data Collection

As a case study, several forms of data collection were utilized for each of the sites and their immediate community. A combination of surveys, observations and conversations with co-working space users/managers comprise the qualitative component of this research's data. In addition, pre-collected data about each of the co-working spaces' community was analyzed pre and post the installation of the new office space. Data was retrieved from the American Community Survey and the Census to determine whether there have been any changes in the composition and demographics of residents and employment details. I also examined Department of Building issued permits for each of the neighborhoods to evaluate the state of the real estate market and note any change since the area rezoning and the introduction of co-working spaces.

A. Surveys

The survey was designed to gauge co-working space users' perceptions and level of interaction and civic engagement with the surrounding area. In addition, the survey collected participants' basic demographic data employment status, home neighborhood, commute pattern, why they selected their particular co-working location, perception of community amenities, along with least and favorite aspects of the neighborhood. The purpose of the survey was to indicate how invested co-

working space users are in the community and the likelihood of them remaining in the area. Surveys at both sites were collected throughout the month of January 2016.

At WeWork Dumbo, surveys were distributed in two different methods – digitally and physically. Utilizing the social platform, I posted twice a week to the Dumbo location site, inviting members to take the survey. In addition, the study was featured as part of one the building-specific weekly events – "Coworking Space Surveys and Cookies with Veronica." A station was set up by the elevator bank in the lobby during lunch hours so people were able to take the survey while they waited for the elevator – there was also an option for members to return the survey later during the day. These two approaches maximized exposure of the study to the building population, capturing the highest response rate possible. A month of survey collection efforts resulted in 24 responses – 8 digitally and 16 physically.

At TEEM, surveys were distributed physically. At the beginning of the month, I presented my research to the members, answering questions they had. A survey station was established in the communal kitchen area with signage about my study, survey and my contact information for any further questions. Surveys were collected daily by the owner-manager and stored until I came by weekly to pick them up. A total of 16 surveys were collected.

Regarding the surveys, a low response rate could be reflective of the month of survey collection – January. It is after the holiday season and there were several snow storms, including a near-record breaking snowfall, along with a 3-day weekend that might have resulted in fewer than expected people to commute to their respective co-working spaces. While both sites offer daily use of the space,

the main focus is on monthly members. That being said, TEEM is part of a co-working space membership program, Croissant. This program grants users access to 23 co-working locations throughout the 5 boroughs. This could have effected survey responses since it could change the consistency of members with more day-users rather than month long members.

At the end of the survey collection period, all the physical and digital responses were compiled together to allow for easy analysis. Data was analyzed site specific and as an aggregate for a small and big picture view of users' perceptions and interactions with their respective neighborhoods. A copy of the survey can be viewed in Appendix A.

B. Observations & Conversations

During the month of January, I was a participatory observer at the co-working spaces. At WeWork, the only way to access the members for them to take the survey was to be part of the network, therefore I worked out of the space part-time (1 day a week) for the data collection month. During my time there, I had the opportunity to speak other members and WeWork managers about their experience and perception of the space. TEEM, on the other hand, was more relaxed about the access to its members for survey collection and didn't require membership. However, I still had the chance to interact with the members and owner-manager during my weekly survey collection. At both locations I was also able to note members' level of interaction with the community and compare it to survey responses. Beyond human observations, I also explored each of the co-working spaces' neighborhood to contextualize the survey responses – noting the

type/state/extent of amenities, open space, food options, public safety features, and publicized opportunities to be involved in the community.

C. Pre-Collected Data

To triangulate the survey and observations, secondary statistical data about each of the co-working spaces' community is necessary. The original intent was to analyze the community pre and post the installation of the new office space along with pre and post rezoning. Community demographic data was retrieved from the American Community Survey the Census: age, gender, race/ethnicity, household income, educational attainment, and travel characteristics of the working population. The scope of the community for each of the selected co-working space were the census tract – WeWork Dumbo is within census tract 21 in Kings county and TEEM is within census tract 184 in New York county. Due to the time that the ACS takes collect and release data, the most current community data available is for 2014. With both co-working sites being so new, this 2014 data predates the opening of WeWork Dumbo (2015) and is the same year that TEEM was established, therefore will not provide comprehensive insight on any potential impact that each co-working space has had on the neighborhood. However, the Dumbo area is already rich with multiple co-working spaces that predate 2014 therefore the community information for the year is still applicable to the context of this study. In Central Harlem, the 2014 data will provide a snapshot of the community at the time of TEEM's founding which should reflect the intended clientele. For the pre establishment of the co-working spaces comparison, 2010

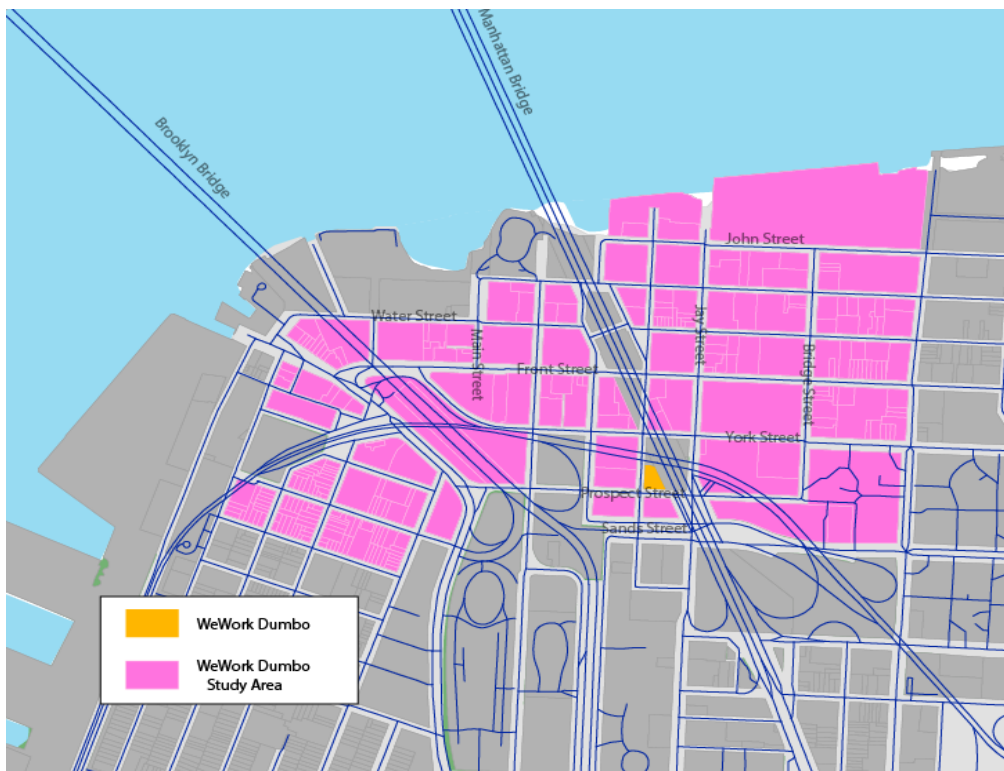
ACS data was used. The pre-zoning year for analysis for both neighborhoods was 2000 Census data.

Furthermore, Department of Building issued permits for each of the neighborhoods to evaluate the state of the real estate market and note any change since the area rezoning and the introduction of co-working spaces. To better understand the micro-market immediately around the co-working space, the study area for this portion of the research is the area immediately by the site within the rezoned area. This encompasses 35 blocks around TEEM and 40 blocks around WeWork Dumbo. The Dumbo study area includes more blocks since there were several blocks in the immediate vicinity that are dedicated to city infrastructure and bridge support. The Department of Building publishes monthly statistical reports with all issued permits for work within the city. Analysis of the volume and type of work permits for the different use type of buildings over time will shed light on the state of the real estate market and any changes since each area’s rezoning and how the establishment of the co-working sites fit into the market.

Blocks within the Study Area of each Co-working Space	
WeWork Dumbo	TEEM Coworking
1, 3, 18, 19, 20, 21, 27, 28, 29, 30, 31, 32, 35, 36, 37, 38, 40, 41, 42, 45, 51, 52, 53, 54, 55, 63, 66, 68, 76, 77, 201, 202, 204, 207, 210, 211, 212, 214, 215, 216	1594, 1595, 1596, 1599, 1600, 1601, 1717, 1718, 1820, 1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830, 1831, 1846, 1847, 1848, 1849, 1901, 1902, 1903, 1904, 1922, 1923, 1924, 1925, 1943, 1944, 1945



TEEM Coworking Study Area in Central Harlem
 Source: ZOLA NYC



WeWork Dumbo Study Area in Dumbo
 Source: ZOLA NYC

However, they only have data available dating back to 2003 which is after the 2002 rezoning of Central Harlem, therefore the neighborhood building permit analysis for the around TEEM will be limited to the time immediately after its rezoning rather than before. While all permits issued were reviewed there was special focus on earthwork and foundation permits since it is substantial work that indicates the conversion of a building’s use, along with new building permits. This dataset will reflect what developers and property owners perceive as the best and highest use of their assets and whether compatible with the city’s rezoning goals.

A case study of WeWork Dumbo and TEEM Coworking provides a comprehensive understanding of the sites and their surrounding neighborhoods. Qualitative data from surveys and conversations offer a human aspect as users share their experiences in the neighborhood while the quantitative data from the ACS, Census and DOB reflect whether the market has responded at all to the rezoning.

Summary of Subject Sites	
WeWork Dumbo	TEEM Coworking
Within the 2009 Dumbo rezoning, promoting mixed use development in a formerly manufacturing area.	Neighboring the 2003 Central Harlem rezoning which was aimed at fostering residential growth.
Part of a large co-working company that has locations across the globe. A 2-building complex that can support 800 member-users at capacity.	Single location co-working company that can support about 100 members at capacity.
Weekly workshops and social networking events specific to each location. In addition, WeWork hosts regional and national events for members throughout the year.	Monthly workshops/webinars for users

Summary of Data		
	WeWork Dumbo	TEEM Coworking
Survey Count	24	13
Census Tract for Community Demographic Analysis	Kings 21	New York 184
Community Demographic Data Sources	Prezoning - 2000 Census Pre Co-Working Space – 2010 ACS Snapshot when Co-Working Spaces Established – 2014 ACS	
DOB Issued Permits Study Area Blocks	40	35
DOB Issued Permits Study Area Time Frame	January 2007 to October 2015	January 2003 to October 2015

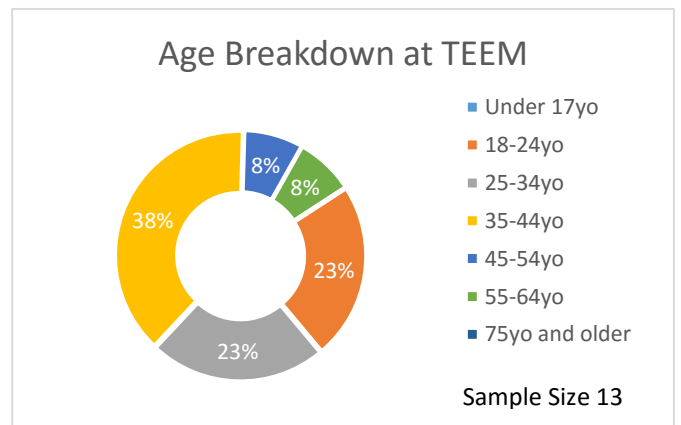
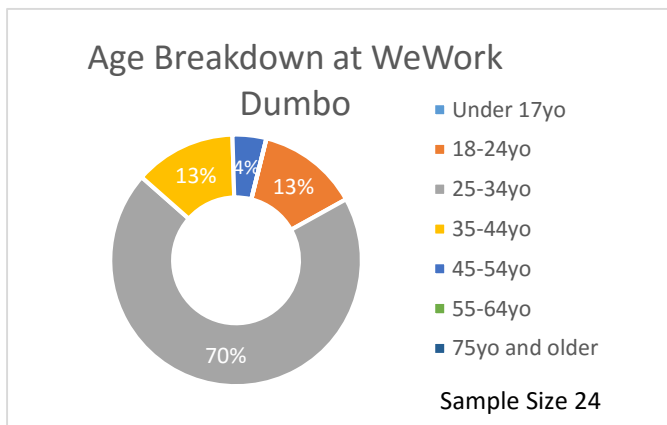
Results

A. Surveys

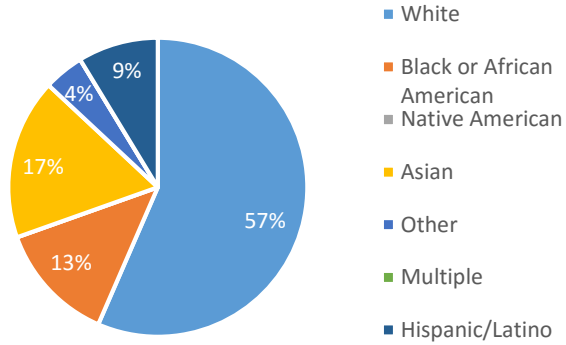
There were a total of 36 completed surveys from both sites – 23 from WeWork Dumbo and 13 from TEEM. Given the recent openings of both the spaces, the timing of survey collection, the weather conditions and the continued membership lease-up efforts, the survey results are representative of the population within each respective space.

Demographics

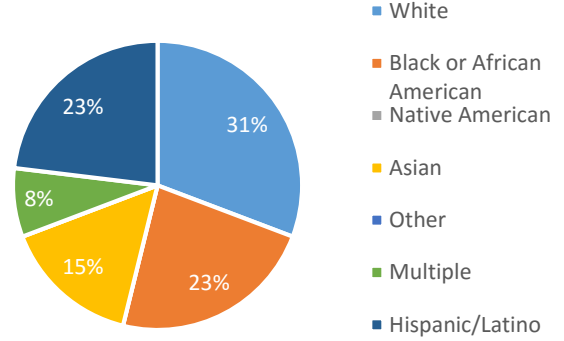
While both sites are co-working sites, their member-users vary greatly. The results of DeskMag’s “1st Coworking Survey” as a benchmark to compare the demographics of the WeWork Dumbo and TEEM’s users. DeskMag (2013) found that the most coworkers in the United States tend to be young and male; primarily ranging between their mid-twenties to late-thirties and the male to female ratio is 2:1. While the average age of coworking space users is relatively low, their educational attainment is high with 75% of member-users having completed at least a bachelor’s degree. WeWork Dumbo is on par with DeskMag’s profile: 70% of the sample lie within the 25-34-year-old age group, 57% are male, 92% have completed at least a Bachelor’s degree and 43% have a graduate or professional degree with average income hovering \$99,000. The majority of the WeWork Dumbo population is White (57%), followed by 17% of the population being Asian and 13% being Black/African American.



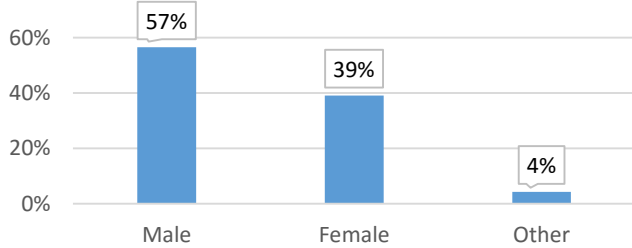
Race & Ethnicity at WeWork Dumbo



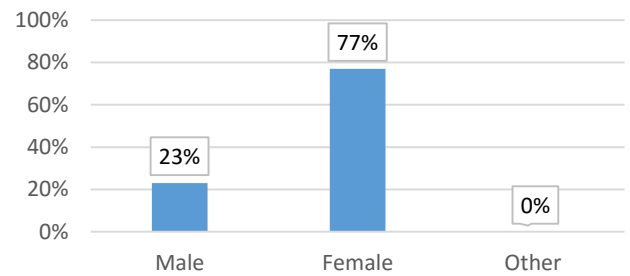
Race & Ethnicity at TEEM



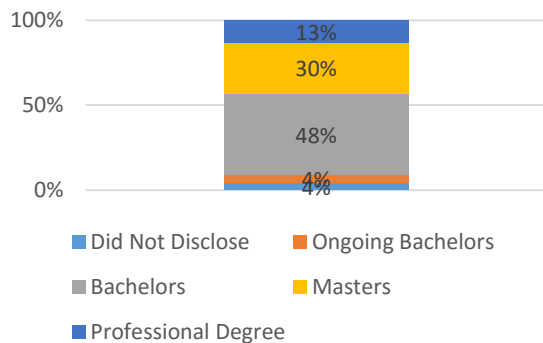
Gender Breakdown at WeWork Dumbo



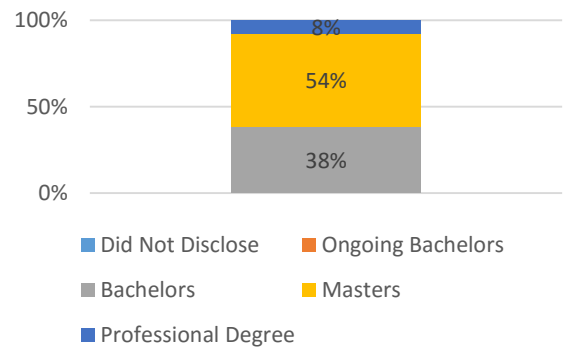
Gender Breakdown at TEEM



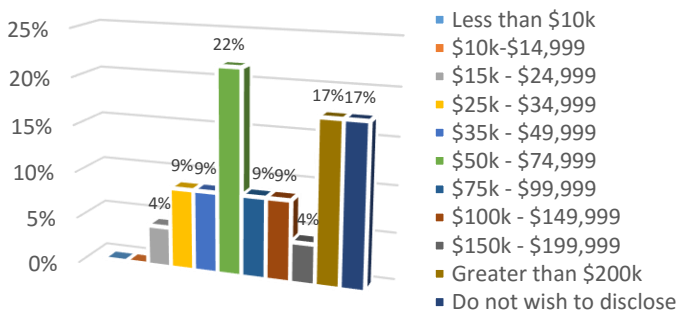
Educational Attainment at WeWork Dumbo



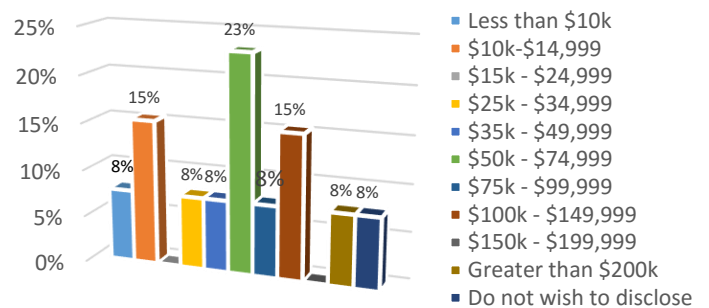
Educational Attainment at TEEM



Annual Incomes at WeWork Dumbo



Annual Incomes at TEEM

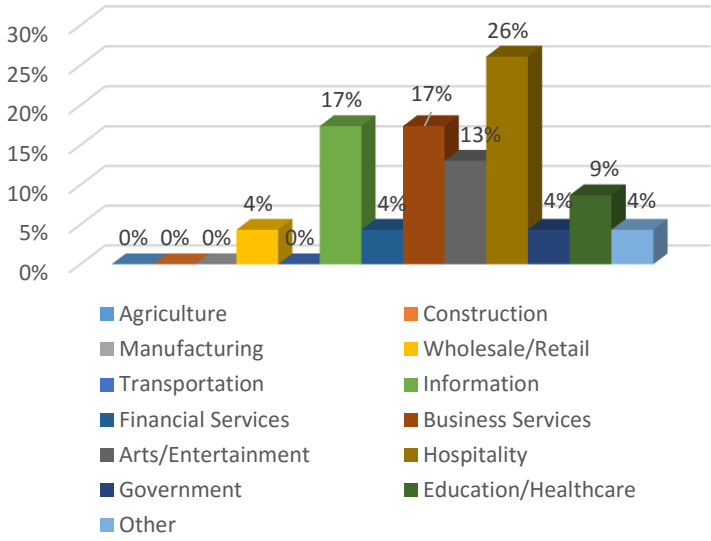


TEEM, on the other hand, diverges from the profile that DeskMag compiled from its survey. The age composition is a bit more diverse and skew to a slightly older cohort, with the largest age group being the 35 to 44 year olds. TEEM's population is overwhelmingly comprised of females – 77%. Race and ethnic composition of TEEM's population is extremely diverse – split fairly evenly among the different groups. In terms of educational attainment, TEEM users have higher levels of education than their WeWork Dumbo and DeskMag (2013) profiled counterparts with 62% of users having a graduate or professional degree. Average incomes hover around \$70,000.

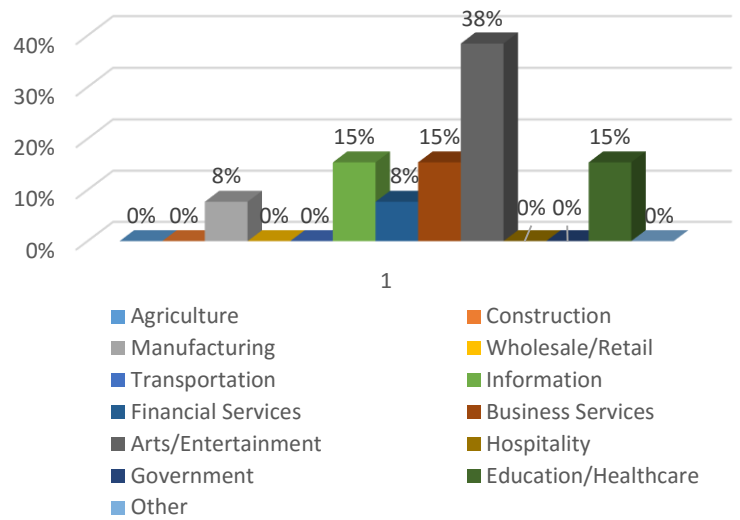
Employment Status

The popular belief about co-working space users is that they are primarily freelancers or self-employed individuals. However, DeskMag (2013) found that to be a misconception – since only 44% fall within those categories while the other 55% own or work for a company with other employees. The population at WeWork Dumbo confirm these findings with 61% of the population a contracted employee while 46% of the TEEM population is comprised of self-employed individuals. There is also a trend that co-working space users work primarily in the arts, media, and technology sectors. While there is strong representation among these sectors – 30%, business services and hospitality were the leaders at this location at 43%. TEEM is more align with the DeskMag profile with 38% of the population working in the arts/entertainment sector and another 13% in the information field.

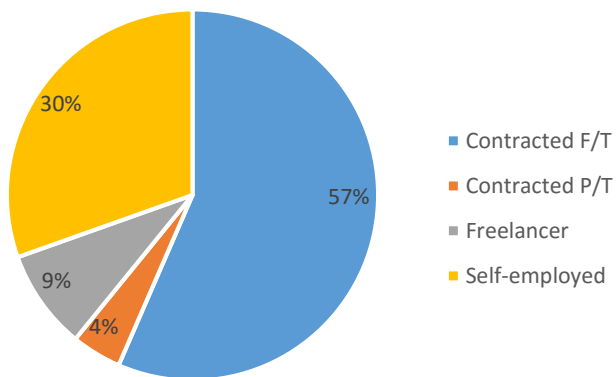
Industry Sectors within WeWork Dumbo



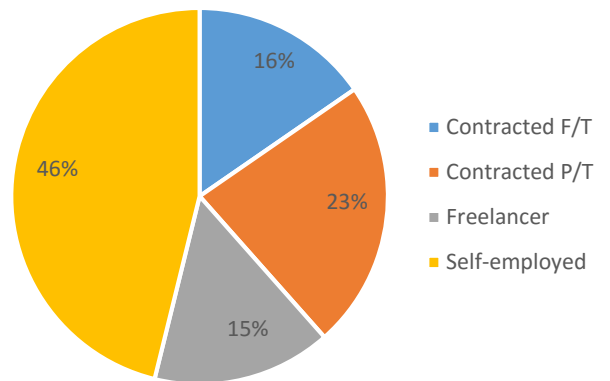
Industry Sectors within TEEM



Employment Status at WeWork Dumbo

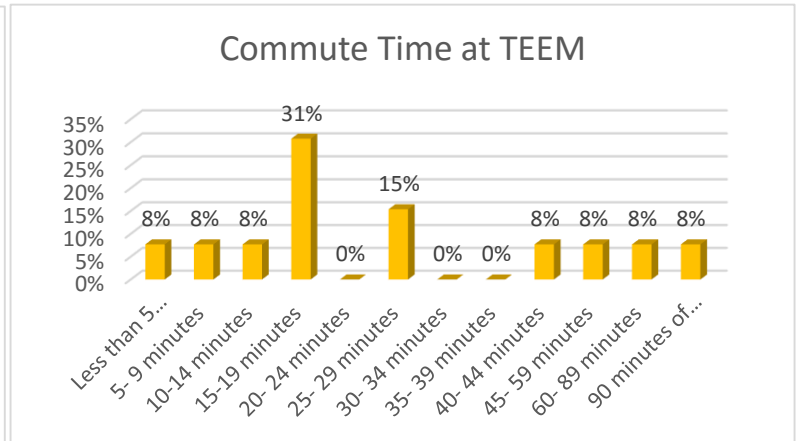
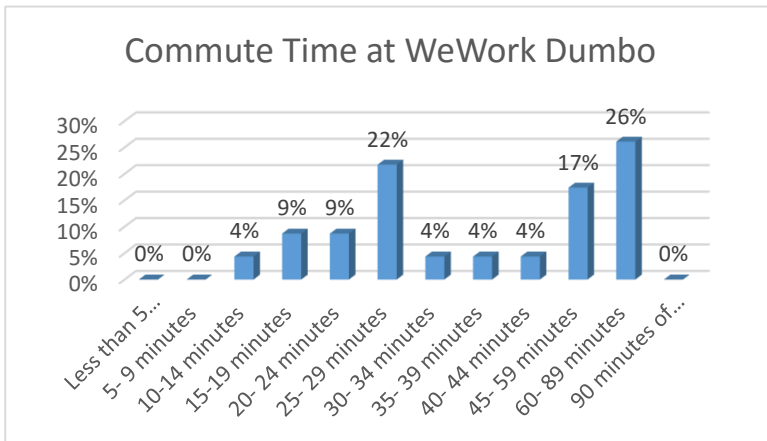


Employment Status at TEEM

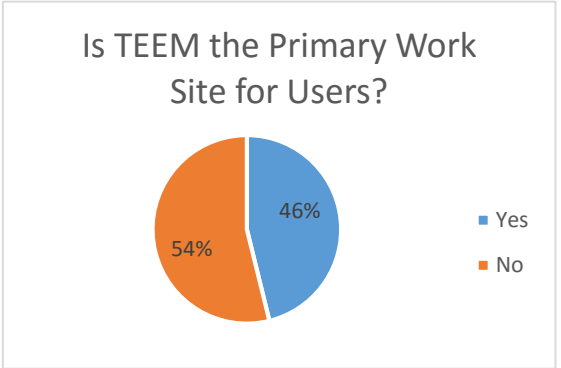
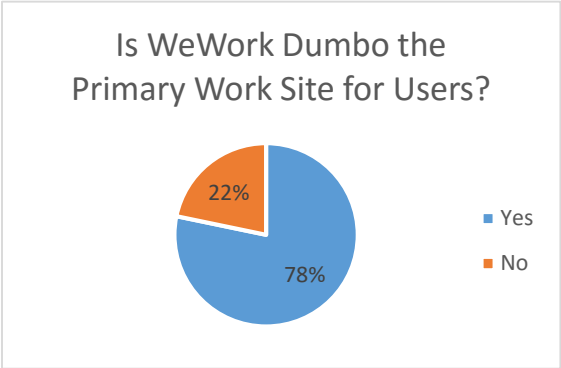


Live Work Play Factors or Indicators

One of the defining features of a LWP neighborhood is the proximity and accessibility of activities, amenities, recreation, and employment to home. Commute time to each co-working space is an indicator of whether or not co-workers view the work neighborhood is a multifunctional use community. The most common commute time for both members at TEEM and WeWork is 15-19 minutes, 31% and 22% respectively. The WeWork Dumbo population tend to have longer commute times with 55% having commute times greater than half an hour each way and 26% actually traveling more an hour each day. Commute times of TEEM members are more equally distributed with travel times ranging from less than 5 minutes to more than 90 minutes.

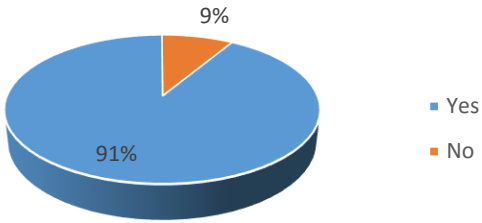


There are many other indicators that would identify whether a community is a LWP place or not. The amount of time and involvement that co-working space users spend in the area along with perceptions and interactions with the immediate neighborhood. At WeWork Dumbo, 78% of the population used the space as their primary work site compared to the 46% of the TEEM population.

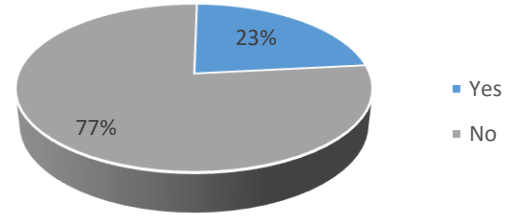


The overwhelming majority of co-workers at both sites are not involved in a local community organization, 91% are WeWork Dumbo and 11% of TEEM do not engage with local organizations. This lack of community engagement is attributed to time constraints. At WeWork, 37% of respondents did not feel they had the time to volunteer with local groups, compared with 50% of TEEM members. At WeWork Dumbo, reasons that co-workers are not involved in local organizations varied: organization-centric issues (unknown opportunities, not aligned with their interest, etc) at 23%; no desire to engage, accessibility to local groups and other each represented 13% of the population. Among the WeWork Dumbo population, there didn't seem to be strong desire to be involved or seek out opportunities to engage. Conversely, the TEEM population's reasoning for their lack of involvement is more optimistic with 30% writing in their reasoning in the other category: involved in a neighboring community where her children attend school; new to community and still learning about the available opportunities; one person was inspired by the survey and wrote that they will look into it now. The remainder of the population pointed to organization-centric issues, 15%, while 5% aren't involved because of accessibility issues.

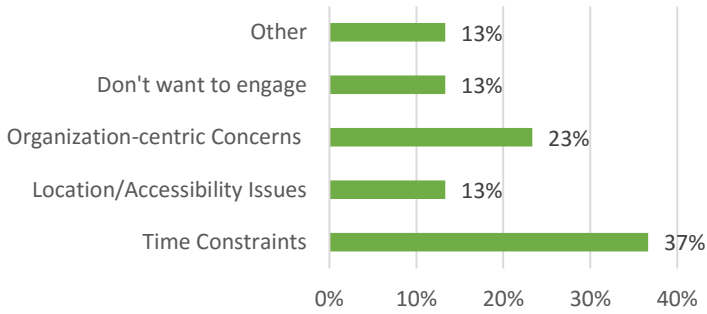
Are WeWork Dumbo users involved in a community organization?



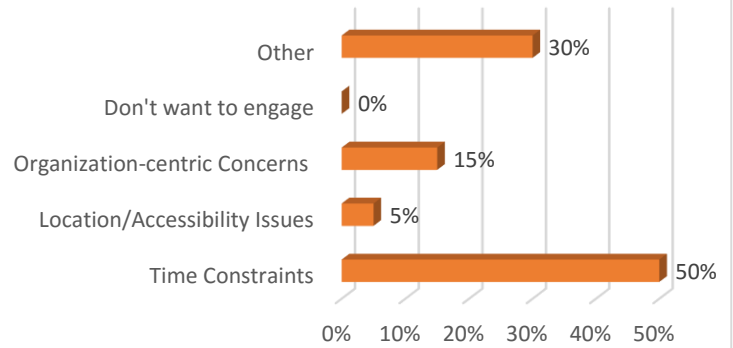
Are TEEM users involved in a community organization?



Factors Affecting Lack of Community Organization Involvement at WeWork Dumbo

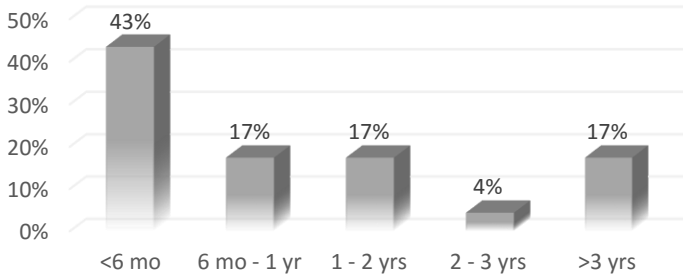


Factors Affecting Lack of Community Organization Involvement at TEEM

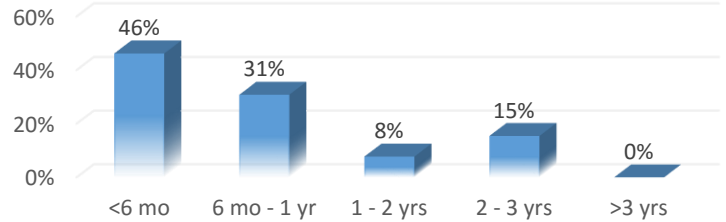


When asked how long members expected to continue staying at their respective co-working space, over 50% at both WeWork Dumbo and TEEM anticipated staying for less than a year – 60% and 77% respectively. WeWork Dumbo members are more likely to stay at the site for longer periods of time with 21% expecting to work out of the Dumbo location for at least the next 2 years while only 15% at TEEM co-workers had the same expectation.

USERS' EXPECTATION TO CONTINUE AT WEWORK DUMBO

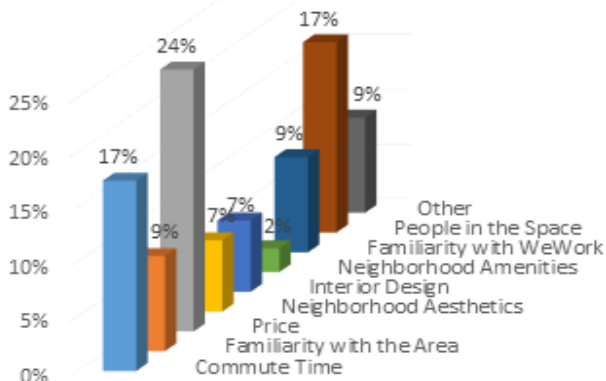


USERS' EXPECTATION TO CONTINUE AT TEEM

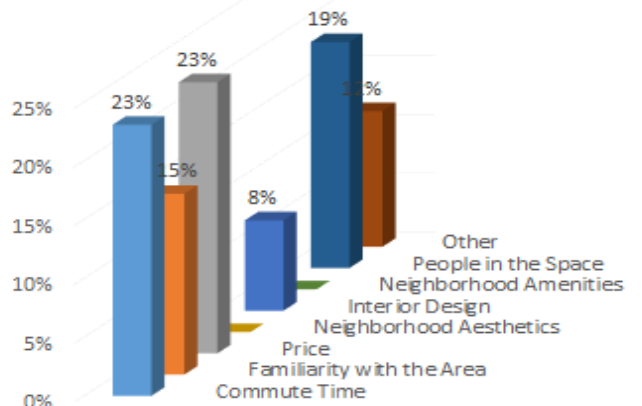


The factors that draw people to the community are important. The survey sought to determine the aspects that drew co-workers to the co-working space and the neighborhood. The most influential factors among populations at WeWork Dumbo and TEEM were price (24% and 23%) and commute times (17% and 23%), followed by the people within the space (17% and 19%) and the familiarity/preference for the particular neighborhood (18% and 23%). Specific to WeWork Dumbo, the WeWork brand attracted a significant amount of the population – 16%. The WeWork brand is built on flexibility and collaboration – encapsulating the creative class mentality. The company’s tagline is “Do what you Love,” reinforcing the new wave of the changing nature and approach to work. As an innovator that embraced new ideas and trends, there is a certain amount of “coolness” factor that the WeWork has.

Appeal of WeWork Dumbo to Members



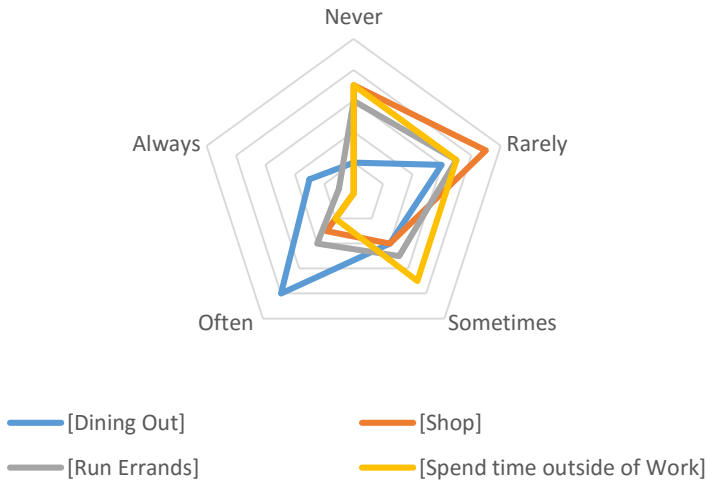
Appeal of TEEM to Members



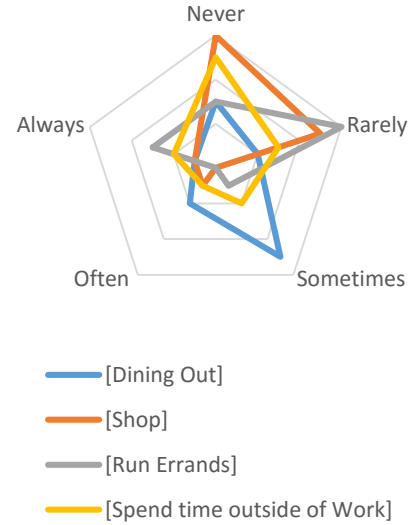
Neighborhood interactions, engagement and perception are also indicators LWP places and how co-working spaces are impacting the local community. Overall, TEEM members do not feel as though they are integrated with the Central Harlem community. Their responses to how well they knew the neighborhood, how safe they felt, and how satisfied they were with the community were overwhelmingly “not at all,” “slightly,” and “moderately.” This is in line with their self-reported interactions with Central Harlem. Almost all of reported to “never” or “rarely” shopping or spending time in the area outside of work. TEEM members reported to dining out in the area sometimes. The only dividing activity in the area was running errands; there were two groups, those that “rarely” and “always” did so. These responses don’t really align with the perceived amenities in the area. It seemed as though the majority of the TEEM population believed there to be “the right amount” of convenience stores, parks, and retail options. However the largest market in the neighborhood according to TEEM members were restaurant and food options, though retail options could also be increased. WeWork Dumbo members reported having a different experience in Dumbo. While they feel extremely safe and moderately to extremely satisfied working in the community, they admitted that they do not feel as though they know or integrated with the Dumbo area. This is aligned with their self-reported interactions with the community with the more than 90% of the respondents never, rarely, or sometimes shop, run errands or hang out in the Dumbo area. The only interaction that most have with the community is dining out, where almost everyone responded that they do so often. These responses are aligned with the perception of neighborhood amenities. Across the board, WeWork Dumbo members believed there to be too few restaurants/dining options, convenience stores and retail

options. Their population is split between having too few or just the right amount of park space.

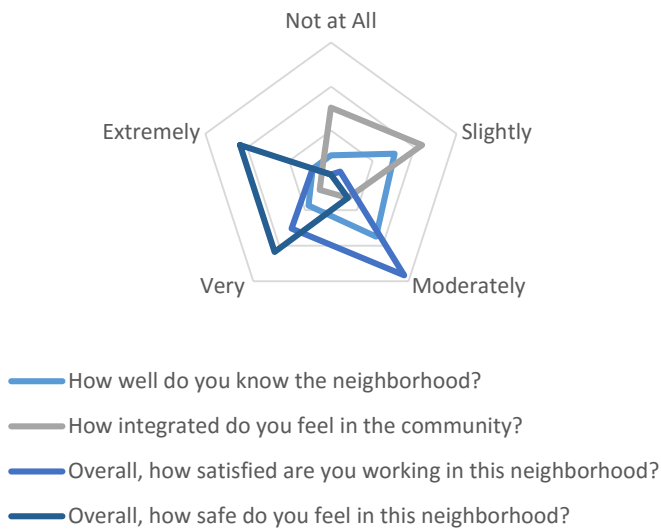
WeWork Dumbo Neighborhood Interactions



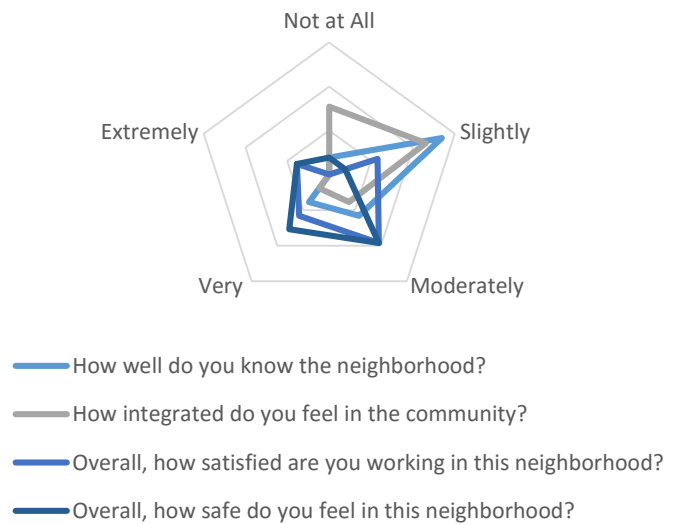
TEEM Neighborhood Interactions



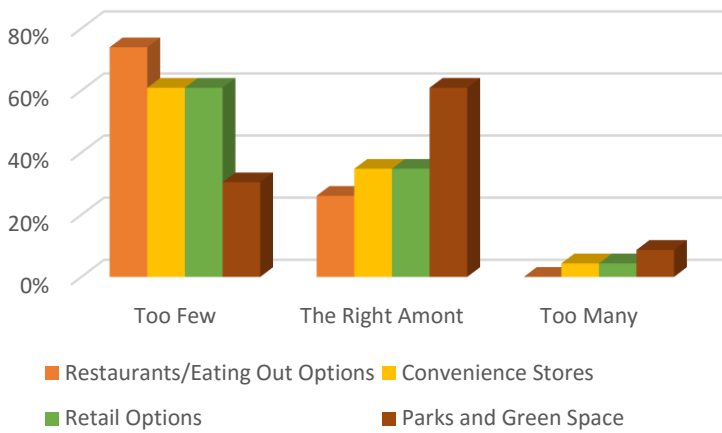
Self-Perceived Neighborhood Integration at WeWork Dumbo



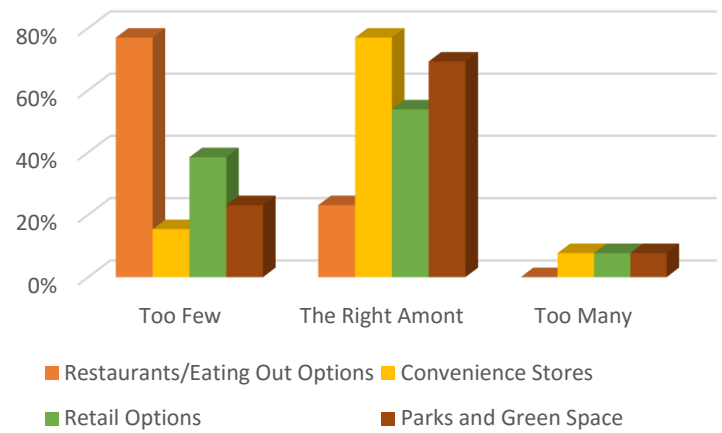
Self-Perceived Neighborhood Integration at TEEM



Perception of Neighborhood Amenities at WeWork Dumbo



Perception of Neighborhood Amenities at TEEM



The final question in the survey asked co-working space users about their favorite and least favorite aspects of the neighborhood that their work space is in. Below are the word clouds created based on their responses. The WeWork Dumbo population loved the Brooklyn location with views and proximity to the city and bridges along with the trendy cultural Dumbo neighborhood. The most disliked features of the Dumbo area were the lack of food options, traffic noise, expensive gentrifying neighborhood and the relative inaccessibility by public transit. Co-workers at TEEM raved about the convenient location and neighborhood – it is accessible, diverse, close to home and kids. There was a positive overtone in all the responses. TEEM members shared the same woe as their WeWork Dumbo counterparts: lack of food options, primarily healthy choices. Central Harlem specific features included safety, lack of general amenities and the dirty streetscape.

While there are common threads between the TEEM and WeWork Dumbo populations, there are also some fundamental differences. Price, commute times, and familiarity of the neighborhoods were the driving factors in co-working space selection for both sites. Most of the co-working space users anticipated only a short stay (less than 6months) at their site. Both populations noted the lack of food options and interactive neighborhood amenities/activities. The co-working space at TEEM and WeWork did not involve themselves with the surrounding community though TEEM members were more likely to get involved if given the opportunity/resources/information. The fundamental differences among the two populations lie within the demographics. TEEM was much more diverse in almost all aspects: age, race and ethnicity, employment status, and annual income. WeWork Dumbo comprised mostly of young White adults that were contracted employees from various industry sectors.

B. Observations & Conversations

i. *WeWork*

The crux of the WeWork mission is community – however my experience at WeWork Dumbo didn't convey the communal feeling that the brand strives for. While I was surrounded by people and a vibrant community, there was still a sense of isolation.



Source: WeWork

Physically the WeWork Dumbo space is not conducive to member interaction with the community. Each floor serves as inclusive environment with a common space by the elevators that included a dining bar, Brooklyn-centric art, cozy looking couches/sofas

and a kitchen area. The kitchen are always stocked with coffee, tea and a rotating beer on tap along with a refrigerator, microwave and espresso machine. There was also a wide selection of games and books in the lounge area. Beyond the common area for casual working and lounging, there are varied work spaces: conference rooms for professional meetings, secluded nooks for additional privacy, and shared and private offices for working. In addition, there is a convenience stand, Honesty Market, part of the WeWork Dumbo facilities where snacks and beverages could be

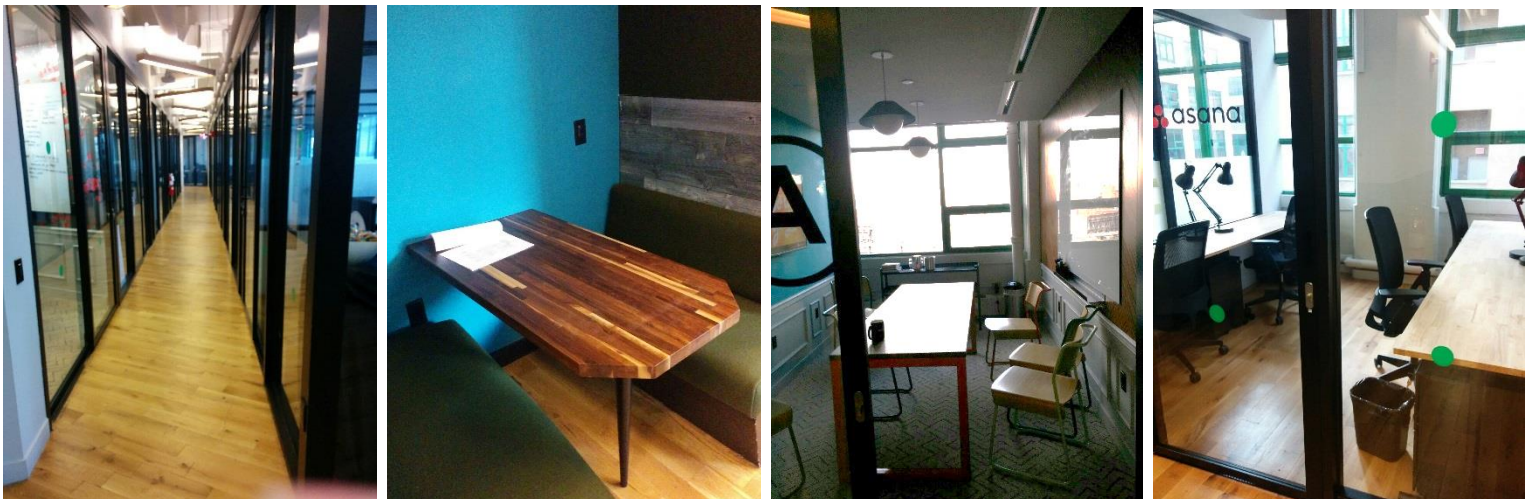


Source: Veronica Chuah

purchased. The community managers acknowledge the bare food options in the area and believe that Honesty Market is great addition to the community since it increases food options. However, the space is only accessible to key card holding members of the space. In addition, speaking with many members in the space, many were unaware of the space and still ventured out in the community for lunch, followed by complaints about the limited

options and price. The various office options suit various types of work styles. During my time at site, I witnessed very few interactions among members. Many remained in their designated office for the entire day, leaving only for the occasional coffee and lunch. With narrow hallways full of offices, the only space for organic encounters was in the kitchen lounge area which is bothersome since re-entry required a key card. Ultimately, the layout of the WeWork building supports an insular environment that doesn't promote engagement with the community beyond.

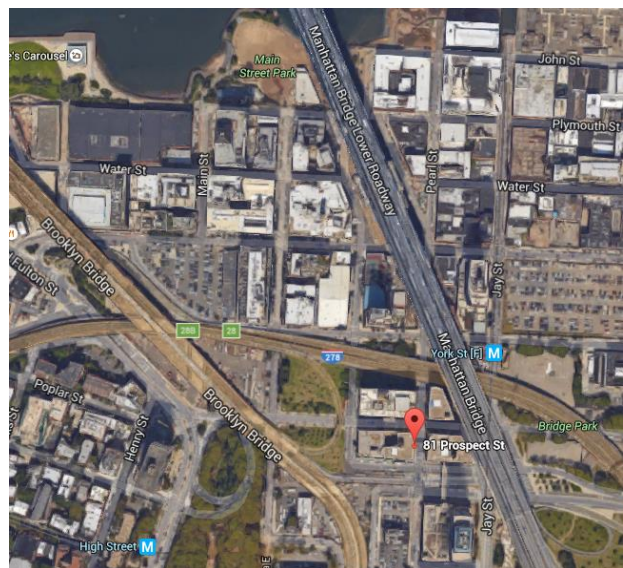
Within the WeWork structure there is a team of community managers who are responsible for fostering a sense of community. They are responsible for planning events, assisting in IT issues, serving as a point person for logistics, growing the WeWork community, and facilitating interactions among members. Their goal is to build a lasting community of members – they are not trying to create place of transient workers. The community managers' responsibilities fall within the WeWork building parameters. While not directly involved in building external community relations, successful relationship made within the WeWork Dumbo network could spill over into the neighborhood as connections made can lead to patronizing other local businesses, product/service awareness



Source: Veronica Chuah

and branding outreach around Dumbo, and collaborations with other locally based individuals/groups. However, WeWork Dumbo, having been in operation for about 6 months, is still struggling to hit stride at around 60% occupancy. The community management team is ever changing. When I first started my fieldwork at WeWork Dumbo, there was a team of 6. At the end of my month of research, 2 of the original 6 were moved to a different WeWork location and 3 new people joined the community managing team. With the rotation the community managers, there isn't a sense of stability among the staff therefore no social infrastructure to support member interactions that could potentially spill over into the Dumbo neighborhood.

There are also some community aspects that impact the level of WeWork Dumbo users' engagement with the neighborhood. Serviced by the A,C,F trains, Dumbo is accessible. However, WeWork Dumbo is nestled between the Manhattan and Brooklyn Bridges, there are many overpasses to walk under, curved streets to navigate, sloped streets to

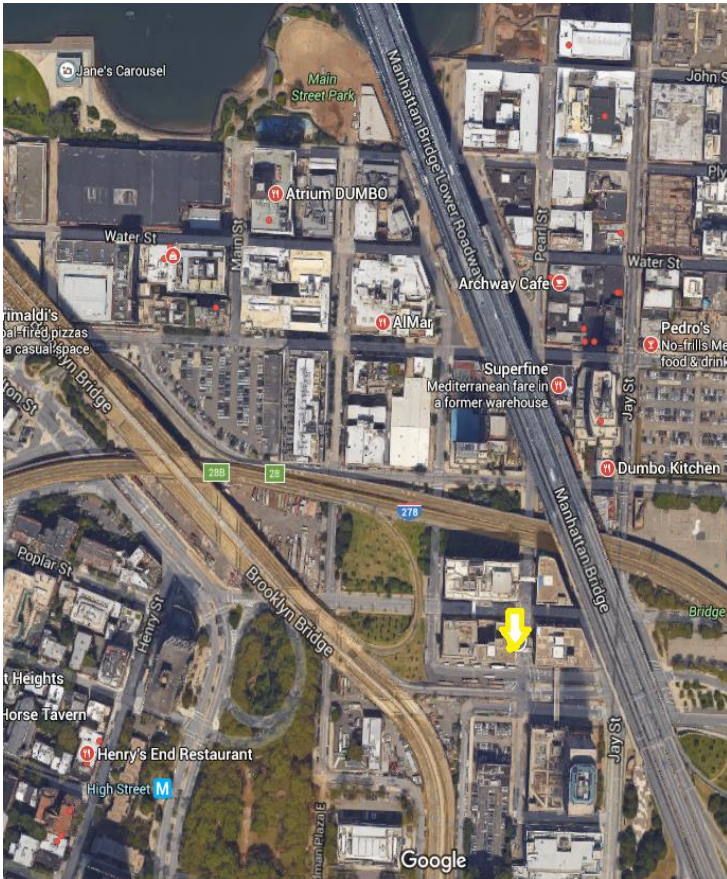


Neighborhood around WeWork Dumbo
Source: Google Maps

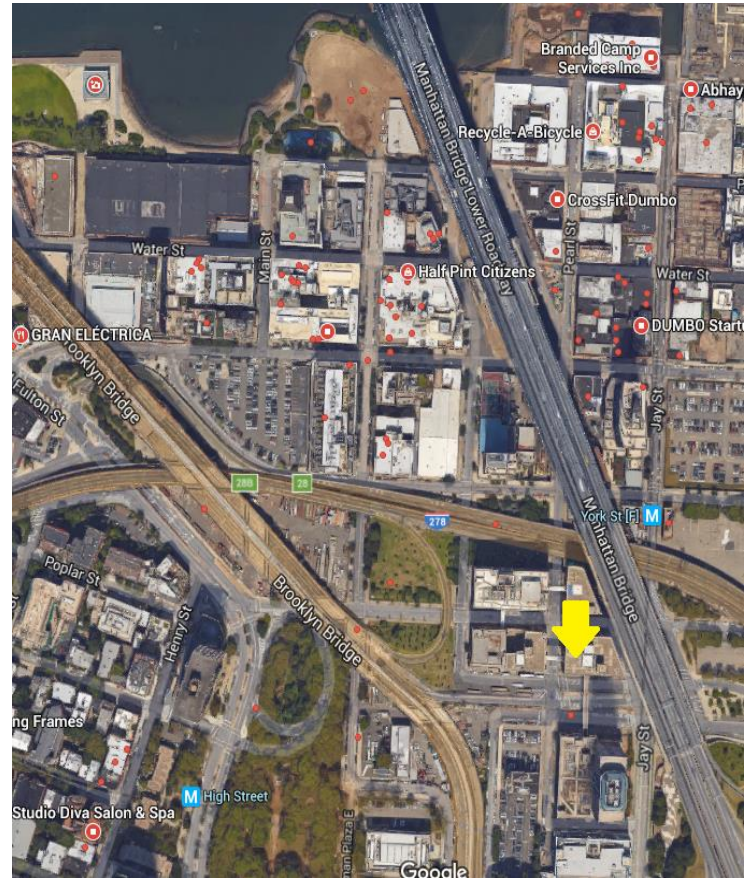
climb and highway traffic to dodge – walking to the site from the train station are a bit challenging. Several prospective members that toured the site mentioned how difficult it was to find the building despite using GoogleMaps and other GPS apps. It takes a bit of effort to find the WeWork facility. Because of the proximity to the highway and bridges, there are very few commercial uses along the walk to the site. Much of the commercial

spaces are concentrated further north of the site where there is minimal traffic or traffic has been blocked off entirely. The closest food option is Dumbo Kitchen, which is a 4 block trek under 2 underpasses. Similarly, almost all recreational activities are just as far from the WeWork Dumbo site. With limited amenities immediately available, there is little reason for WeWork Dumbo users to explore the area and ultimately no opportunity for them to engage and become invested in the Dumbo community.

From my observations and interactions with the co-working users at WeWork Dumbo, many were simply using the space because it is affordable and available. Co-workers only left the building for lunch and off-site meetings. Despite its mission, the WeWork Dumbo facility is being used in the traditional office sense – people are commuting to the office for a typical 9-5 day with a lunch break outside then traveling home afterwards – there is minimal sense of community. There is no lingering in the area after work – partially because there is not much to do in the area and partially due to the lack of relationships built within WeWork Dumbo.



*Food options around WeWork Dumbo
Source: Google Maps*

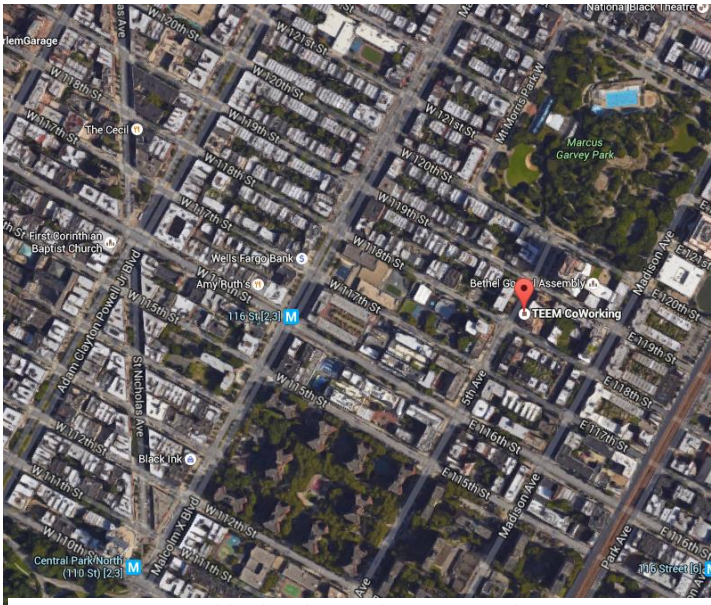


*Recreational activities and facilities around WeWork Dumbo
Source: Google Maps*

ii. TEEM Coworking

TEEM was founded on the idea of breaking the traditional office mold and creating a setting that “facilitates effortless networking in a collaborative environment” to expand ideas and materialize visions. Visiting the site and speaking with members and the owner gave me insight on the co-workers’ perception and interaction with the Central Harlem community.

The physical layout aspires to deliver on the mission for both the internal and external community of Central Harlem but there are some built environment and scale obstacles. TEEM occupies the full ground floor of a new residential building on a



Neighborhood around TEEM Coworking
Source: Google Maps

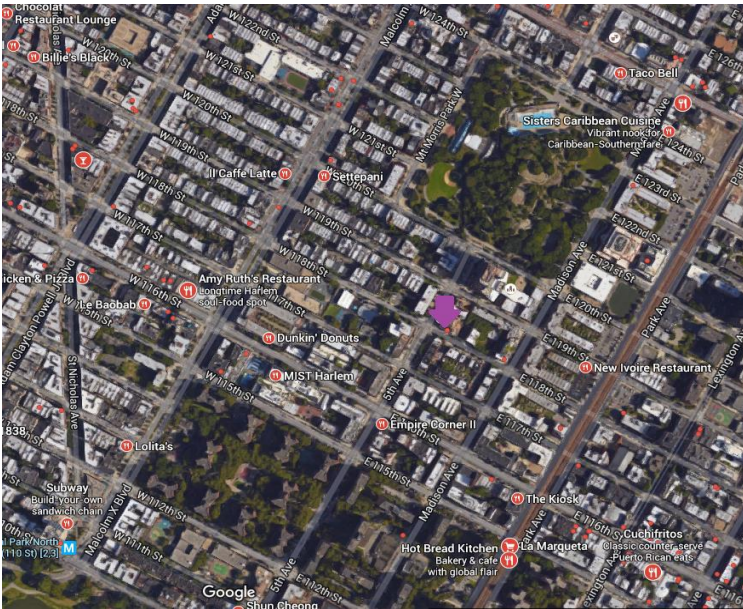
residential street in residential district. The surrounding ground floor retail is occupied by delis. The closest train station is the 116th station of the 2/3 line, about 3 blocks away on Malcolm X Blvd – it also the closest business corridor in the area. There is minimal foot and vehicular traffic

due to its residential nature and surrounding parks. TEEM’s street presence is rather demure as it blends into the building’s façade and surrounding deli awnings. To be more

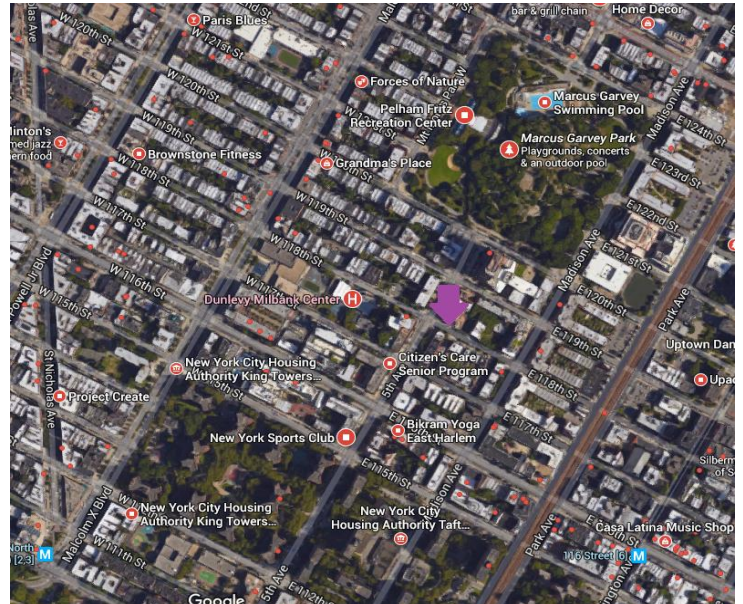
inviting and transparent, windows are all along the streetscape, letting passersbys and neighbors peer into the co-working facility’s



Source: Veronica Chuah

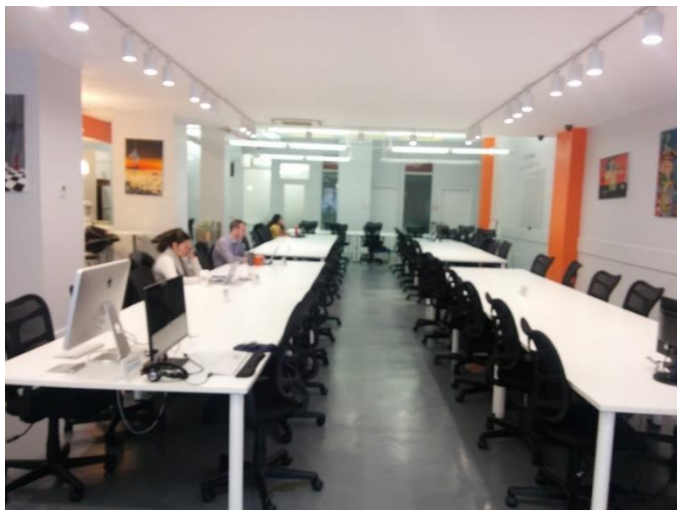


*Food Options by TEEM Coworking
Source: Google Maps*



*Recreational activities and facilities around TEEM Coworking
Source: Google Maps*

conference room and workspace. Inside, is an open floor plan with four large tables for members. There are no columns or partitions separating the 4 large tables for members to work at – facilitating interactions among users. Off to the side are break-out round tables for small group collaborations. The existing columns delineate the work space from the



Source: Veronica Chuah

kitchen. The kitchen was rather small, stocked with snacks and basic appliances – it wasn't meant to be the socializing corner of the space, that was supposed to happen at the desks. This small kitchen also encourages co-workers to venture into Central Harlem for meals and special refreshments. Most eventually buy food

from the area but often return complaining about the lack of options and the distance food options beyond delis. On the other hand, there are several recreational activities in the

immediate area. With the optimistic responses from the survey, there is potential with TEEM members participating with one of these local groups.

In spite of physical layout that supports collaboration and openness through work along with engagement with the Central Harlem community, these rarely happened since many TEEM members worked independently on projects and often with headphones in. In fact, members almost are purposefully selecting to sit at least several seats away from other members – as if to give each other privacy. Also being a smaller owner-operated co-working space than WeWork, there were significantly fewer people at TEEM – each day averaged to about 15 people. There are also two ways to attain TEEM membership: directly with the owner-operator and through a co-working consortium membership program. This impacts the type of members that use TEEM. While the majority of TEEM users had monthly memberships, there is also a noticeable flow of daily members from the consortium program. While the physical layout of the TEEM facilitates work collaboration, almost all the members are intent on their individual project and not seeking the collective working process nor are there enough consistent daily members to capitalize on the opportunities framed by the layout. With minimal interaction within the space, relationships are not really developed therefore neither is investment in the co-working space and the community it is in.

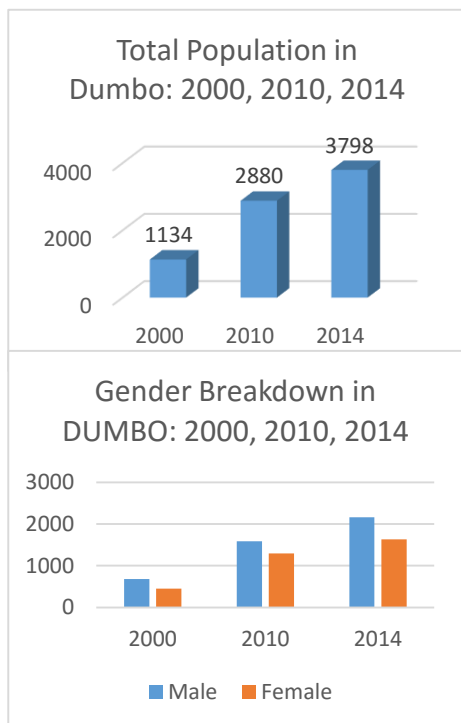
Despite being vastly different physically and programmatically, I observed the same trend among the WeWork Dumbo and TEEM members – they were more interested in the third-place aspect than the collaboration aspect of co-working. Most were there to work – there was minimal expressed interest in being a part of the community their co-working space is located in. The commodity was the physical office space not the

programming and built-in networking system. Seeking food options was the primary reason members ventured into the local area. However, both Dumbo and Central Harlem did not have the amenities that co-workers sought therefore many were dissatisfied with the area. Despite the new type of work that members were engaged in, the traditional divide between work and life is persisting.

Secondary Data

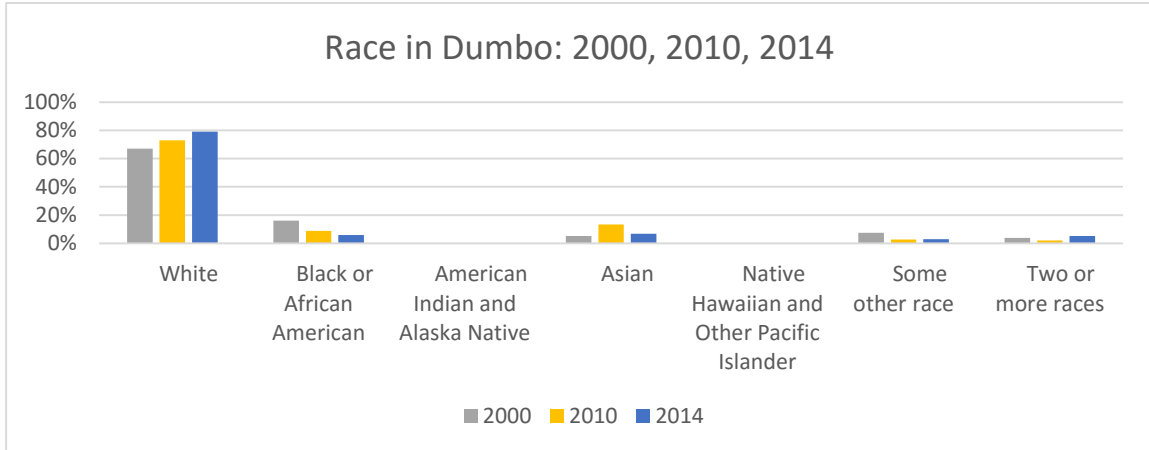
Pre-collected secondary data about Dumbo and Central Harlem demographics were collected and compared. Snapshots into each neighborhood were taken from three years: 2000, 2010 and 2014. For neighborhood demographics, the study area parameters was the census tract that the co-working space is located. These three years provide a glimpse into the composition of residents in the area, pre-rezoning, post re-zoning and around the time of the co-working space opening. Similarly, to gain insight on response of the real estate market in the immediate area, DOB issued permits were reviewed from 2000 to present.

i. *DUMBO*

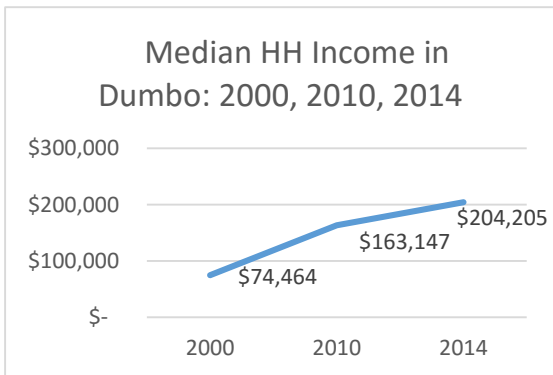


Between 2000 and 2014, the population of DUMBO has more than tripled to 3,798 from 1,134. There was already significant growth prior to the rezoning of the area in 2009 that by 2010, the population has already doubled since 2000. With the immense growth, gender composition has remained fairly unchanged with the male comprising 54%-60% of the population, slightly outnumbering the female populations. Similarly, there were slight fluctuations

with the race and ethnic composition of DUMBO residents. While there was overall growth among all the race and ethnic groups, the resident composition grew more homogenous over time with the White population grew from about 67% to almost 80% of the population.

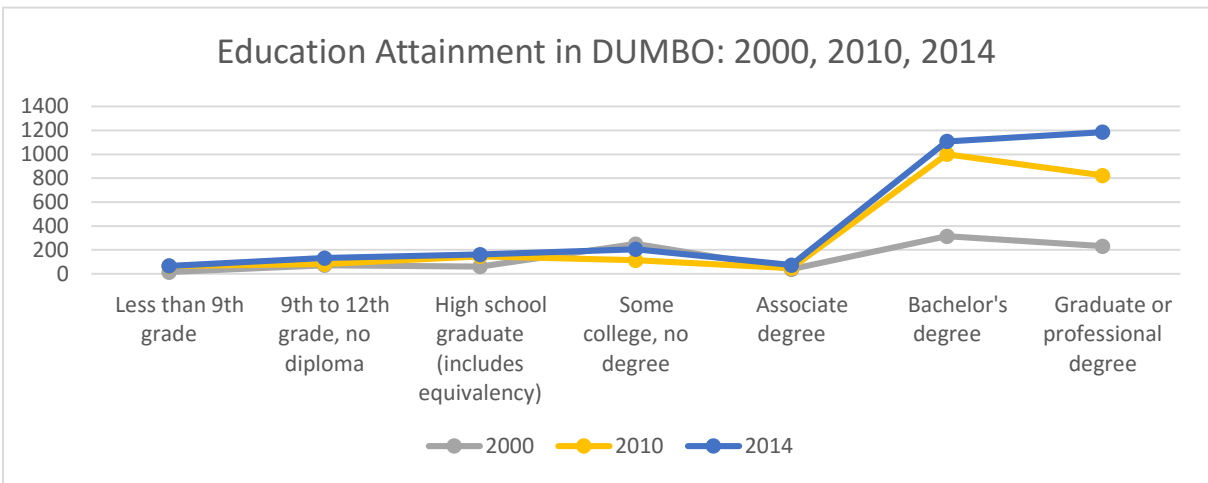
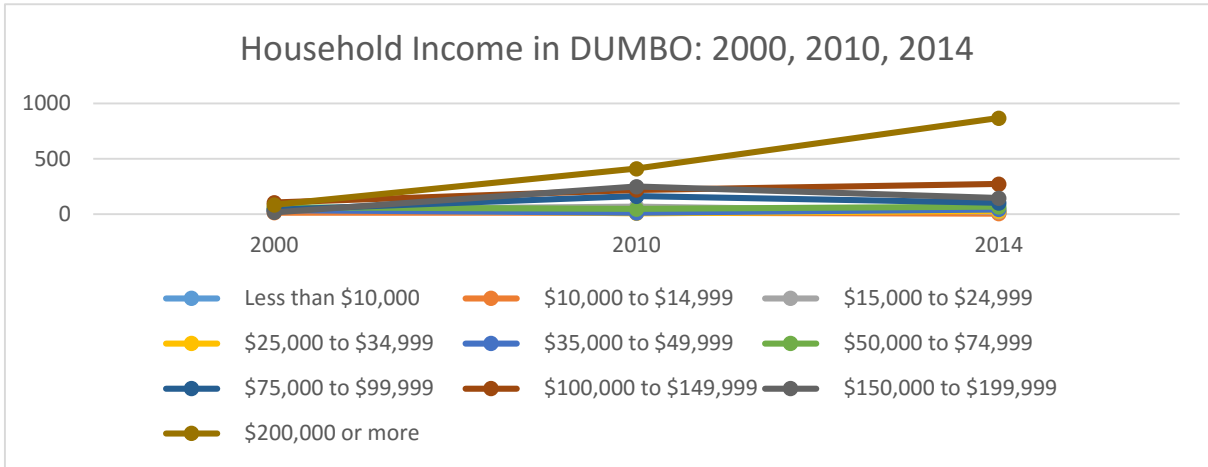


While rezoned for mixed-use developments, the residential population exploded in the area, which had the largest impact on the income distribution among residents over the study period. Median household incomes have nearly tripled since 2000, from \$74,464 to \$204,205 in 2014. The area is the reigns as the most expensive neighborhood in Brooklyn (Leon, 2015; Upadhye, 2012). There has been exponential growth of the number of households with annual incomes greater than \$200,000 while the number of all other household income groups remained fairly consistent over the 14 year time span. Given the clear correlation between income and educational attainment, DUMBO residents'

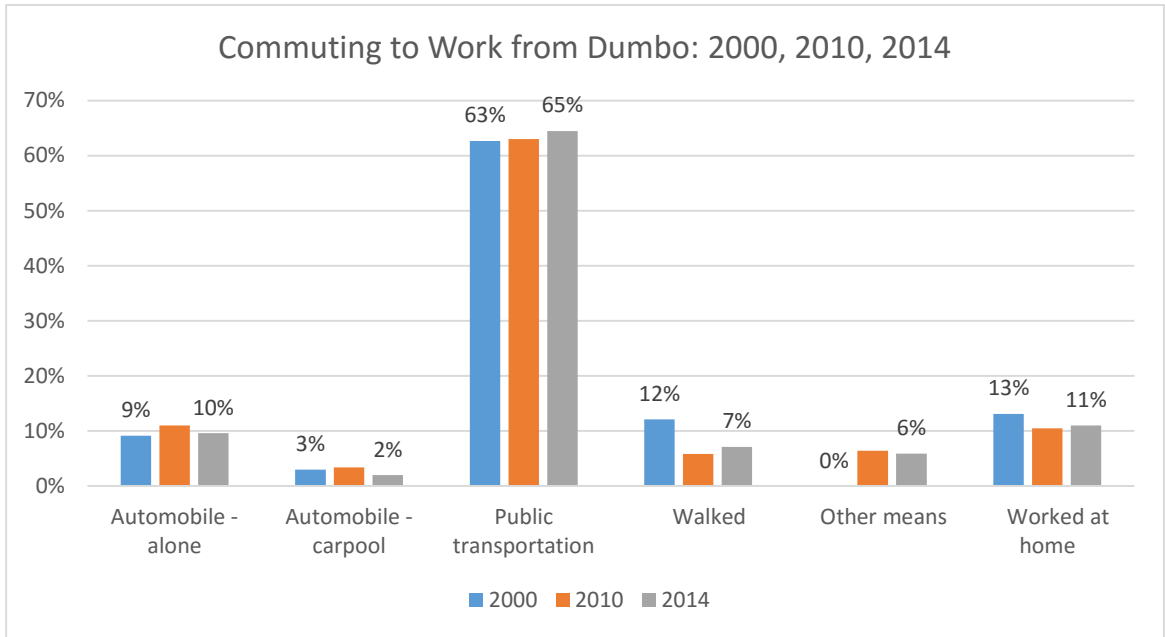


education attainment has increased over the study period. The influx of residents in to the neighborhood since 2000 have been highly educated. In 2000, only about 62% of the over 25 years old portion of the population had a

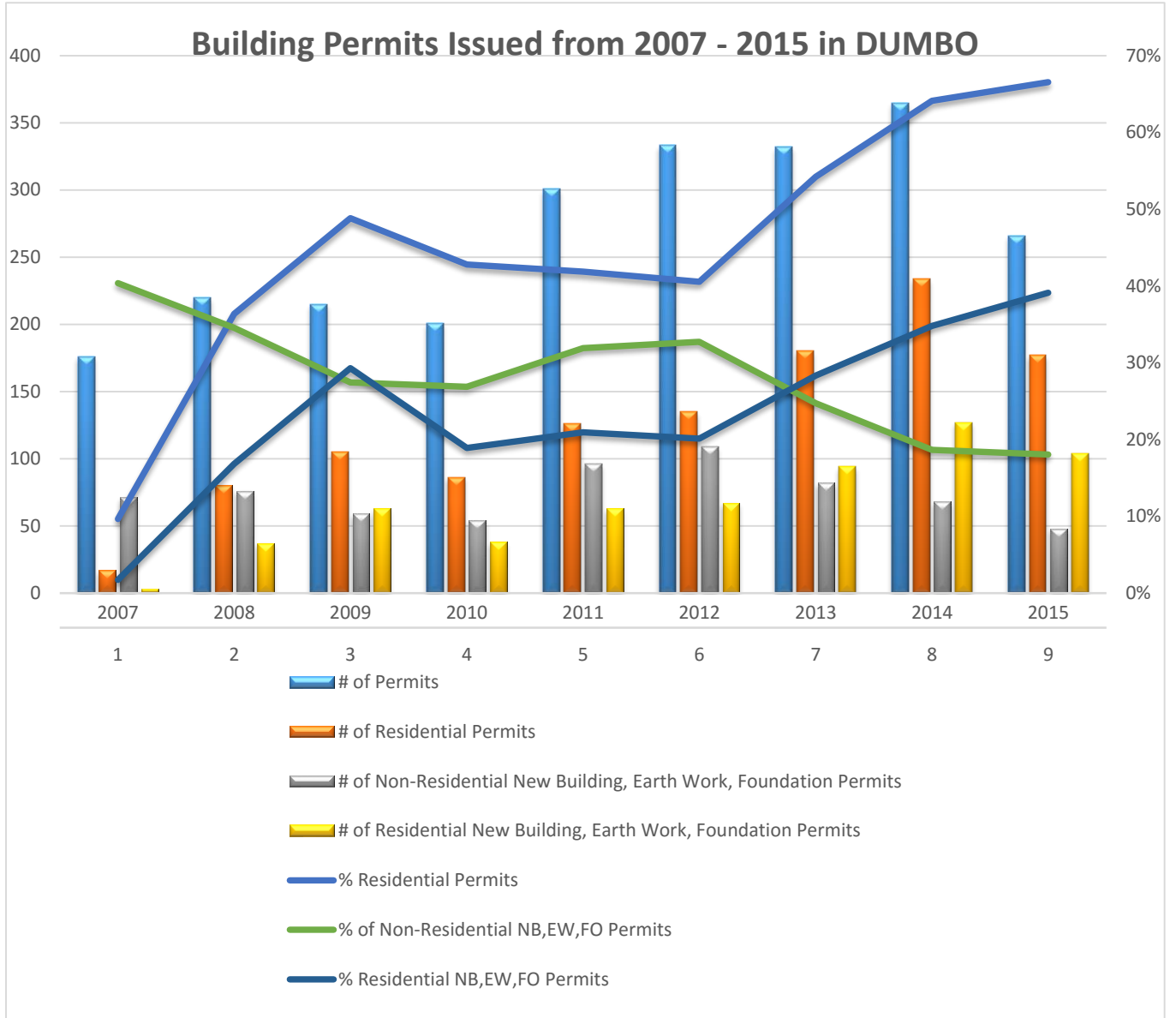
bachelor's degree or higher. By 2014, it is almost 80%.



While DUMBO has acquired a reputation for being a creative hub and home to the New York Silicon Valley (Upadhye, 2012), the majority of residents still commute out of the neighborhood to work. About 77% in 2014, took public transportation or some sort of automobile to commute to work, compared to the 75% in 2000. While this may seem like a slight difference in percentage, the drastic difference between the total populations between the two years suggests that the new wave of residents is primarily working outside of DUMBO. Conversely, a larger percentage of DUMBO residents seemed to live and work in the neighborhood in 2000 than they did in 2014, 25% and 18% respectively. Mean travel time to work for the over 25 years old working population rose from 30.8 minutes in 2000 to 34.1 minutes in 2014.

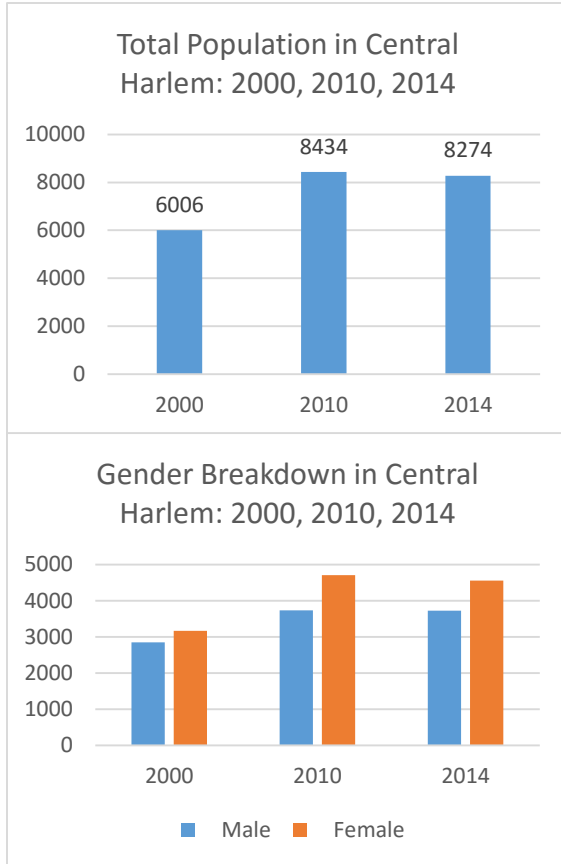


The real estate market in DUMBO is changing. Overall, from 2007 to 2015, the number of permits have been rising over the years, however there has been a shift in building typology. In 2007, about 10% of permits were for residential buildings. However, each year, there has been more residential permits issued. The turning point year is 2013 when residential permits made up 50% of total permits. Since then residential permits have been the majority of permits. By 2015, about 65% of permits issued were for residential buildings. With residential permits growing to be a larger share of permits issued, permits for other building uses have declined; from about 40% to 20%.

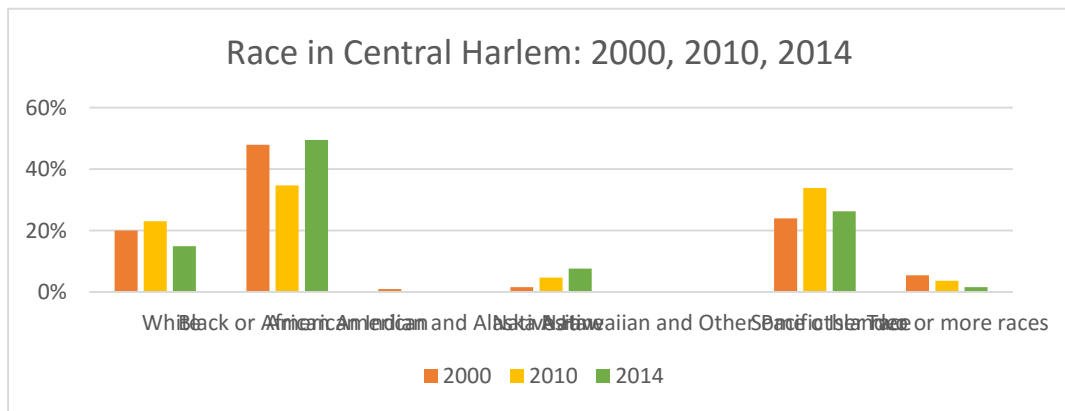


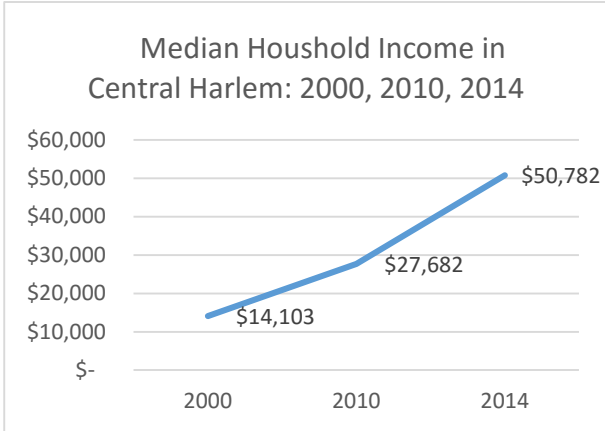
ii. *Central Harlem*

Between 2000 and 2014, the overall population of Central Harlem grew slightly, from 6,006 to 8,274. Already a residential area, the nearby rezoning of the nearby Fredrick Douglas Blvd in 2003 reinforced the residential nature of Central Harlem with ground floor commercial. Even with the population growth throughout the 14 years, the gender ratio has



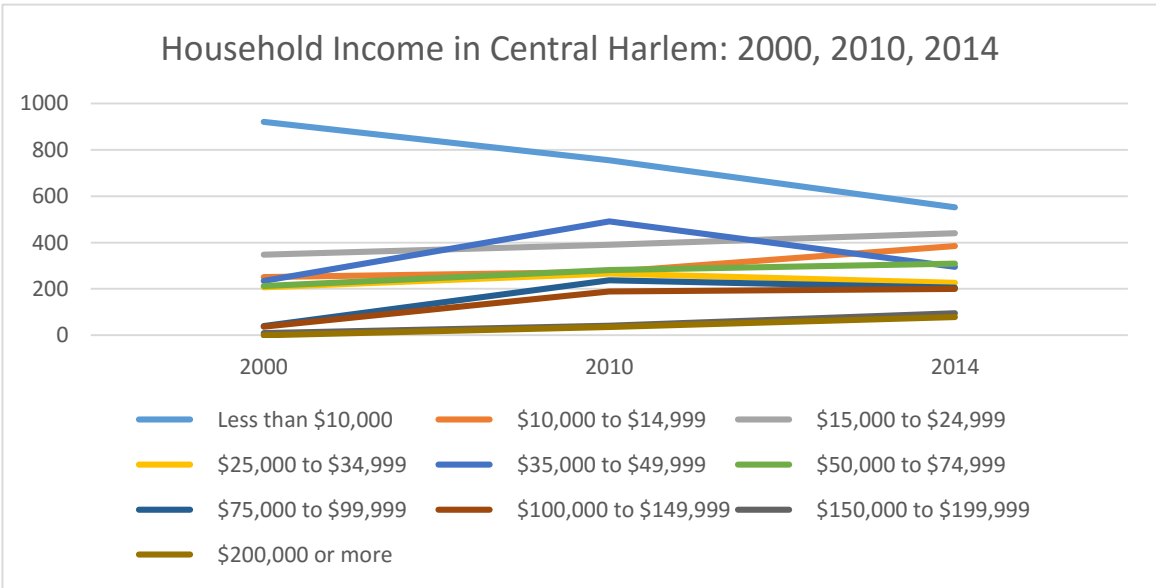
remained consistent; 44% males and 56% females. Central Harlem is fairly diverse. Over the study time span, there had been some fluctuations in the race composition of Central Harlem, however, overall maintained the same composition; consisting of about 50% Black/African American residents. During the study period, the Central Harlem percentage of White residents shrank from 20% to about 15% while the Asian population rose to 7.6% from 1.6%. Perhaps the biggest change within the 14-year time

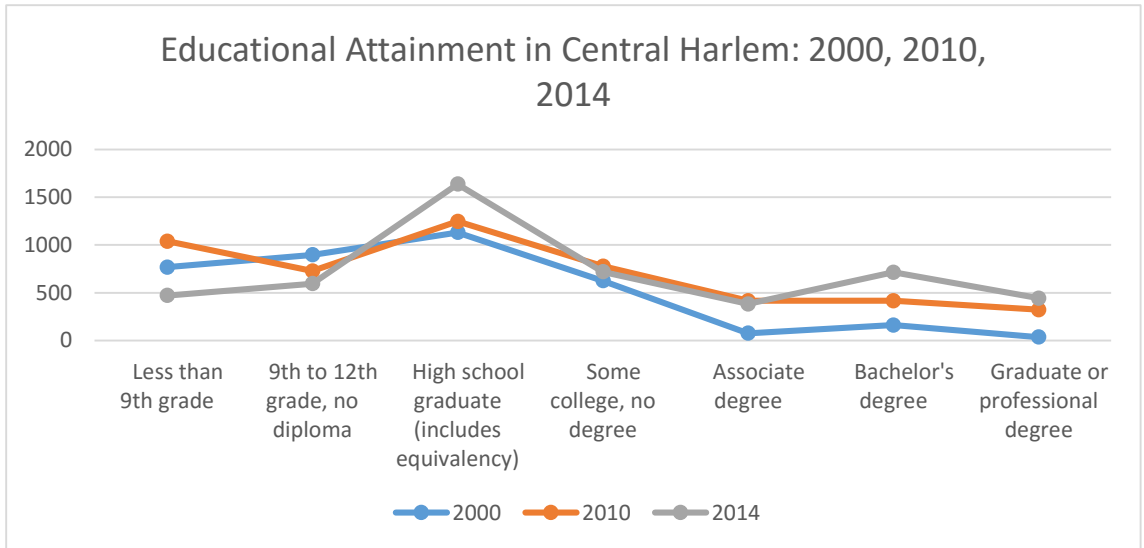




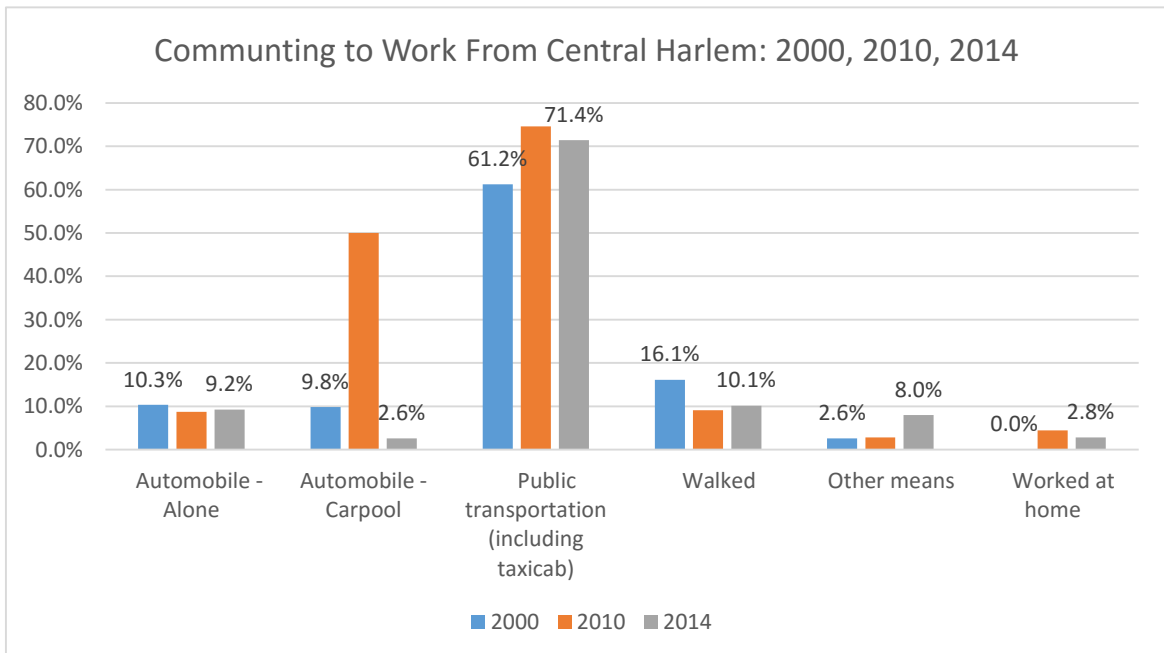
span is the rise in median household income – it nearly quadrupled from \$14,103 to \$59,782. There has been a steady decrease in households with annual incomes less than \$10,000. The two income brackets with the greatest growth

are households with annual incomes \$75k to \$99,999 and \$100k to \$149,999. There was also the emergence of the households earning more than \$150k. The number of households with incomes less than \$75k remained steady throughout the study period. This increase in median income and the emergence of a middle and upper class in Central Harlem is aligns with the educational attainment of Central Harlem residents. Over the course of 14 years, the percentage of the over 25 years old population with at least a high school degree grew from about 55% to 78.5% while the percentage with at least a bachelor’s degree more than quadrupled from 5.3% to 23.3%. Central Harlem residents, on average, are attaining higher education and earning more in 2014 than they did in 2000.



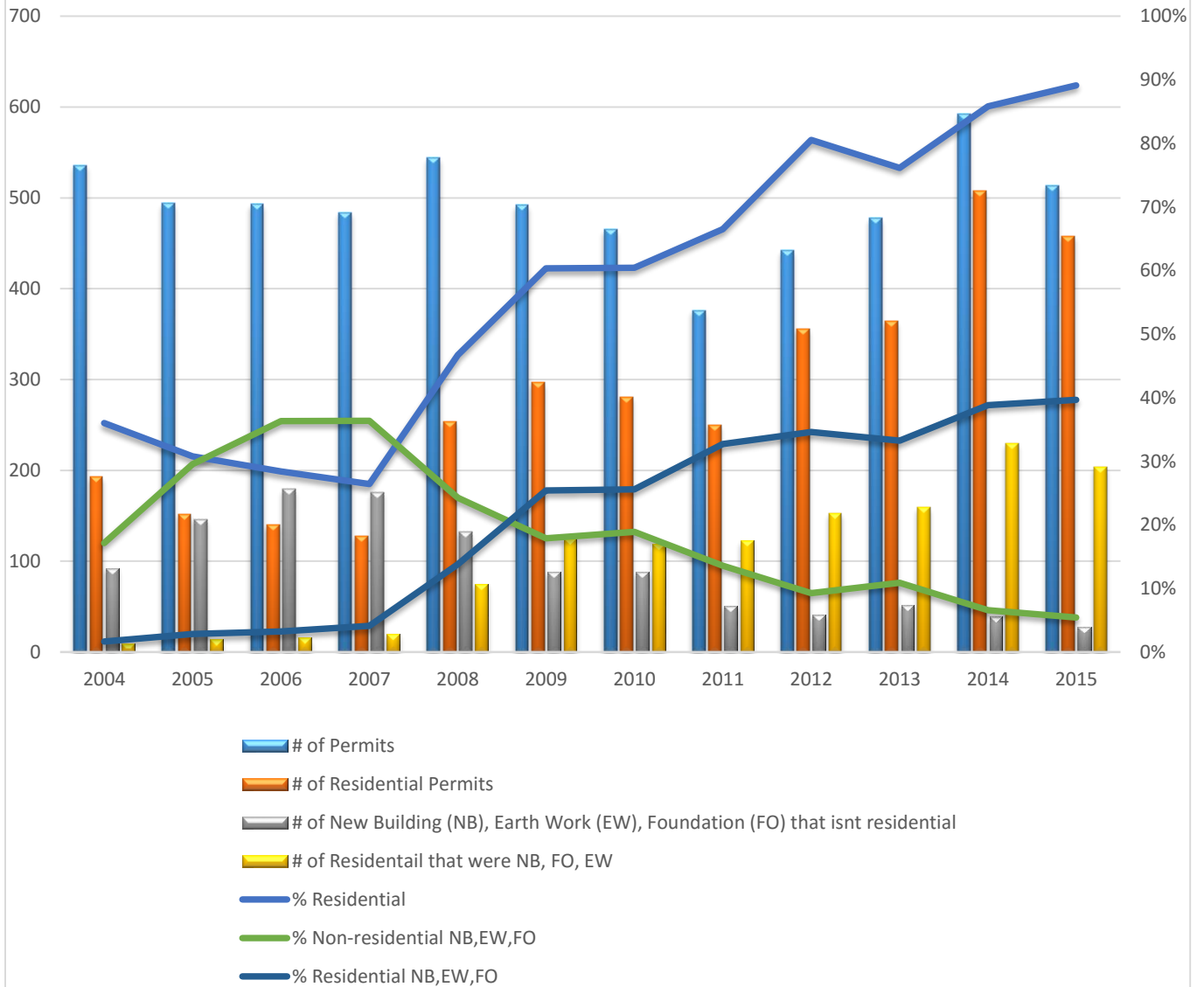


Despite the population growth and change in the income distribution, the commute patterns of residents to work remained fairly consistent with about 90% of the population work outside of Central Harlem. Commute times have reduced by 8 minutes, from 43minutes to 35minutes. There has actually been a decrease in the percentage of people that work locally – dropping from 16.1% to about 12.9%.



From 2004 to 2015, the real estate market in Central Harlem changed and continuing to do so. Overall, the number of permits have remained steady while the building use has shifted. In 2004, about 33% of all permits were for residential buildings. In 2007, after several years of decline, residential permits picked up speed rising to about 82% of all permits issued for Central Harlem. Following the residential building trend, the percentage of residential earthwork, new building, and foundation permits have also grown from barely 1% to about 40% from 2004 to 2015. As residential buildings permits grow to a larger permit share, other building uses are declining in permit share and in count. Nonresidential earthwork, foundation and new building permits dropped from a high of about 180 in 2006 to 25 in 2015.

Building Permits Issued fom 2004 - 2015 in Central Harlem



Discussion

In both case studies there was a mismatch between the co-working space and its larger community. While city planning rezoned each area, there was little follow up in policy to ensure the districts were successful with the new zoning and new uses. As a result, members are content with their respective co-working space however generally dissatisfied with the greater community.

Both WeWork Dumbo and TEEM Coworking have no difficulty attracting people to their space – the issue is retaining members. Co-workers bring social capital and monetary capital to communities and retaining them in the urban fabric will enrichen the area. Through targeted rezoning, the city sets the goal for these mixed-used integrated districts however this does not manifest in either of the case study areas. Currently, there is a clear separation of the day time population of workers commuting in the neighborhood for work and a night time population that are returning home. This segmentation of the two groups is based on how they utilize space in the community. In both Dumbo and Central Harlem, there two populations are distinct with little overlap.

Within the co-working spaces, both with their affordable pricing and consortium of people are able to draw people to their space however many members are unlikely to stay beyond 6 months. Despite co-working spaces known for the social and networking aspects, members didn't seem to be taking advantage of their conglomeration effect – as most were focused on individual work. At WeWork Dumbo, this individualistic focus could be perpetuated by the physical layout and staffing issues whereas at TEEM, it could be the result of the space-centric service provider approach rather than a curator of people (Merkel, 2015). Without meaningful relationships being developed, members are not tied to the co-working space or the community. Another huge contributing factor in the transient nature of the members is the neighborhood. At both sites, most

of the co-workers were commuting into the community for work. At TEEM, about 24% of members live within a half hour commute compared to the 4% working out of WeWork Dumbo. The greater percentage of co-workers living in closer proximity to TEEM could explain the greater willingness of members to engage with the community. Already living and working in Central Harlem, TEEM members are contemplating “playing” in the community. Time constraint is the most common factor why members aren’t involved. But members are pursuing recreational activities elsewhere, presenting local organization the opportunity to increase outreach and awareness allowing members to pursue the same recreational activities in Central Harlem, where they already live and/or work. The disconnect between members and local organization indicate a gap but also huge potential for the two to collaborate and further community development and investment in the neighborhood. Conversely, 96% of the WeWork Dumbo population live outside of DUMBO, commuting into the area for just work. While time constraint was the main driving factor, there was also an expressed blatant disinterest in engaging with the community. Of the live-work-play paradigm, WeWork Dumbo members are only loosely tied to DUMBO by the work aspect. With minimal ties to the community, co-workers can come and go as they please, especially with the flexible lease terms that the WeWork model offers. Ultimately for Central Harlem and DUMBO to be the live-work-play communities that city planning hope for them to be, there needs to be live and work options available to draw new residents and employees. But the final piece is the play portion, there needs to be a wide range of accessible recreational activities to retain residents and workers in the neighborhood beyond their typical commute patterns – creating a 24 hour community rather than a segmented population that takes shifts activating the neighborhood.

Conclusion and Recommendations

Successful neighborhoods don't just spring up from nowhere. They are fostered, developed and established. It is a collective effort from all stakeholders. Municipalities that want sustainable long term economic development need to be involved and working with communities throughout the process. There needs to be a comprehensive effort with all parties involved for successful community and economic development.

In the case study neighborhoods, there was little community engagement; while there was a lack of involvement from co-workers, there was also little outreach efforts from local community organizations. This gap is problematic since it highlights the minimal communication among community stakeholders, stagnating integration and community development. But it also presents the opportunity for a holistic approach. A huge reason that many co-workers didn't participate in a local organization was their unfamiliarity with the existing organizations and the area. Local groups can tap into the new population through outreach efforts. By presenting all the different way to be involved or engage in the community, co-workers are more likely to work **and play** in the area. With greater involvement, the currently transient co-working population will likely be more invested in the surrounding neighborhood and, in turn, more likely to remain in the area and continue stimulating economic development in the area. Co-working spaces and local organizations should collaborate to grow a long-term population that will be integrated into the community, rather than a 9-5 crowd that only interacts with the surroundings during lunch hour. While this strengthens co-workers' ties to the community, it is only two legs of the live-work-play paradigm. Alternatively, community organizations and co-working spaces can also approach the paradigm from the residential side and address the work and play portion of the equation. By meeting the all three parts, there should be greater success in spurring sustainable

economic and community development. Co-working spaces, by drawing members within a catchment area, can blur the segmented worker and resident populations while community organizations can offer the recreational activities that residents were previously pursuing outside of the community. Ultimately, this creates a community with the full live-work-play package.

Municipalities should also have an active role in creating or revitalizing communities. While the rezoning process incorporates community needs and opinions in the public review process, it shouldn't end there. In the case studies, the city stepped away after the rezoning. This allowed developers and property owners to utilize the land based on the highest and best use, which turned out to be residential. The commercial overlays were not particularly effective in Central Harlem due to the pre-existing commercial corridor and in Dumbo, residential conversations and developments garnered higher rents/sale prices than alternative uses. Zoning, in these scenarios, were suggestions. Municipalities should adopt a multi-pronged approach that facilitate community's goals – zoning to create the parameters and policy to reinforce. Examples of policies include: greater financial incentive for developments and projects that further the intended rezoning goals; requirement for a community benefits agreement for projects that do directly align with the rezoning goals.

Ultimately, there needs to buy-in from local organizations, property owners/developers, municipality officials and residents for the goals for the area. All stakeholders must be on the same page with developers or new business owners understanding the community goals and how their new business or organization fits into the greater picture.

While this research did shed some light on co-working spaces outside of the Manhattan core, there were also some restrictions that limited the study. Given the time constraints, the first-hand data collection was limited to one cold January and only two sites were studied. For further

understanding of the dynamics between co-working space users and their work community, further data can be collected on more co-working spaces outside of the CBD over a longer span of time to capture a larger scope of co-workers' experiences and perceptions. Since much of the literature, including this one, focuses on the co-working space and its users, further investigation on community perceptions on the co-working space will enrich the research on the field. Future work can delve into how local communities perceive and interact with co-working spaces and their members. It will provide greater insight as to how neighborhoods can tap into the potential of a new worker population surge.

Co-working space offices is new typology that addresses many of the technological, demographic and workplace trends. Flexible and evolving in its manifestation, co-working spaces are able to adapt to their neighborhood and member population. As the sharing economy has grown, co-working spaces have acquired a sense of “coolness” and clout. Most of the existing literature and popular media regarding co-working has been positive – noting all the benefits to participants and the urban landscape. However, while co-working addresses many issues, it is not a solve-all solution for communities. Most of the literature have evaluated co-working in a very insular environment without much context of the surrounding area. Based on my research, it seems that co-working outside of CBDs have little impact. With little tying co-workers to the neighborhood, there is littler personal or social investment in the area creating a transient working population. I propose that co-working spaces work with local communities and organizations to be mutually beneficial. Co-working spaces would be stabilized with consistent long-term members; this would make programming easier to tailor and more successful. Communities would benefit with involved co-workers that work and play in the area, which means greater local spending. Another subset of the population will be more integrated and

enthusiastic about the neighborhood. Municipalities would benefit as their rezoning goals for the area and city at-large will be achieved.

Co-working spaces have a great deal of potential to change and revitalize communities, however they are not the only variable. The other variables are community and municipal input and engagement or else co-working will simply be another generic building in the urban landscape.

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Appendix

CO-WORKING SPACE NEIGHBORHOOD PERCEPTION SURVEY

Age:	Gender:
Home Zip Code:	Race/Ethnicity:
Highest Level of Education:	

1) What industry sector do you work in?

- | | | | |
|--------------------|--------------|--------------------|----------------------|
| Agriculture | Construction | Manufacturing | Wholesale/Retail |
| Transportation | Information | Financial Services | Business Services |
| Arts/Entertainment | Hospitality | Government | Education/Healthcare |
| Other _____ | | | |

2) What is your employment status?

- | | | |
|----------------------|----------------------|------------------------|
| Contracted Full-Time | Contracted Part-Time | Independent Freelancer |
| Self-Employed | Other _____ | |

3) What is your annual income?

- | | | | |
|------------------|----------------|-------------------------|------------------|
| >\$10,000 | \$10k-\$14,999 | \$15k-\$24,999 | \$25k-\$34,999 |
| \$35k-\$49,999 | \$50k-\$74,999 | \$75k-\$99,999 | \$100k-\$149,999 |
| \$150k-\$199,999 | \$200k+ | Do not wish to disclose | |

4) How long is your commute to TEEM? _____

4a) Please check all modes of transportation that you use: Car Train Bus Bike Walk

5) Is TEEM your primary place of work? Yes No

5a) If not, where is your primary place of work? _____

6) Are you involved in a community organization close to TEEM? Yes No

6a) If you are involved in one, how much time do you dedicate to it each week?

- | | | | | | | |
|------|-------|-------|-------|-------|--------|-------|
| <1hr | 1-2hr | 2-4hr | 4-6hr | 6-8hr | 8-10hr | >10hr |
|------|-------|-------|-------|-------|--------|-------|

6b) If you're not involved in one, what factors inform your decision? *(select all that apply)*

Too much of a time commitment
 Venues are inconveniently located
 Organizations unaligned w/ my interests
 Other _____

Doesn't fit into my schedule
 Organizations didn't feel welcoming
 I don't see a need to engage

7) How long have you worked at TEEM?	<6mo	6mo-1yr	1yr-2yr	2yr-3yr	>3yrs
8) How long do you plan to continue working at TEEM?	<6mo	6mo-1yr	1yr-2yr	2yr-3yr	>3yrs

9) **Why did you choose to work at this location?** (select all that apply)

Familiarity with the Area Price Neighborhood Aesthetics
 Interior Design Commute Time People w/in the space
 Neighborhood Amenities Other _____

Neighborhood Interactions	Scale				
How often do you participate in the following activities in the neighborhood?	Never	Often			Always
10) Dine out/buy food	1	2	3	4	5
11) Shop	1	2	3	4	5
12) Run errands	1	2	3	4	5
13) Spend time outside of work	1	2	3	4	5

Neighborhood Perceptions	Scale		
How do you feel about the number of the below amenities offered in the neighborhood?	Too Many	The Right Amount	Too Few
14) Restaurants/Eating Out Options	1	2	3
15) Convenience Stores	1	2	3
16) Retail Options	1	2	3
17) Parks and Green Space	1	2	3

Neighborhood Integration	Scale				
	Not at all	Often			Extremely
18) How well do you know the neighborhood?	1	2	3	4	5
19) How integrated do you feel in the community?	1	2	3	4	5
20) Overall, how satisfied are working in this neighborhood?	1	2	3	4	5
21) Overall, how safe do you feel in this neighborhood?	1	2	3	4	5

22) What do you like most about this neighborhood? _____

23) What do you like the least about this neighborhood? _____

24) If there was one thing that you could change about the neighborhood, what would it be?
