

Office Typology for the Post-Covid Workforce

Kelsey Dempsey

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Robert Mugerauer

Judith Heerwagen

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Kelsey Dempsey

University of Washington

Abstract

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Kelsey Dempsey

Chair of the Supervisory Committee:

Robert Mugerauer

Architecture

A thesis presented on the development of the office in America beginning with the early Twentieth Century to present. Emphasis is placed on the effect the global pandemic has had and will have on work environments and office operations, particularly within the architecture and design industries.

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INTRODUCTION

This thesis began as an investigation into office typologies throughout recent history within the United States and developed into a proposal-based study of where the office is heading. The office experience has and continues to transform because of the global pandemic. The importance of the office going forward will be centered on collaboration and socialization, with more flexible work setups and schedules.

Design implications for office locations and layouts largely hinge on the comfort level of employees. Many have grown accustomed to work from home habits and would not mind carrying this practice on post-pandemic. However, the separation of home and work life is beneficial. Most design firms have gathered that a hybrid approach will best serve employee and employer needs. Hybrid in this case refers to a combination of work from home days and in office days. Hybrid also refers to a prototype model found in the body of this thesis.

Preliminary research and conversation with industry professionals informed designed iterations. The identification of the Hybrid model as the main prototype for office design going forward is the closing point of this work. However, this thesis is meant to serve as a starting point for others interested in office and workplace design going forward. This investigation is exploratory and will continue to develop as the lasting implications of Covid-19 become clearer. This thesis will focus on architecture firms and how their offices can evolve through this historic event.

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PRELIMINARY RESEARCH ON OFFICE TYPOLOGY

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Several resources were used to establish a literature review for corporate campus typology. These resources fall into three groups based on their research approach: historical review, quantitative analysis, and typology investigation. The resources that use a historical review method study the typology of corporate campuses and office space in the United States from the early Twentieth century to present day. Much of the historical review consists of a case study approach where individual buildings, companies, or architects are observed. The quantitative sources offer a survey of a city's office building stock, either comparing a city's development over time or comparing one city to another. Going forward a particular city or metropolitan area may be identified to understand corporate campus development more holistically. The typology investigation articles focus on new corporate campus typologies (specifically the high rise) and what might motivate a company to choose this approach. The aim of this literature review is to further define the thesis topic, identify sources of quality information, and form an organizational structure for further writing. The aim of the thesis is to use historical information along with current data to suggest a corporate campus "best practice" typology. Various typologies will be assessed based on the following criteria: economic investment, urban connectivity (including transit implications), and employee and company productivity.

Historical Review:

This approach draws on somewhat dated literature to capture the culture of a period (mid to late Twentieth century). Notable corporations of this time, like General Motors, IBM, AT&T (Bell Labs), all used corporate architecture to progress their company identities and reach. A parallel between residential suburbanization and corporate suburbanization is drawn. Both sectors decentralized to avoid the negative components of urban areas (pollution, crime, noise, etc). The suburb became a symbol for an idyllic future and represented an optimism for families and companies alike. This shift of culture capital from urban centers to city fringes can also be attributed to the rise of the automobile and highway infrastructure.

The research question is not directly related to the mid-Twentieth century, however this historical literature is necessary to critique office building typologies. Separate corporate buildings (solely for one company) did not widely exist until this mid-century mark. The question of whether this shift was necessary or merely convenient can be raised. Did companies capitalize on cheap land and suburban promise solely for brand image? Or can these corporate campuses be seen as a necessary shift to accommodate for new management structures as companies increased in size?

Three sources from my initial literature review use this approach to analyze corporate office architecture. All the sources use urban design theory/history to analyze suburban sprawl. For example, the “Main Street” and “Elm Street” organization of old downtowns is addressed. This organization of urban context is compared to the suburban office parks and subdivisions found later in the century. By presenting a timeline of both urban and suburban development, these sources provide a deeper commentary on office development. Without providing a framework for what came before suburbanization, the analyses of the suburban forms themselves would be done in a vacuum.

If the historical review of the suburbanization of the office stopped there, by just comparing it with the suburbanization of American life in general, then this approach would be weak for my research question. However, these three historical sources also examine the work culture and managerial organization of

corporations during the mid-Twentieth century. It is important to note that companies, particularly those in technology markets, shifted their organizational structure during this time.

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A changing cultural attitude toward science and research developed in postwar America. Science as incubator for knowledge was lost on the business venture of it all. Patents and products ruled the metrics of early tech giants, so productivity and efficiency of its employees was paramount. The architect Eero Saarinen was responsible for some of the most iconic corporate campuses of the mid-Twentieth century. Exorbitant amounts of money were spent on new suburban developments, rationalized by the promise of increased business growth and technological development. A case study approach of several buildings is presented in one of these historical resources. This may be viewed as a myopic approach to understanding the entirety of business offices of this time, but in fact offers a much-needed basis to the overall topic. These buildings by Saarinen (GM's Technical Center, IBM's Thomas Watson Research Center, Bell Laboratories at Holmdale, etc.) embody the organizational shift that occurred in research and development offices. Typically, R&D was housed in the same layouts that administrative and managerial roles utilized. "Saarinen shared with his corporate clients the convictions that the isolated campus was the ideal model for R&D and that basic research required a new spatial and symbolic identity and an elaborate public stage." (Knowles and Leslie 2001) The new model for these corporate buildings would look no further than the typical university campus for design inspiration. Universities produce the brightest minds and developments, so why should this model not be capitalized upon by American corporations. The university campus concentrated all that a student might need into a relatively compact area. Students could study, collaborate, eat and essentially live within the confines of a university's campus. Researchers already were migrating to the suburbs to live, so it was only natural that their workplace followed them. The campus structure could serve to incubate developments with their office layouts and project an improved corporate image through its building form.

Quantitative Analysis:

From the historical review one can gather the general zeitgeist of corporate culture during the midcentury years. However, how has this culture prompted a greater shift in office building stock outside of a case-by-case basis? One of the quantitative sources takes a slightly later survey (1979-1999) of office building stock. This survey examines thirteen metropolitan areas and begins to analyze them based on location and density of office building developments. This resource is successful in quickly depicting the changing nature of the “office” in American cities. It opens with a quick statistic: In 1979 74% of offices were located within cities, 26% in the suburbs. In 1999 58% of offices were located within cities, 42% in the suburbs. Although this statistic can be taken at face value, the author elaborates on what defines a “city” and a “suburb”. A metropolitan area encompasses both core cities and surrounding suburbs. Also, it is noted that a suburb can become a city (ex. Irvine, CA).

Four city models are described within the article: primary downtowns, secondary downtowns, edge cities, and edgeless cities. This breakdown of what language used is critical to understanding any type of research. Although the concept of city is generally accepted as an urban area with greater density than its surroundings, it is key to more closely define the city when taking metrics at this scale. The location of an office is not simply within the city or outside it. There are varying conditions, and the clear categorization of these separate conditions is successful.

This resource also has a clear data and methods section that describes what sources were used to gather raw data. It lists the benefits and downsides of each of its two raw data sources. For example, one of the sources, Black’s Guide to Office Leasing, does not track Manhattan. In this instance, the data from Cushman and Wakefield’s office reports are used. Also, it mentions a condition that exists in some cities that may skew office square footage numbers. This condition is known as “flex space” which is office space that is housed in a manufacturing facility (this is common in San Francisco and to some degree in Los Angeles). After presenting the available data and organizing the metropolitan areas into four conditions, the article closes with a public policy implication summary. Research articles often fall short in the presentation of a solution, or the implication of the findings. This aspect of the article is a positive and something that lacked in the other sources I found on this topic. I would like to take this approach with my research question (presenting existing research, analyzing it, and extracting design implications).

The second source centers on one metropolitan area rather than taking a survey of several cities. The metrics of this report depict existing building stock and office typologies, while reporting area job growth by industry. Infrastructure developments are not meeting the needs of the expanding job market and are pushing many to commute by car. This is a new component not found in the other sources but relates to the overall mission of the research question. The mission of the research question is to define a corporate building typology that is successful in today's job market. Success can be measured in many ways, but employee access is key to any thriving businesses. This typology will differ based on the unique qualities of different metropolitan areas. However, by having a comprehensive report of one of the nation's hottest metros for job growth (San Francisco/Bay Area), one can extrapolate implications for other cities. This report provides statistics, but also draws conclusions based on the observed data. The data, analysis, conclusion, suggestion model of the SPUR Report is the most robust research approach out of all the sources.

The suburban office buildings throughout the Bay Area continue to be the primary setting for employers, mostly because building downtown has more zoning regulations and is generally more expensive. However, a downtown location would provide a smaller building footprint and be more accessible by transit. If the Bay Area wants to continue to thrive as a center of innovation more efforts need to be made toward smarter office development. This report identifies the environmental implications of suburban office park development (larger building footprints, car dependent, etc) and the health impacts on employees (more sedentary lifestyle).

To support the previous claims, the SPUR Report provides a case study of two buildings with comparable square footage. The study compares the lot size, building footprint, parking footprint, and transit ridership of employees. By having a side-by-side visual and quantitative comparison of two cases it is easier to draw conclusions from office building typology and location. The case of the downtown building with a smaller floorplate and underground parking presents a higher transit ridership. This can be attributed to the convenience of transit hub locations and less visible parking. One issue I have with this case study is one

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larger suburban building is compared to two smaller urban, high-rise buildings (the two high-rises' combined square footage is comparable to the suburban building's square footage). This is not a one to

one comparison and I believe a stronger case could be made with more similar building cases. Also, the parking comparison between the two cases lacks a direct comparison. The parking for the suburban case gives several surface level parking spots whereas the other combined cases just list "below-grade parking". I would be interested to know the parking space count and if the spaces are rented out monthly to the public or reserved solely for the company staff. Below are some of the additional research metrics included in the report.

A figure-ground study is presented for 11 Bay Area locations with population, transit, office square footage, and job position metrics. This is a great study to see which areas of the region are performing better than others and look to replicate these successful strategies. Also, in addition to total office square footage, new building square footage is included.

The next iteration of this office square footage study presents new development (2011-2015) in 19 Bay Area cities (not all of these were present in the figure ground study). A bar graph presents the square footage in two categories for each location: development within ½ mile radius of regional rail transit and development outside of the ½ mile radius. Although there has been significant growth in office building stock, most of the new properties are outside of this ½ mile radius metric. This shows that although growth is occurring rapidly in the Bay Area, the transit infrastructure is not keeping up. It can be noted that the only Bay Area location that is really focusing on transit oriented new development is San Francisco (this makes sense because the city already has a strong transit network unlike the outlying municipalities). Of all the new square footage that falls within ½ mile radius of a regional rail station 71% of it is in San Francisco.

A following section is provided to dissect implications of these findings. Traffic congestion is a major issue in the Bay Area, with commute times ever increasing. An estimated 5 billion dollars in lost time value can be attributed to the San Francisco area alone. If transit could be improved to decrease commute times

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employees could travel from work to home easier, allowing for much needed relaxation time. Also, more efficient transit would allow for a wider geographical range for housing.

About halfway through this report a brief history of the corporate campus is presented. This short diversion from the report's own findings is very helpful. The history draws primarily from Louise Mazingo's *Pastoral Capitalism: A History of Suburban Corporate Landscapes* (which I used for the history portion of this literature review). To see two of my sources, cross over in this way, is reassuring that I am finding quality resources about the research topic. This history recap describes the initial companies that moved from the East coast and Midwest to Silicon Valley, the current home of the American tech industry. Many up-and-coming companies would repurpose older buildings as their new homes. This is worth mentioning when most metrics only seem to track development in terms of new square footage. How would repurposed spaces fall into this conversation?

This report continues what is found in Mazingo's work but includes more recent developments. Some companies have decided to create city developments (ex. Amazon in Seattle's South Lake Union neighborhood) while others stick to the suburban campus form (Apple Park in Cupertino). Something I had not thought of before is that iconic suburban developments like Apple Park do not follow the general Silicon Valley suburban development model. Apple's "spaceship" building is very much a permanent and customized building, meant solely for Apple use. This differs vastly from the easily deployed and inexpensive modular developments that characterized Silicon Valley during the 1990s. This building does add notoriety and aligns with Apple's brand, but is it a model that should be replicated for all its buildings?

The last portion of the SPUR Report provides an outline of what employers may be considering when creating a new office development. Four main considerations are listed: employee attraction/retention, security/intellectual property, floorplates, and growth and exit strategies. Depending on the nature of a company some of these categories may be favored over others. For example, with Apple's building the first two categories took precedence. This iconic architecture no doubt attributed to employee attraction, and the floorplate size was not minimized.

Typology Investigation:

The typology investigation is a continuation of the quantitative analysis section but is focused more at the building or singular campus scale (rather than city scale). Urban growth trends point to a continual increase of population in cities. It is a valid investigation to consider incorporating the high-rise typology into a company's corporate real estate plans. In addition to just a high-rise form it is important that the city in which this typology is incorporated has a variety of mixed uses and does not rely solely on the nine-to-five crowd. Britton and Hargis use four categories to define the benefits of a vertical campus: efficiency, sustainability, accessibility, and urban context.

In addition to these categories there are inherent differences between the high-rise and typical corporate campus. These include vertical rise versus horizontal growth, urban versus suburban location, and small versus large floorplates. These characteristics have a significant impact on how people interact with each other and can influence the efficiency and success of a company. The nature of work is changing and should influence the design of the workplace. Work historically has been a clock-in and clock-out endeavor, but now work almost never stops completely. This shift means more employees and employers are desiring flexible office layouts with a variety of space types.

One connection between the suggestions found in the Britton and Hargis article and Mozingo's *Pastoral Capitalism* is the incorporation of the module into office design. Both the Bell Labs Murray Hill Campus and the GM Technical Center used a module to organize space. Murray Hill utilized a six-foot unit while GM went with a twelve-foot version. Eero Saarinen relied heavily on the module for many of his corporate campus designs.

The floorplate is a key component to the success of a high-rise office space. It can dictate light penetration and guide structural layouts. It is important to consider future uses of an office space and switching of tenants. The module approach mentioned above can be leveraged to provide greater flexibility within a company's office layout, but also to promote customizable features for future occupants. Even if the same company occupies a space for many decades, a flexible layout can adapt to changing organizational

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structures. The floorplate alone can address efficiency and sustainability, and to a lesser degree accessibility (interpreting as internal flexibility rather than external ease of access here).

The location of a high-rise office within the urban fabric is important to determining its success. A high-rise brings density to a city, but can fail if necessary, infrastructure is not in place to support the development. For example, employees could spend unnecessary time commuting if transit is not conveniently located and adequately scheduled. Also, knowing your workforce is key to choosing location and typology of your company's next office development. Where do your employees live? If the bulk of your work force lives in surrounding suburbs, then a downtown location may not be the most viable. This dynamic will create occupants that only inhabit the building (and surrounding area) during typical working hours. This can be a drain on the urban environment and does not promote a lively street life. In addition to knowing the current workforce, it is important to know who the company wants to target for future hires. Generational differences can elicit different approaches. Is the company targeting the experience-oriented Millennial or the Boomer that enjoys a little more personal space? "As employees become more mobile and less tied to their desks, the average amount of space per employee nationwide, in all industries, has dropped to 250 square feet from 400 square feet in 1985" shares Shevory.

Like the four categories mentioned previously (Britton and Hargis) the SPUR Report shares additional considerations for companies. Depending on a firm's current position in its lifecycle can inform its real estate needs. A new startup may not be able to design a bespoke building just yet and might favor cheap and flexible office spaces. An established firm may want to tailor their office space to facilitate organizational structure. These same firms are the ones in a position to commission an iconic building or campus (i.e. Apple, Google, Facebook).

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Case Studies:

The critical analysis portion of this research project will consist of corporate campus case studies. The first examples will be early examples of this typology, and subsequent cases will follow chronologically. The first corporate campuses were concentrated in the United States' Midwest region and along the East Coast. Technology development, university partnerships, and venture capital were key influences on the rise of corporate offices in Silicon Valley and along the West Coast.

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Nela Park:

Nela Park in East Cleveland, Ohio was developed as an industrial park for National Electric Lamp Association (National Quality Lamp Division of the General Electric Company) in 1913. Although this is not quite a corporate campus this development is key to understanding corporate operations in twentieth-century America. The move from the downtown location to a more suburban setting marks a shift for businesses. Noted benefits of this industrial park are lower rents and improved working conditions (quieter and cleaner).



General view, Nela Park, (National Electric Lamp Association of the General Electric Co.) Taylor Rd. south of 20th St., East Cleveland, Ohio.

The Nela Park complex consists of 20 buildings in the Georgian style and feels quite similar to a university campus. Design and manufacturing simultaneously occurred at General Electric's East Cleveland location, although top research officials never worked here. This model is a pioneer for corporate architecture yet functions as a successful industrial park to this day. Nela Park still serves as the headquarters of GE's lighting division. The low-rise buildings and open green space are features that will continue with later corporate developments. However, the absence of parking lots at Nela Park along with its Georgian architecture allow the park to read more as a university campus than a corporate campus.

Murray Hill:

The first corporate campus was created by Bell Laboratories in Murray Hill, New Jersey. Company headquarters had existed before this; however, Murray Hill was the first to follow the campus typology. Murray Hill's construction began in 1941, with the first building completed in 1942. Much like the development of university campuses, the Murray Hill site continued to add buildings in the following decades.

The Murray Hill campus differs from Nela Park because more emphasis was placed on housing research and management staff. Murray Hill was the first time a corporation brought together research divisions to one location. By having several divisions near each other there was more opportunity for cross pollination of ideas within the company. The new presence of 300 to 400 engineers (and their families) was a driver for suburban housing development in the nearby townships. Current residents of Short Hill and New Providence were concerned that the facility would bring about too much development, specifically the industrial kind. This is where Murray Hill differed from the earlier Nela Park. No manufacturing would occur at this site, and the campus would house laboratories for research and development. This Bell Labs development spurred some of the first research and development zoning designations in the country.



Figure 2. Aerial Photo of Bell Laboratories at Murray Hill

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General Motors Technical Center:

Another one of Eero Saarinen's creations, the General Motors Technical Center, advanced beyond research and development facility to brand image. "The corporate campus humanized, sanitized, and glorified the corporate endeavor by invoking seductive American themes" (Mozingo 2011). Construction began on this project in 1949 and was completed in 1955. The layout of buildings around the large manmade lake evokes the image of a university quad. However, the sleek modernist buildings are a far cry from the architecture of university campuses and the earlier Nela Park. I have drawn heavily from Mozingo's "Pastoral Capitalism", and I believe this development is the prime midcentury example of that phrase. The GM Technical Center was leveraging industry and scientific research for profit and displayed this success through its campus design.



Figure 3. GM Technical Center in Warren, Michigan

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Holmdel:

Bell Laboratories opened another office in Holmdel, New Jersey. This development was designed by Eero Saarinen and featured a singular building on the site. The Bell Labs campuses served as both functional offices and a way to attract new talent. Like the GM Technical Center, the Holmdel campus could be used as a marketing tool for acquiring new talent.



Figure 4. Aerial Photo of Bell Laboratories at Holmdel

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Stanford Research Park:

The influence Hewlett-Packard and Stanford University on the Santa Clara Valley helped to create the Silicon Valley we know today. After World War II, Stanford was struggling financially and was sitting on valuable land. The university partnered with the City of Palo Alto to create a partnership. This partnership manifested in the development of the Stanford Industrial Park in 1953. This park was to provide office space for businesses that wanted access to a top-notch talent pool. The partnership exists to this day, with many new buildings added over the years. The name changed to Stanford Research Park in the 1970s to better reflect the aim. By looking at the map you can see that development did not stop in the 1950s. This research park continues to add new structures and industry giants still fill the tenant list.



Figure 5. Aerial Photo of Stanford Research Park

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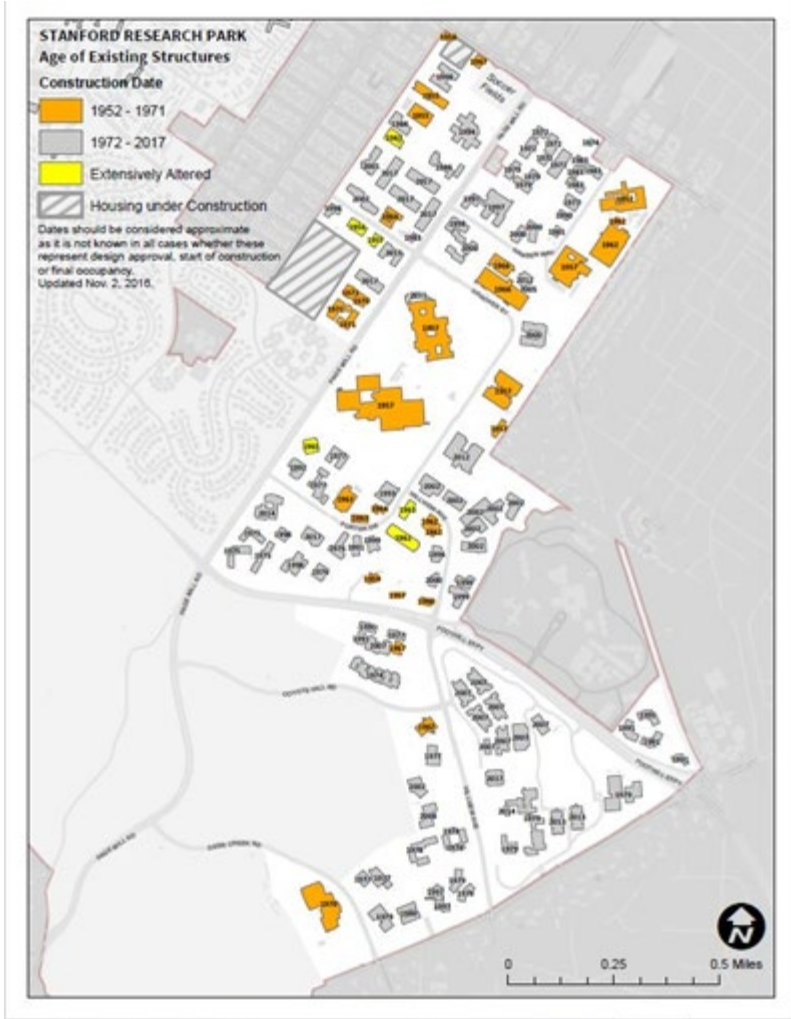


Figure 6. Age of Existing Structures, Stanford Research Park

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The decision to choose a certain typology for a company's next development is multifaceted to say the least. I have provided an in-depth historical framework for the development and adaptations of the corporate campus. In studying early Silicon Valley, the Stanford Research Park stands out as a unique model that differed from the East Coast and Midwest examples. This development was the result of a public and private partnership, that has continued to drive economic growth in Palo Alto and all of Silicon Valley.

After reading through additional resources, I am still coming up short for the information I would like to obtain. Next steps after this course should involve contacting personnel at some companies to ask how real estate decisions are made. The Laposá and Villupuram article touched on the type of research I would like to conduct, however did not provide any raw data from the specific companies.

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PROPOSAL AND FRAMEWORK

Executive Summary

What is the issue?

Current workplace typology has not changed in accordance with the evolving workforce, labor market, and new industries.

The Covid-19 pandemic has added a layer of complexity to this already existing issue, increasing its relevance in the contemporary workplace.

What ought to be?

After observing the drastic shift from office to work from home employment, a more adaptable and resilient typology is desperately needed. This typology will look different for various industries, but approximate frameworks can be outlined and suggested.

What is the proposition?

My proposition is to study this issue from many viewpoints including business, design, human resources, and environmental impacts. I believe providing evidence to support a design decision based on a strong business case will be more readily received by industries and individual companies.

What is the project?

The project will consist of three preparatory sections to support the individual proposals/business cases of each specified workplace typology package. The first section will include a historical review of office spaces from the early twentieth century until present day. This review will observe shifts at both a planning and architectural scale to encompass the city to suburb migration of offices. The second section will be an analytical capture of the Pre-Covid workforce. These metrics will describe company operating costs, energy usage and emissions, and employee productivity/efficiency. The third section will report on initial Covid-19 shifts performed by sample companies. Kneejerk reactions may not be the best long-term strategies, however these initial actions can inform future operational practices. This third section will also include a sampling of proposals from architecture, interior design, and product design firms concerning office layouts and furniture configurations.

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From these three sections I will create at minimum three proposals for companies to utilize in this Covid era, and in the post-Covid era. At present I have chosen software, manufacturing, and service as the industries that will receive a separate proposal.

Thesis Statement

The onset of the Covid-19 pandemic forced entire industries to shift portions of their workforce to a work from home model. Although this model was initially employed as a temporary solution, it has raised the question of whether the office is a necessary component for every company. My proposition is to study this issue from several viewpoints including business, design, human resources, and environmental impacts. I believe providing evidence to support a design decision based on a strong business case will be more readily received by industries and individual companies.

Conceptual Framework

This thesis will be centered on architecture as a vehicle for company performance. Further, this thesis will view architecture as: a conduit for employee productivity, a means of fostering employee safety, and an advancement in workplace typology.

The preliminary research conducted in Spring 2020 will establish a base history of the office space and its evolution throughout Twentieth century America. This portion of the thesis will utilize an urban design lens to study the macro shifts of the office from the dense urban core to the newly developed suburbs. This shift relies heavily on changing transportation patterns in addition to a convincing vision of the midcentury American worker.

Continued study of current office typologies will present a survey of popular, innovative, and successful design strategies. A shift from strict design observations will occur when company business operations will be examined. This portion of research will be used to determine financial implications of various office setups. Note, however, that this thesis is not merely a summary of company business performance following a historical background. Rather, this thesis will be an analytical study of company business performance that is directly related to the company's office real estate holdings, the company's office layout/design standards, and the company's work from home logistic strategies.

Methodology

As described in the above section, this thesis will begin with a historical survey of office architecture. A survey of contemporary office architecture will occur in ARCH 599. In addition to conducting a general architectural survey, a more detailed study will occur for specified companies/corporations/entities. The selection of these entities will be determined based on 1. Representation of overall field (does the architecture capture common techniques employed throughout other companies), 2. Breadth of information (is there adequate literature concerning this company and its office design decisions), and 3. Applicability (could the company's design techniques and operational decisions be repeated in a company of the same industry).

Based on the companies that are selected for further study, additional tenets can be identified for incorporation such as financial reporting (accounting), employee productivity and satisfaction, employee health, and environmental impacts. These subcategories will be used to generate a consensus of "successful" office architecture. These successful office approaches will be used to generate proposals for best practice design and operational strategies.

The proposals will each include: 1. Design suggestion (typology, location in reference to nearest metro area, floor layout), 2. Operational suggestion (employee location, scheduling) and 3. Financial suggestion (initial cost, payback period/ROI). Additional sections may be added to each proposal if relevant information arises that would further the design and business case.

Scope of Investigation

The historical survey portion of the thesis will be limited to office spaces located in the United States and will begin in the early Twentieth century. In selecting study companies, some may have international offices. However, the focus will be placed on companies with headquarters and significant presence in the United States. The design and business proposals presented in the thesis are intended to be timely and should be employed either in the continuing Covid or early Post-Covid era.

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INITIAL RESPONSES AND OBSERVATIONS

Initial Responses:

- Deep cleanings, then shutting down for a few days to weeks: This was a common response at the very early stages, regardless of if the company had any reported cases yet. This measure was precautionary, and believe it gave employers time to create a more comprehensive plan going forward.
- Work from home, if possible, hybrid model: Companies tried to limit the number of employees on site/at the office to allow for physical distancing. In some industries, entire offices were instructed to work from home to play it safe. Other industries were not willing to sacrifice production delays and tried to stagger shifts when possible (hybrid work schedule).
- No visitors to office: This was an effort to limit the number of people on site. Namely this was important for companies that use their office campus as a public relations tool, i.e., Google, Facebook, Apple, etc.
- Banning work trips/travel: Travel was deemed hazardous, and in some cases was not even possible (due to travel bans).

Short-Term Plans:

As the nature of the pandemic became clearer, many employers instituted a complete work-from-home model if possible. Remote conferencing technologies such as Zoom and Microsoft Teams became the new conference rooms. Instant messaging a coworker was the equivalent of popping your head over a cubicle wall to ask a question. The model was new in a technical way (eliminating commutes, altering dress codes, creating an at home office), but the interpersonal model was new too. Many managers found themselves either checking in too much or not enough with their workers. And the workers felt a constant need to keep their ears open for the next ding alerting them of a recent instant message.

Going forward the logistics of working from home became more natural, but the expectations of availability may still be unclear. Does one step away from dinner if you receive a work call past five o'clock? The grey area has put much emotional and mental strain on employees. Many feel the need to overcompensate to prove they are in fact being productive.

Long-Term Plans:

Returning to the office in a safe and efficient manner is top of mind for many employers. However, the pandemic's work-from-home effect has many questioning the need for an office at all. Many anecdotal surveys have come out showing both the hesitancy of employees to return to in-person work and their outright desire to stay working from home. Many believe the workplace still holds an important place within office culture, namely promoting social connections and employee relationships.

Overall Observations:

1.The physical office is still valued as part of the work experience.

The desire to have a physical office is still prevalent. The dramatic shift to work from home has shown many employers and employees that remote working can be beneficial when needed. However, the office as a place will continue to exist as a building typology.

2.Employees view the office as a place to collaborate and socialize.

The in-between moments that organically occur at the office are lacking in the work-from-home environment. In order to have this socialization, one must schedule a meeting to reach someone, whereas one could simply walk past a coworker's desk in the office.

3.Separation of work and home life is difficult without a dedicated space for each.

This separation of work and life is key to maintaining proper mental health among employees. Most people never envisioned their homes to serve as a one-stop shop for every facet of their lives. A physical office has historically been utilized to keep these areas of one's life separate. However, with the remote work shift it is not always possible to have a dedicated space for one's work.

4.The nine-to-five schedule is being questioned.

Many employees are finding the need to adjust their working hours. The merging of home and work life means working straight for hours on end is no longer possible for many. Tasks are still being accomplished without sitting at an office desk all day.

Developer/Urban Observations:

Developers are pausing on capital intensive projects and holding their current building stock. The continued spread of the virus leaves many developers without a clear plan for the near future. The overall observations from workplace culture will affect the real estate holdings of developers and corporations alike. The knee jerk reaction to liquidate empty office buildings may seem like the right decision in the moment but could have drastic implications to a city's vitality. A developer's building stock will likely become more diverse and be less dependent on office space soon.

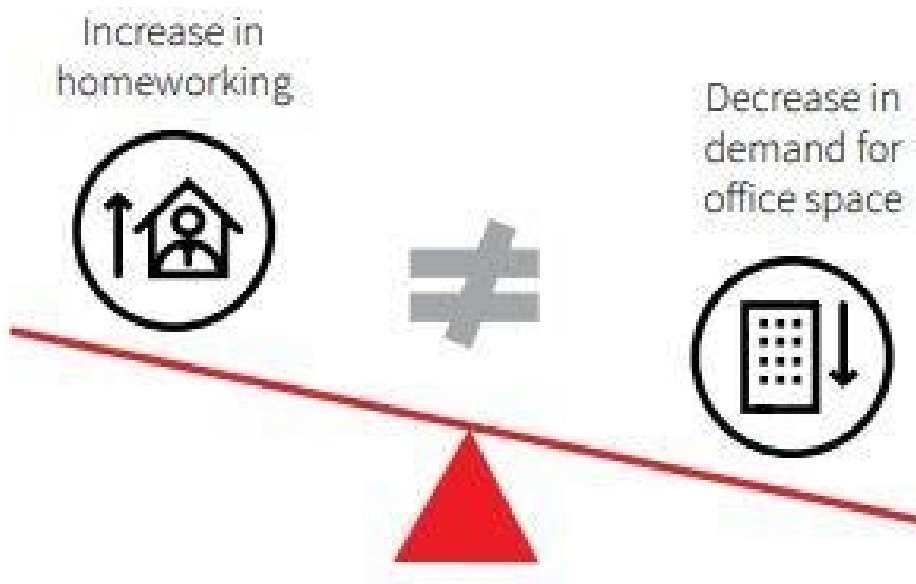


Figure 7. *The Future of Global Office Demand, JLL*

In addition to the portfolio mix changing for many real estate companies and developers, the business strategies are evolving. Flexible strategies going forward may include shorter lease terms. This would allow companies to flex as the needs of their workforce changes. Right now, work from home is holding the workforce together, but may not be the long term solution for every worker.



Figure 8. The Impact of COVID-19 on Flexible Space, JLL

When discussing office building stock, it is only natural to point to urban cores, but the location of office space may be shifting. The workplace expanded to the suburbs with highway expansion in the mid-Twentieth century, then shifted back to city centers with a new generation entering the workforce. This ebb and flow is indicative of work culture and society values as a whole.

Employees have come to enjoy the comforts of home and a more flexible schedule. The work from home reality of the past year has all but eliminated work commutes for many, which has freed up previously unutilized time. The commute is all but ingrained in the mind of many Americans, but does illicit a favorable association? If it is possible to work from home some days of the week many employees would happily do so.

It should be noted that prior to the pandemic, the hub-and-spoke model was gaining traction. This model operates with a main office (hub) that serves to connect several departments within a company. From this hub, multiple smaller offices (spokes) emanate out. The spokes act as an intermediate between a company's main building or campus and the home office. The spoke portion of this model is utilized by many coworking spaces that were thriving pre-pandemic. The scattered nature of these coworking spaces allows users to remain within their neighborhood and close to where they live.

[3]

The hub-and-spoke model could be a development model for companies going forward. Employees could use spoke locations most days, with hub locations being reserved for multi-department meetings and managerial staff. Satellite offices could occupy more flexible building spaces, which would allow the specific needs of local employees to be met.

Design/Office Observations:

Design implications for office locations and layouts largely hinge on the comfort level of employees. Many have grown accustomed to work from home habits and would not mind carrying this practice on post-pandemic. However, as previously mentioned the separation of home and work life is beneficial. Most design firms have gathered that a hybrid approach will best serve employee and employer needs. Hybrid in this case refers to a combination of work from home days and in office days.

On the days, that employees do come into the office it will look quite different. Even before the onset of the pandemic, the open office plan was declining in popularity. Companies were trading square footage savings for a decrease in productivity. Desks will no longer repeat endlessly across an entire floor but designated individual offices will not be making a comeback either. Utilizing a variety of spaces will likely be the way forward for most companies. Partially assigned seating and pods of movable furniture are two strategies that could be incorporated.

With travel being severely limited many meetings will continue to occur virtually. With employees needing to video call into separate meetings simultaneously, the needs for small booths could increase. Existing building layouts could be adjusted to better accommodate for these changings. A larger conference room could be converted to several smaller, soundproofed rooms.

With a hybrid work schedule, this will decrease the amount of people who are in the office at once. With lower person count it is possible to decrease overall office size. If partially assigned desks are incorporated a strict start of day and end of day wipe down would become routine. If no change to overall office layout is made immediately employees could occupy every other desk if a hybrid schedule is adopted.

Cultural Observations:

In addition to physical changes within the office, many operational changes will persist after the pandemic. Throughout this shift to work from home, coworkers have had the chance to see each other through a more empathetic lens. Video calls are often interrupted by someone's child or pet. Technical difficulties persist even after months of utilizing the same computer setup. The blurred line between work and home has cast a more human light on many employees. This attitude may promote a more robust remote-work policy.

Work is closely tied to many American's identity. The interruption of the nine-to-five grind during this pandemic has allowed individuals to delve into hobbies and passions outside of work. Baking bread, cutting your own hair, and reading have soared in popularity. It will be interesting to see if this disruption to the traditional 40-hour work week will have lasting impact. Will employees feel confident in taking advantage of new work policies or will the urge to be in the office as much as possible persist.

[4]

CONVERSATION WITH THE FIELD

Conversation with the Field:

Three industry professionals participated in dialogue to share their unique knowledge and insight regarding Covid-19's impact on office design and operations. Please refer to Appendix B: Industry Professional Meeting Minutes for a comprehensive summary of topics discussed. The figure below outlines main takeaways from each professional. Special thanks to Mary Lee Duff, Kay Sargent, and Clark Sept for their time and expertise.

Insights from the Field



Mary Lee Duff, Director of Strategy-Interior Architects

Virtual options can bring more equity into the workplace, especially regarding gender roles.

It's not just about making the workplace respond to Covid, but learning from people and employees. Just because the office has changed, does not mean every person will feel confident returning.



Kay Sargent, Director of Workplace-HOK



Clark Sept, Director of Consulting-Gensler

Some companies are on either side of the pendulum, with one extreme being a completely remote model and the other being completely in office with little change.

Figure 9. Industry Professional Insights, Kelsey Dempsey

[5]

DESIGN PROTOTYPES

1. As-Is:

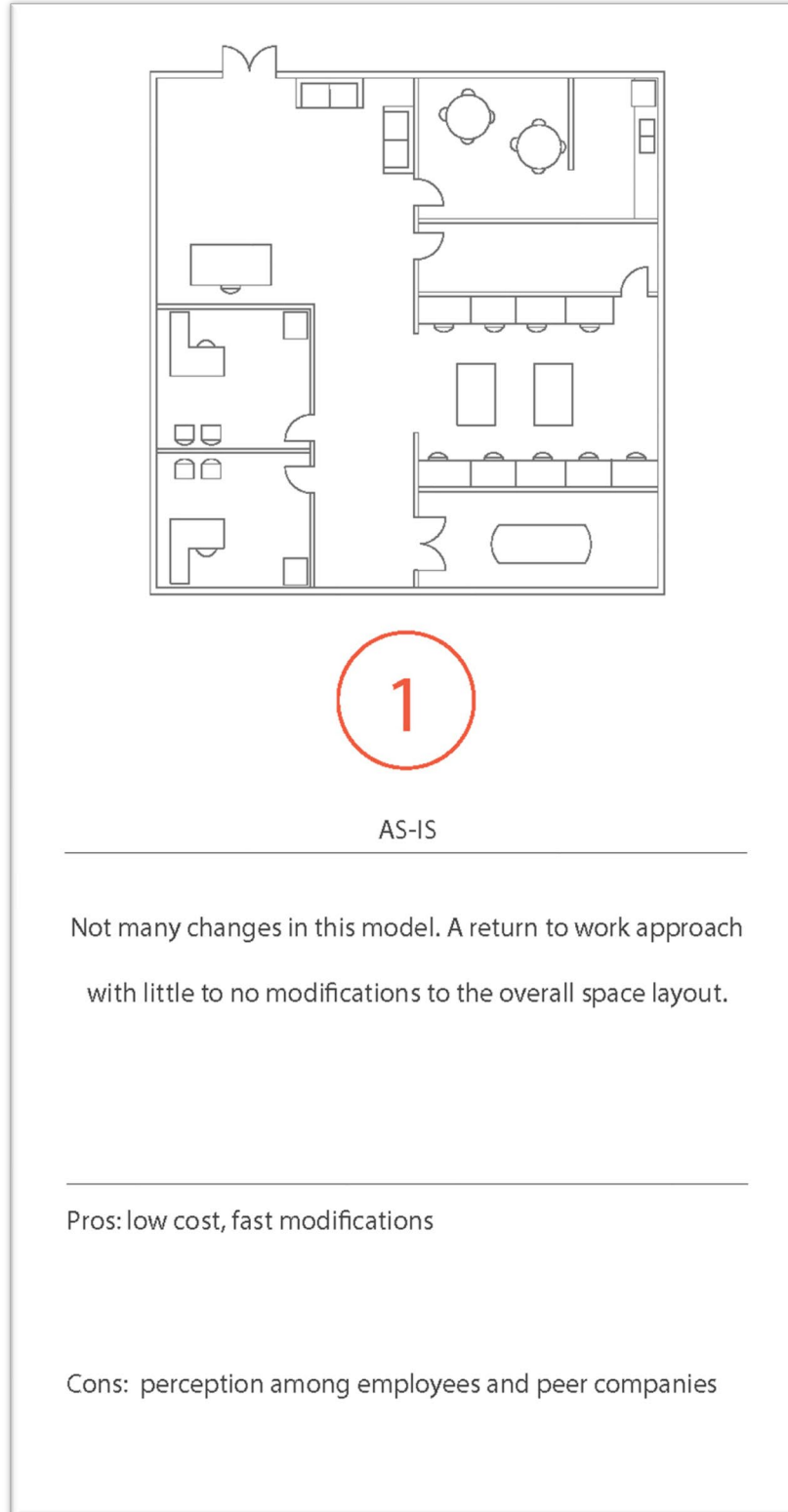


Figure 10. As-Is Model, Kelsey Dempsey

2. Paradigm Shift:

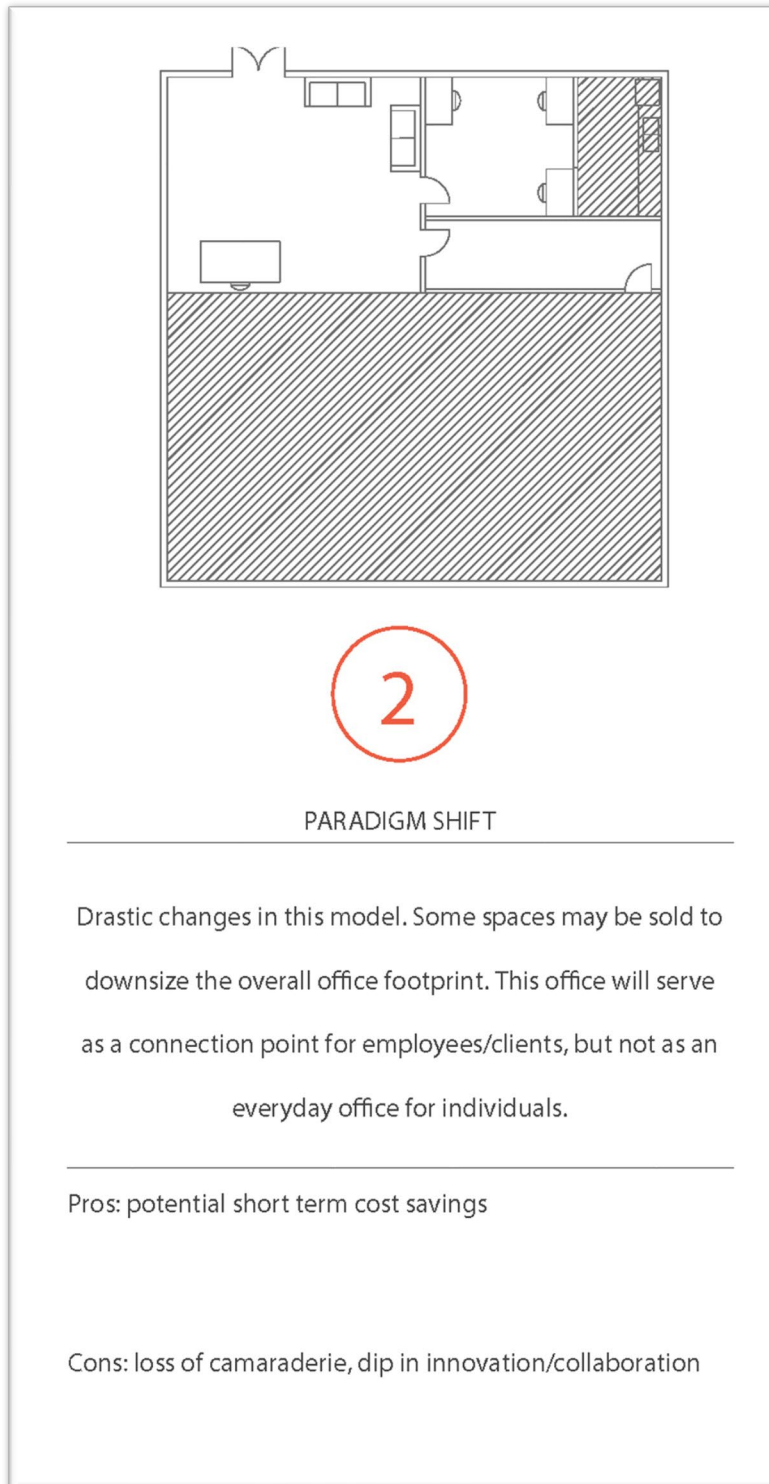


Figure 11. Paradigm Shift Model, Kelsey Dempsey

3. Hybrid:

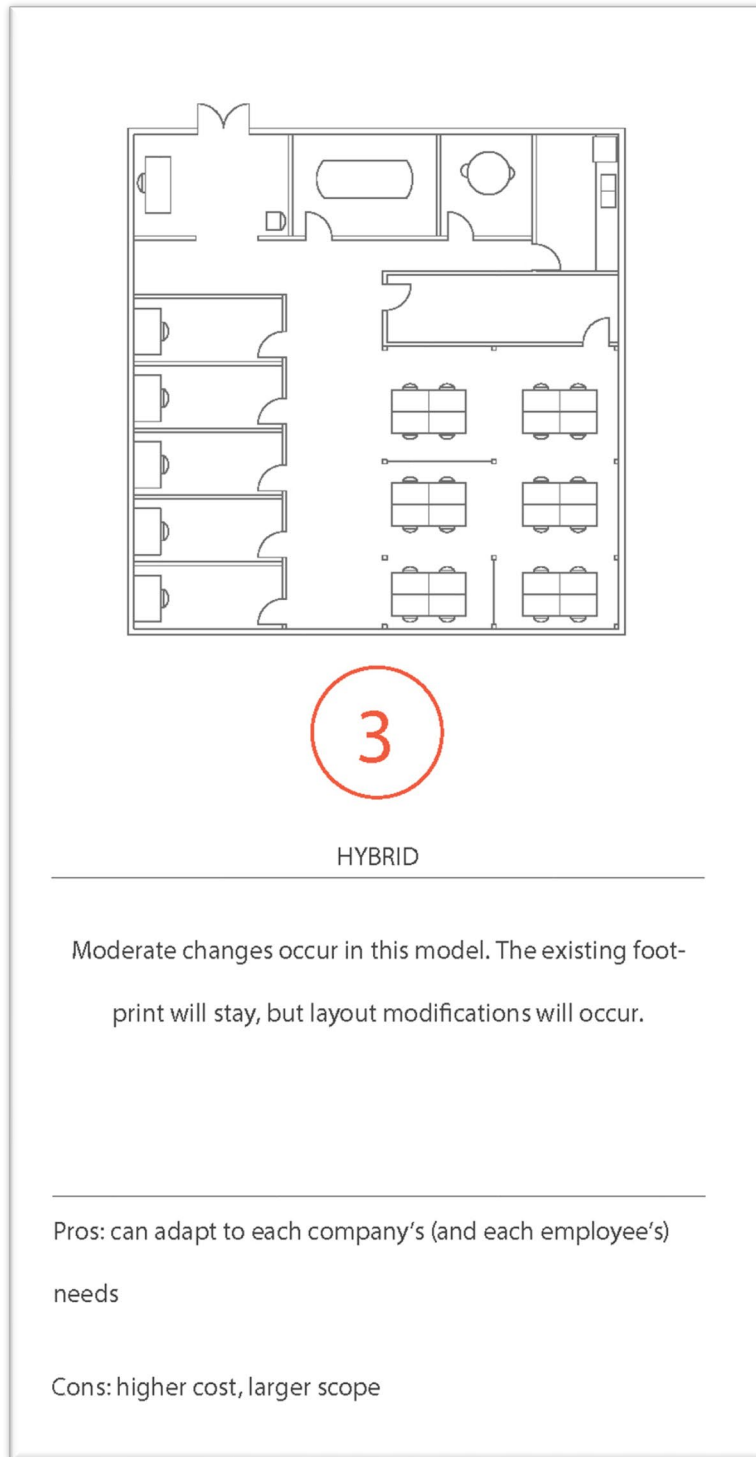


Figure 12. Hybrid Model, Kelsey Dempsey

Hybrid Model Continued:

After discussing with industry professionals, the specifics of each prototype, all agreed that the hybrid model would be the most fruitful model to explore. The figures included in this section will outline three spaces in a shared office building, in addition to furniture explorations.

1. Lobby/Shared Entrance
2. Architecture 1.0 (moderate change to the design office)
3. Architecture 2.0 (more drastic change to the design office)

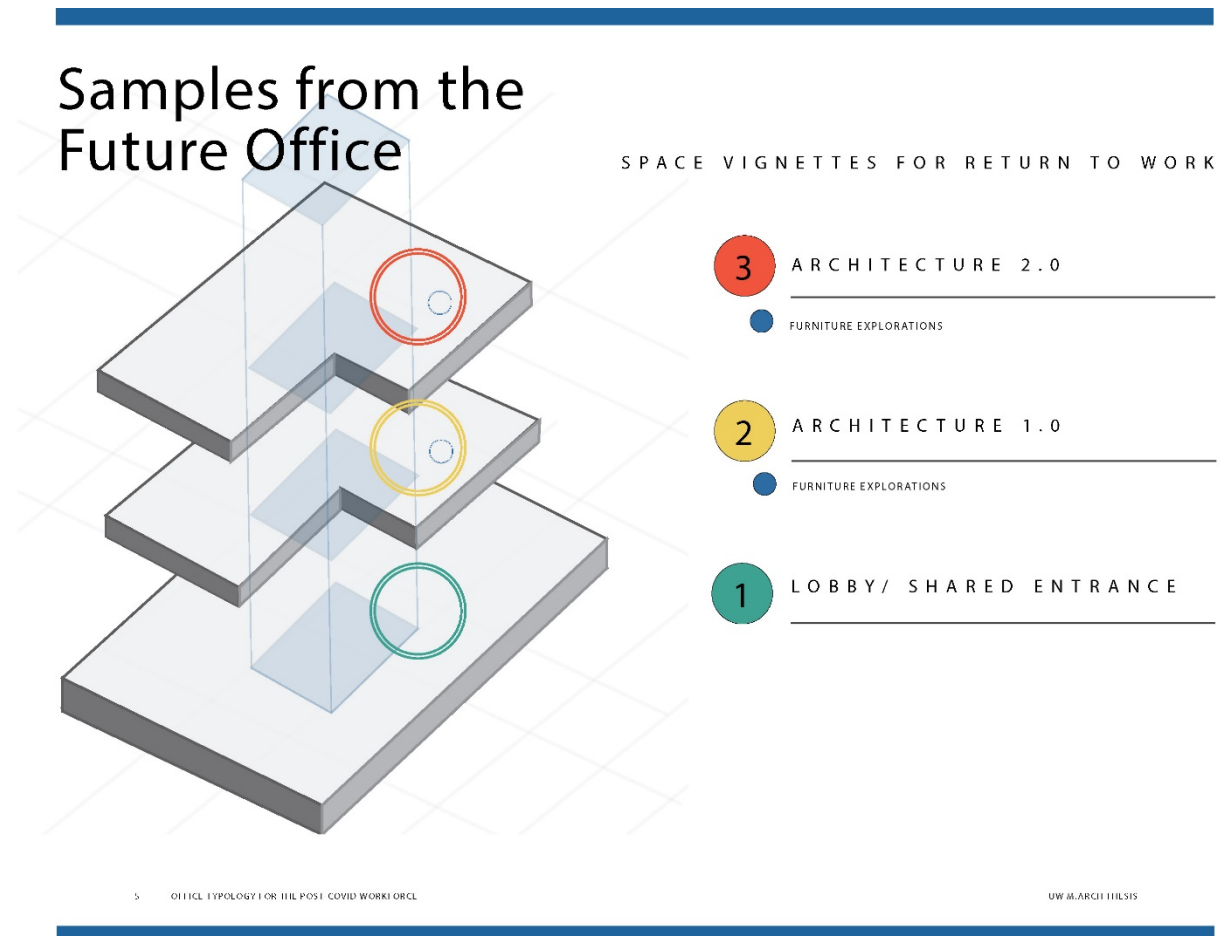


Figure 13. Hybrid Model Office Overview, Kelsey Dempsey

Lobby/Shared Entrance:



LOBBY/ SHARED ENTRANCE

COMPONENTS:

- Double height or ample daylighting
- Incorporation of plants and biophilic elements
- Enclosures/Nooks
- Drop ceilings and acoustic panels
- Staggered arrivals for visitors



Figure 14. Lobby/Shared Entrance, Kelsey Dempsey

Architecture 1.0:



ARCHITECTURE 1.0

COMPONENTS:

- Desk pods with peripheral storage
- Semi-enclosed meeting room (for conference and coworking)
- Layered presentation/collaboration surfaces
- Collaboration Hallway
- Virtual meeting rooms (group and individual)



Figure 15. Architecture 1.0, Kelsey Dempsey

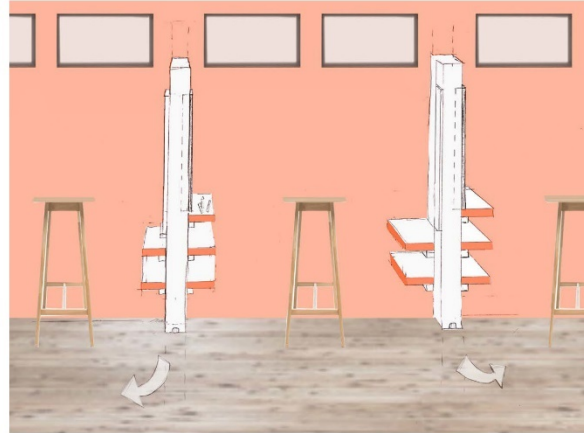
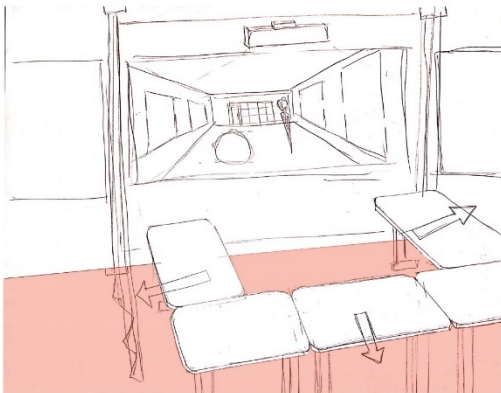
Architecture 2.0:



ARCHITECTURE 2.0

COMPONENTS:

- Virtual meeting rooms (group and individual)
- Project team/ "scrum" areas
- VR prototyping room



COMPONENTS:

- Desk pods with peripheral storage
- Layered presentation/collaboration surfaces
- Collaboration Hallway

Figure 16. Architecture 2.0, Kelsey Dempsey

Furniture Explorations:

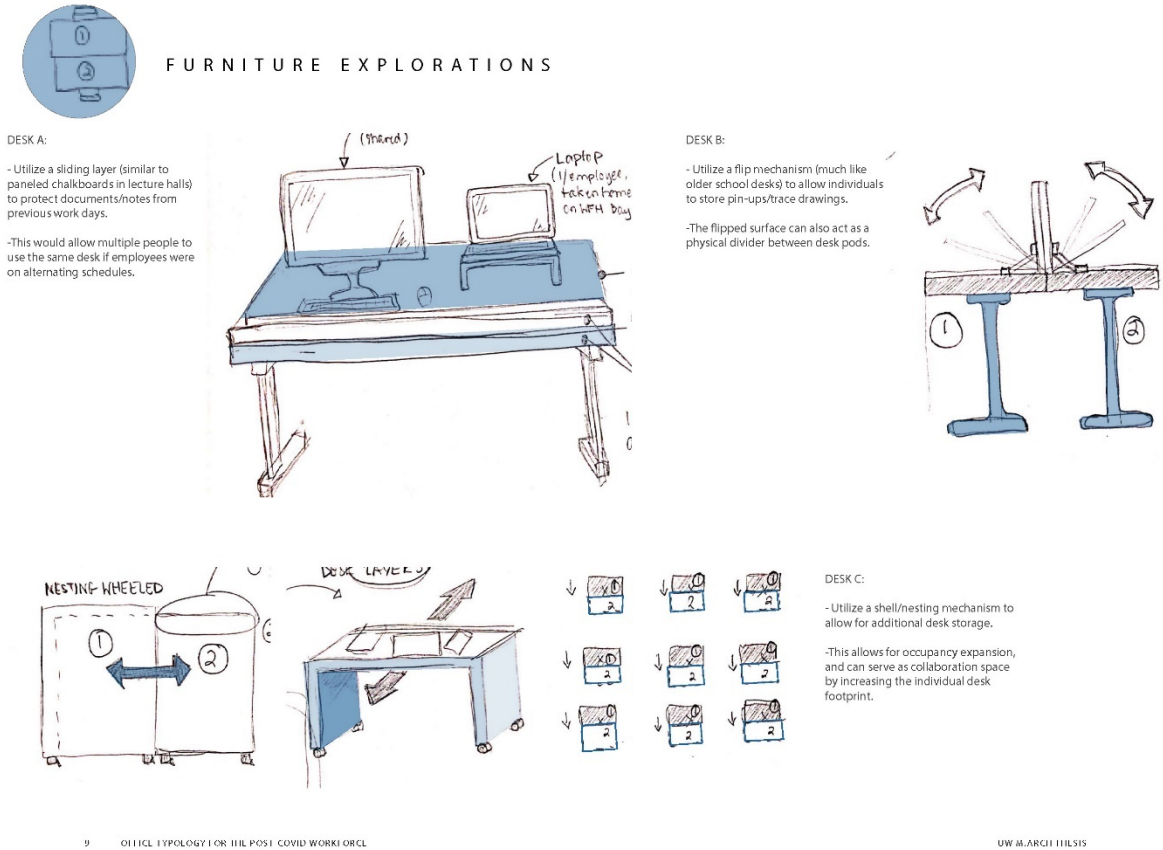


Figure 17. Furniture Explorations, Kelsey Dempsey

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APPENDIX A

COMMITTEE MEETING MINUTES

ARCH 599/700

Meeting: Kelsey Dempsey, Bob Mugerauer

1pm on January 13, 2021

Today we discussed the first four weeks of our schedule (included at the end for reference):

-Bob's role is twofold: 1. Positive insight, 2. Guardrail

-Logistics/Communication (Bi-weekly meeting, email kacdemps@uw.edu from here on out)

-Meetings are to serve as gentle pressure. Schedule and topic will change as quarter progresses.

-Relevance of topic, allows future research "seedlings"

-Aside: Employer-Employee trust factor (How has this developed? What components allow an employer to become more trusting of an employee's work from home behavior/productivity?)

- Proof vs. Exploration

"I've checked with this many office managers and this is the trend...."

Anecdotal relationships sometimes are more important than hard numbers-> And having unanswered questions allows for future research. NOT EVERYTHING NEEDS TO BE FIGURED OUT!

Tasks for Next Meeting (January 27,2021):

-Email Bob report from ARCH 592 (Research Methods) containing historical survey of office typologies (20th century)

-Refine/edit above report

-Gather popular press and anecdotal research concerning initial Covid-19 response (What were initial responses/strategies for work from home?)

APPENDIX A

a.1 Historical Survey

- Read and extract relevant findings from ARCH 592 Final Paper
 - Conduct survey of contemporary office typologies in the US (2010-2020)
 - Create a complete historical survey of office architecture from early Twentieth Century to pre-Covid
 - Present survey to committee for review
 - Receive feedback on survey, and incorporate into revision/next draft
- (set survey aside)

a.2 Company Responses to Covid-19 (several)

- Conduct broad research on company approaches to the sudden work from home shift upon the onset of Covid-19
- Identify varying approaches/Covid-19 responses (“business as usual”, limited hours, completely remote, staggered schedule, etc.)
- Identify business implications of each of these approaches (set company responses aside).

ARCH 599/700

Meeting: Kelsey Dempsey, Judith Heerwagen

11am on January 15, 2021

Notes from today's meeting:

-Goal/Aim of this thesis: Determining if the office is still beneficial for companies (benefits outweigh negatives).

-Touched on how smaller workforces in city centers could affect urban life

-How are companies making the decision to keep their real estate holdings?

-Biweekly meetings

Tasks for Next Meeting (January 27,2021):

-Email Judi report from ARCH 592 (Research Methods) containing historical survey of office typologies (20th century)

-Refine/edit above report

-Gather popular press and anecdotal research concerning initial Covid-19 response (What were initial responses/strategies for work from home?)

*Judith to send Kelsey resources, check with UW/University Architect about possibly sitting in on meetings

Proposed list of tasks for first four weeks (from Thesis proposal):

a.1 Historical Survey

-Read and extract relevant findings from ARCH 592 Final Paper

APPENDIX A

- Conduct survey of contemporary office typologies in the US (2010-2020)
 - Create a complete historical survey of office architecture from early Twentieth Century to pre-Covid
 - Present survey to committee for review
 - Receive feedback on survey, and incorporate into revision/next draft
- (set survey aside)

a.2 Company Responses to Covid-19 (several)

- Conduct broad research on company approaches to the sudden work from home shift upon the onset of Covid-19
- Identify varying approaches/Covid-19 responses (“business as usual”, limited hours, completely remote, staggered schedule, etc.)
- Identify business implications of each of these approaches(set company responses aside)

ARCH 599/700

Meeting: Kelsey Dempsey, Bob Mugerauer

1pm on January 27, 2021

Today we discussed:

-There is no set office typology that works well in all situations. There was no normal for the office before COVID, so there will be no one size fits all after COVID.

-1980s/1990s trend of no one having an office, you just come in and rent space (was this the early version of WeWork Bob?)

-It is clear the office wasn't working perfectly, and COVID's work from home measures just shone a light on this issue.

-Will companies be going forward focus on outlining measurable tasks for employees? Will there be less autonomy when it comes to task structure and managerial styles? (This harkens back to the trust/relationships between managers and employees).

-There is emotional and mental exhaustion due to always being "on". Employees feel the need to respond or constantly be at the ready when a message or phone call comes their way.

-Has the coffee break or dare I say smoke break been all but removed from the workday? (That time to oneself where you can decompress for a moment).

-The "now" is different than the "response". How a company intuitively maintained operations at the onset of COVID most likely looks different than the "back to work" plan they put out publicly after working kinks out.

-How does office space attract new hires/employees? How does the office/ corporate campus function as a PR tool to customers? Is the office merely an image, or identity architecture?

APPENDIX A

Tasks for Next Meeting (February 10,2021)

- Gain contacts from Judi at Google and LinkedIn
- Reach out to my personal connections at Apple, Tesla
- Schedule interviews/talks with company contacts

*Note to investigate disclosure/legal doc (Stating that purpose of interview is for research and non-business purposes, etc. and that I can use the shared information) *

- Follow a.3 as a guide, but feel free to be more flexible
- Maintain open channel of communication with company contacts

From Thesis Proposal....

a.3 Specific Company Investigation

- Obtain anecdotal research and testimonials from company employees (either as primary research or as secondary research) concerning opinions of workplace environments
- From this research determine if certain office typologies and operational approaches are still viable for that industry (ex: if work from home is working for a company, and employees are uncomfortable coming back to an office setting full-time, leverage this insight)
- Create initial design proposal for first company
- Create initial operational proposal for first company
- Create initial business proposal for first company

ARCH 599/700

Meeting: Kelsey Dempsey, Judith Heerwagen

11am on January 29, 2021

Notes from today's meeting:

- This conversation is more than a "return to work" plan, it is an investigation on the relevance of the office.
- Hub/spoke offices vs. central HQ. Why did this idea not work in the 1980s? Were these offices of convenience rather than a place to connect with work colleagues/friends?
- What becomes of these newly erected corporate campuses (i.e., Google)?
- Design/operational solutions vs. Real estate/financial solutions (What might make the best sense operationally in terms of day-to-day function may not be possible financially).

Tasks for Next Meeting:

- Email Judi and Bob to schedule a joint meeting the week of February 7th
- Bubble diagram of concepts (what concepts are repeated in reports/articles, and how do they relate to each other)
- Identify hierarchy of the above concepts (ex. Does the hybrid work schedule have implications on a company's real estate holdings or on the urban core)
- Email these findings to Judi and Bob (receive feedback)
- Revise before next meeting

A.2 Continued:

A.2 as described in the initial Thesis Proposal was concerned with initial company response (Spring/Summer 2020). However, before conducting interviews and moving into A.3, I need to leverage existing literature focusing on future solutions for the workplace (focusing on design firms).

A.2 continued will shift from response to proactive solutions. By identifying concepts that are echoed across the board I will be able to present a solid foundation to my interviewees.

ARCH 599/700

Meeting: Kelsey Dempsey, Judith Heerwagen, Bob Mugerauer

4pm on February 17, 2021

Notes from today's meeting:

-Tighten lens of thesis topic-> What do you want to figure out/gather from this project?

-What I want to know is how are decisions made for a company to modify their built environment? Would companies even be willing to share this information, or would they just share the generic laundry list: talent pool, transportation infrastructure, healthy downtown.

-Decision making factors Pre-Covid and Post Covid may look different. Pre-Covid decision making factors could be identified by reading existing literature, but post-Covid factors may still be in flux. Also, companies and consultants are hesitant to share absolutes and definite plans. Everyone is still unsure, and decisions will only be deemed appropriate after putting them into play.

What type of office typology do you want to focus on? This can narrow down the scope of the thesis. I am interested in corporate campuses/ collections of buildings. However, companies at this scale typically are more discrete with sharing insights. Is it feasible in the time I must reach out to inside contacts at companies like LinkedIn, Google, Facebook, etc. and receive actual feedback? Also, what is "in it" for these contacts. What do I have as a bargaining chip to illicit participation?

-Maybe a less notable company would be the way to proceed? A local contact could be more valuable in the ease of communication. Use the before, during, after (Covid) matrix to organize decision making factors.

Judith's GSA Connection:

-Phase 1 is wrapped up, which creates an opportunity for me to meet with the project manager and team.

-How are they seeing work changing? What have they learned? How are people working now?

-What do I want to know from GSA?

-Prompts from Judith's email: What are the key questions you want to explore? How can what you learn contribute to how you would use it to guide design for future office(s). How do you integrate diverse ideas? etc."

APPENDIX A

Tasks for Next Meeting:

1. Develop outline for GSA meeting (then send to Judith and Bob)
2. Redefine specific company investigation tasks
3. Compile existing documents into a working singular thesis document

Specific Company Investigation/Questionnaire

-Obtain anecdotal research and testimonials from company employees (either as primary research or as secondary research) concerning opinions of workplace environments

-From this research determine if certain office typologies and operational approaches are still viable for that industry (ex: if work from home is working for a company, and employees are uncomfortable coming back to an office setting full-time, leverage this insight)

-Create initial design proposal for first company

-Create initial operational proposal for first company

-Create initial business proposal for first company

ARCH 599/700

Meeting: Kelsey Dempsey, Judith Heerwagen

4pm on March 24, 2021

[Reviewed meeting notes from Kelsey's meetings with Mary Lee Duff of Interior Architects and Kay Sargent of HOK.]

Summary Topics from Meeting with Mary Lee:

-Of the three prototypes presented, Mary Lee sees most clients migrating toward a hybrid approach. The technology exists to create a paradigm shift space that utilizes AR/VR strategies; however, these are not financially feasible for most companies. The hybrid approach will use a no-touch built core (restrooms, circulation, etc.) and a touch perimeter (open/flexible office). This will allow greater flexibility within a tenant's space, and for further growth if a tenant moves out of a space all together.

-The "open office" portion of the hybrid approach is not simply rows of desks or cubicles. Rather, it will include a variety of spaces that range in size and noise capacities. For example, small spaces that are near soundproof, medium spaces that have semi-permanent furniture arrangements, and larger spaces that allow for differing desk layouts.

-The office will need to be agile to foster timely collaboration and serve as a social destination.

Summary Topics from Meeting with Kay:

-Activity based working is on the rise in the US (this idea has been present in Europe but is still new to US).

-Remote work was already growing in popularity." Agile"/" Scrum" rooms where everyone on a team can throw out ideas is popular in creative businesses.

-The hub and spoke model was and is being put into practice. This model utilizes a central hub (ex. headquarters/central office) and several smaller spokes (satellite/neighborhood offices).

Returning to Office:

-Some companies will have spokes, and some will not. This is dependent on the company's size, needs, and resources. Companies can conduct a supply and demand analysis to see how many employees will be interested in a shared office space. Offices in general had too much square footage to begin with before the pandemic.

APPENDIX A

-Design firms are asking clients to be patient. Even if the office is adjusted and ready for employees to return, the employees themselves may not be ready. Returning to the office is not solely about the space, but about the comfort level of the people who will inhabit it.

Topics Discussed with Judith:

-Developing a timeline for incremental change will be the most practical way forward for most companies.

-By creating phases for office changes a company can gain footing at each step. As discussed with Kay, employees will need to readjust to in-office environments.

-This thesis is to serve as a prompt for discussion, not as the answer to office design going forward. The changing components of the office should be visually shown, then explained using findings in literature and these interviews.

ARCH 599/700

Meeting: Kelsey Dempsey, Bob Mugerauer, Judith Heerwagen

4pm on April 7, 2021

Early today I attended the department's thesis meeting. We discussed deadlines, presentations, and document guidelines. I relayed this information to Bob and Judith and began to discuss when they would be free for final review.

Summary from Meeting:

-Showed Bob and Judith that I had compiled an initial draft of my thesis. But we agreed that I should shift to sketching and graphics instead of writing more.

-Two main dates are June 1st/2nd (presentations) and June 27th (final document due). All of us agreed it to be best to have the final document complete and submitted by graduation.

-Shooting for a full draft by May 10th.

ARCH 599/700

Meeting: Kelsey Dempsey, Bob Mugerauer, Judith Heerwagen

4pm on April 14, 2021

Summary from Meeting:

-Reviewed sketches from past week. These were focused on the hallway and desk areas.

- Desk Assignment:

You can utilize a reservation system like how a restaurant allows you to pick what table you would want to sit at. This would minimize desk mix ups when one desk will be serving multiple employees throughout the week.

- Architects and Their Paper:

Design professionals draw and take notes profusely by hand. Many sketches are often scattered across one's desk to spur inspiration. There could be a way to preserve the exact arrangement of these sketches from day to day, while letting someone else use that same desk. Look to sketches showing similarity between a multi-layered chalkboard and a possible multi-layered desk.

This same idea could be used for pinup space. Different layers could slide past each other so different projects teams could come back to their designated pin-up spaces.

- What Will Draw People Back?

After over a year of working from home, many employees have come to enjoy the freedoms of not being in the office. When creating an atmosphere for employees to return to we must include both comforting and interesting spaces that can flex with personal preferences.

Also, keeping in mind indoor air quality can help ease safety concerns. Air exchange rates could be increased, and more intensive filtration could occur in shared spaces.

The psychology of returning to work is just as important as the logistics. Creating hallways that remind employees of the outdoors could subliminally help occupants feel safer. Throughout the pandemic we have seen the importance of the outdoors for gathering (for its ample space and air flow).

- Next Meeting Goals:

1. Layout option sketches

2. Common space sketches *Think of the flow of the spaces, not just each one individually.

ARCH 599/700

Meeting: Kelsey Dempsey, Bob Mugerauer

4pm on May 5, 2021

Summary from Meeting:

-Reviewed sketches from past week. Sketches included an overall axon that identified 3 “types” of office spaces. Bob gave feedback on order and techniques to make visuals clearer. I have included hand notes from the meeting.

-Also sketches included a mind map/ topic development timeline of my research. Bob and I agreed that the paper can contain all the topic development (from campus typologies/history of offices) whereas the presentation should come in at a more pertinent point (what where the instantaneous affects COVID had on the office/work life).

Presentation Order:

1. How did COVID affect the office in the short term? What were strategies that companies took right away to mitigate spread and foster safety when the nature of the virus was largely unknown? (Use write-ups from Winter 2021)
2. Shift to more lasting changes-->this is where the three prototypes/approaches can come into play (As-is, paradigm shift, and hybrid).
3. Summarizes this intro portion by pulling out key reasons the office is still needed, and why it is important. (Collaboration, social aspect, change of scenery, etc.).
4. Overall building vignette: This is where the design aspect of the thesis really comes into play. Visual will be exploded axon with three areas highlighted, then a logo/color will identify each area going forward
5. Lobby: The lobby space will showcase how the entrance and common spaces may change when tenants return to the office.
6. Arch: The Arch office is for those practices that want to play it a touch safer when making updates to their space, or those that do not have as large of a budget to work with.
7. Arch 2.0 (Labeled “Tech” in my notes): The Arch 2.0 office is for those practices that have more capital to spend on updating and investing in their tech lineup (VR room, 360 AV capabilities, etc.). Note that this Arch 2.0 can be applied to other business types as well.

APPENDIX A

8. Takeaways: This slide will summarize and speculate. What are some propositions that may seem way out there right now, but are likely coming soon? Also, what are lasting impacts that are beyond design/built space that will affect the function of the office going forward?
9. Questions: The end of the presentation is where I will invite a dialogue with visiting jurors and industry professionals. As Bob shared, this presentation and thesis is to “educate and stimulate”. In no way is this research complete, but rather a jumping off point for future investigation. I am hoping to invite Mary Lee, Kay, or Clark to my review once we have secured a time.

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INDUSTRY PROFESSIONAL MEETING MINUTES

ARCH 599/700

Meeting: Kelsey Dempsey, Mary Lee Duff (Interior Architects)

1pm on March 15, 2021

Notes from today's meeting:

-Introductions and 5-minute pitch to Mary Lee about basis of my Thesis. Mary Lee works for Interior Architects (founded in 1984, now has 23 offices)

-Mary Lee is based in SF/Bay Area, and therefore works with large tech companies

-Mary Lee gives feedback on each prototype concept

1. "As Is":

Not seeing much of this

Companies are using Covid as a chance to reflect on how their office functions and how they can improve.

2. "Paradigm Shift":

-There are some companies that are leasing out their space or moving all together. Virtual rooms are already happening, and lower tech virtual tools (desk top options with directional audio).

-Virtual options can bring more equity into the workplace, especially regarding gender roles. Return to work will look different for males and females (who have taken on additional household responsibilities during Covid).

-Immersive (goggles) vs. Desktop

3. "Hybrid":

Even before Covid offices were moving to a hybrid model

-Real estate professionals seek more flexibility in office spaces, this helps marketing to a wider range of future tenants/clients.

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-For example, have a built core in the middle of a floorplate/building, with open space surrounding on the perimeter.

-Agile spaces are needed

-The office should be a destination of collaboration.

Additional insights from Mary Lee:

4 Part Workplace:

1. Home
2. Main Office (Hub)
3. Satellite Space (Spoke)
4. Energize Space

- Urban vs. Suburban Discussion:

-Generational preferences > Younger/single employees want to be close to amenities that an urban setting provides. Employees that have families desire to be in the suburbs.

-Companies have begun to experiment with a “vertical campus” model for their HQ’s and have supplemental satellite spaces outside of the urban core.

- A driver for this vertical campus is also the built-in sustainability factor that comes with mass transit. (Employees can access a centrally located HQ easier than one in the suburbs, generally).

- Next Meeting Goals :

1. Send prototypes to Mary Lee ✓ (completed)
2. Mary Lee connect Kelsey with researcher (Erik Lucken) ✓ (completed)

ARCH 599/700

Meeting: Kelsey Dempsey, Kay Sargent (HOK)

1pm on March 19, 2021

Notes from today's meeting:

-Kay shared multiple resources during our meeting today. She reviewed HOK's Workplace Evolution timeline which highlights office layout trends from the 1980's to present.



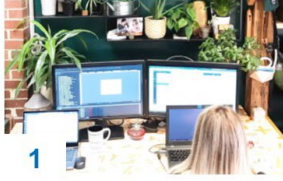
Figure 9. Workplace Evolution, HOK

-Kay agrees that the hybrid model is what most companies/clients are moving towards. And she noted that each company may have a variety of the above spaces within their workplace portfolio.

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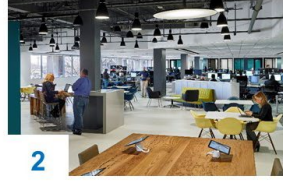
-She also shared several “lasting effects of Covid”. It is not just about making the workplace/office respond to Covid, but learning from people and employees. Just because the office has changed, does not mean every person will feel confident returning.

COVID-19 LASTING INFLUENCES



1

Increased remote work programs



2

More choice, spacing, unassigned work points



3

Enhanced lobbies for transition



4

Shielding | Boundaries | Dividers



5

More storage space - personal and supplies



6

Enhanced HVAC Systems, Enhanced filtration and air exchanges

LASTING INFLUENCES



7

Increased use of technology to reduce touchpoints



8

Reworked restrooms



9

Variation of meeting spaces



10

Increased handwashing capacity



11

Controlled spaces for visitors



12

Minimalism

Figure 10. COVID-19 Lasting Influences, HOK

ARCH 599/700

Meeting: Kelsey Dempsey, Clark Sept (Gensler)

9am on April 6, 2021

Notes from today's meeting:

I introduced myself to Clark and gave the background on my thesis topic. I shared the three prototypes with Clark, then we began discussing the factors that affect a company's decision to move forward with a certain prototype or strategy.

Clark quickly shared that this issue of return to work is not just a design problem, but more of a strategy for all parties involved. He began by stating that development strategies hinge on public policy, planning, and tax code implications for organizations. There is a long history of inequity in the workplace, and the pandemic has just exacerbated those. When discussing development, he shared a piece by Richard Florida called "The World is Spiky" which covers the topic of globalization and agency/access.

Organizational Values:

When asking Clark how a company chooses to make decisions concerning their offices, he answered in a different way than other people I have talked with. He placed importance on an organization's values as a driver for decision making. Some companies want to go after diverse and young talent, and for this type of employee you see a greater pool in urban areas. In addition to an organization's overall values, you have the personal values of leadership within. What is important to leadership may not be as important to the younger employees (who are a part of another generation). This dissonance can cause a disconnect within companies.

Organizational Approaches:

In addition to a company's values, there is also its approach. Some companies want to actively engage with their urban environment. They want employees to have a dialogue with the street and become a part of the neighborhood they are in. This approach is utilized by Salesforce at their offices in San Francisco where several amenities were intentionally left out of their buildings. But not having every need under its roof, Salesforce is nudging its employees to interact with their environs. A differing approach is used by Google, who packs its buildings chalk full of amenities for its employees. Googlers never have to leave the office for their day-to-day needs, creating a stark divide between who works for the company and who does not.

Covid Shift:

Even though large corporations have been able to pivot to work-from-home for the majority of their employees, smaller scale businesses do not always have that luxury. For example, Clark mentioned a chiropractor located near Gensler's SF office that had to close up shop due to lack of customers. This

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small business owner pivoted his business to a mobile model in order to meet his clients where they were at, literally. Although remote work has been a great tool during this pandemic, it is not the answer for all work modalities and careers. Technology has allowed greater mobility for many workers, allowing employees to work for offices not geographically close to them. That being said, not everyone has an equal playing field when it comes to their line of work or even technology access. This dilemma can be referred to as “experience equity”.

Takeaways:

Return to work is a “race to second place”. Everyone is waiting to see how it’s done, rather than going for it right now. Clark believes that some companies are on either side of the pendulum, with one extreme being a completely remote model and the other being completely in office with little change. What is likely to stick will be a hybrid approach. This approach is not clearly defined and will look different for every company. One company’s approach will likely change several times throughout the next few years to adequately respond to its employees’ and business needs. Return to work should be more of a continuum rather than an on/off approach.

The office is a place to foster company culture and collaboration. The office will persist due to our innate social nature. The office is a matter of physical environment, digital environment, and policy combined.

