

WORK IN THE 21ST CENTURY:
A STUDY IN ORGANIZATIONAL ADAPTATION TO ALTERNATIVE WORK
ARRANGEMENTS

by

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ABSTRACT

The concept of alternative work arrangements (AWAs) represents a growing trend within many organizations to shift once-common models of working to newer paradigms. Among many options, this includes models where employees may work from somewhere other than a primary physical office space (remote work), or no longer possess a personal desk at their office (desk sharing). Both remote work and desk sharing often require employees to adapt to a mode of “working” far different than they are accustomed to, yielding a range of conflicting opinions, pros and cons, and unique experiences along the way. The research question becomes: *How do employees make sense of their organization’s shift towards alternative work arrangements?* This capstone explores the transition from the perspective of a higher-education information technology organization (HEITO) in the midst of its journey in adopting and adapting to AWAs, initially presenting the historical circumstances that led to the organization’s current state. A literature review and secondary research is used to explore AWAs and several sub-topics related to the change, and a recent survey of HEITO’s employees is used to gather quantitative and qualitative data on the organization’s transition. This capstone concludes with an analysis of the research data, and thoughts pertaining to further studies on AWAs.

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Lastly, I'd be remiss to not express a sincere debt of gratitude to the higher-education IT organization (HEITO) that I am currently a member of, and that this capstone is centered around. Not every organization would be willing to share its own story so candidly through personal opinions and survey data, and allow it at the highest levels. The linkage between my learnings throughout this program and getting to know and assess my own organization is inextricable, and I could think of no better way to cap off this journey than with this capstone.

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CHAPTER 1

INTRODUCTION

The Changing Landscape of “Work”

If you had to describe what your office environment looks like, what would first come to mind? You might think of it as a somewhat common workplace, filled with wall-height cubicles and the glow of fluorescent lighting. Perhaps instead of the environment itself, you think of the varied activities that occur in and around work, including the numerous watercooler conversations in your breakroom over the years, or the slog through traffic that encompasses your daily commute. However, if you're one of the 43% of United States (US) workers who spend at least some of their time working remotely, or one of the 5.2% of US employees working full-time from home, you may instead speak of the comfort of your living room or countless alternate locations that resemble anything but a classic “office” (Choudhury, Larson, & Foroughi, 2019). Perhaps instead of the commotion that occurs in your breakroom or on the road, you instead call to mind the mild buzz of your local coffee shop, or relish the absence of a commute as part of your daily routine. In such scenarios, the idea of *remote work* becomes an essential part of the way some workers adapt to their overall work environment.

Similarly, picture your desk at work, and consider how you might describe it to others. To some, photographs of family and friends, an array of office supplies and assorted tchotchkes will come to mind, and frame a sense of personal belonging that surrounds your work area. Yet conversely, some may instinctively retort “*My desk?*”, and look back to the days of having a personal, private desk at work as a tale from days

of yore. Some workers may simply choose, or be assigned, a desk at random that contains a minute set of essentials (e.g. computer monitor, keyboard, mouse) when physically on-site at work, and carry around their laptop and other belongings as needed. Of course, the concept of being “at work” itself is subjective, as we may have all of the personal creature comforts of a work desk, but possess them in a workspace primarily based at home or at a different location. While the average, dedicated personal workspace continues to decline in both size and time used in traditional office environments, this decline becomes ever apparent when viewed through the lens of companies moving towards models of *desk sharing* for their workers (Lewis, 2013).

Both remote work and desk sharing may be considered unique phenomena in the realm of the modern workplace, but it is imperative to view such changes from a broader perspective, i.e. seeing the forest through the trees. From this perspective, both concepts are really just two of many possible examples of *alternative work arrangements*, hereupon often referred to in the abbreviated form of AWAs. In our case, AWAs can be described as working conditions and measures that deviate from the norm of working in a company’s primary physical office building, and having a personal desk at that location. With events such as the Coronavirus pandemic, also known as COVID-19, forcing millions of workers internationally across various sectors to work remotely to curb the spread of the virus, employees have become accustomed to different modes of working more than ever before, or at least out of necessity (Clark, 2020). Additionally, independent of such crisis scenarios, when a number of Fortune 500 companies have continued adopting such measures to the extent that they become the standard for how

many modern companies operate, what exactly is the “norm” in the modern-day workplace?

Perhaps if nothing else, such questions make one thing clear: work in the 21st century and how one defines where and how they “work” continues to evolve and, more importantly, is increasingly moving towards a model of alternative work arrangements. Several data, research and first-hand accounts from employees can ultimately attest to such changes taking place within many office environments. Yet it is within this general assessment that a common fallacy exists. As highlighted in our initial descriptions and contrasting depictions of remote work and desk sharing, these modes of AWA adoption are often viewed as binary strata – i.e. a working world with AWAs, or one without them. To take a cue from Roger Martin (2009, p. 8) in a work explored through Janet Greco’s DYNM 551 *Devil’s Advocate* class, those who “exploit opposing ideas to construct a new solution enjoy a built-in advantage over thinkers who can consider only one model at a time.” In reality, the world of AWAs is far more than binary.

Companies often experience more than simply choosing (or not) to actively employ AWAs within their organization. In fact, for those that have endeavored into the realm of AWAs, the process of bringing about a change towards AWAs entails much more than a company-wide email, or metaphorical flip of a light switch from a policy and procedural perspective. Rather, some companies are caught in the middle of undergoing such a change towards AWAs; a process which entails considerable effort and adjustment from leadership and employees alike. This adjustment process can be lengthy for those organizations less adept at change, and often involves numerous smaller changes throughout levels of the organization to further its rollout. It is this same process that will

ultimately (re)shape employees' perspectives about their own employer, how workers are treated, and what role a company and its policies play in alignment with workers' future goals and aspirations. Overall, companies may instead actively be involved in *adapting* to, and moving towards a model of AWAs, while simultaneously breaking away from the cultural norms, standards and comforts many have considered to be “work” over the years. In fact, it is this exact process that my organization is actively undergoing today, and this transition scenario that my capstone specifically addresses by asking the research question: *How do employees make sense of their organization's shift towards alternative work arrangements?*

Origin Story – An Organization in Transition

It often takes a personal experience to define the impact that a change – be it small, large, or any degree in between – can have on an organization and its people. It is no coincidence that the topic for this capstone has its roots in a personal experience I have witnessed and been an active participant of. I am a member of an organization that has decided to embark on a journey towards adopting AWAs of both remote work and desk sharing, a journey that is still ongoing after several years. My organization, which we will generically identify as the “Higher-Ed IT Org” and abbreviated as “HEITO”, is a slightly above 100-person IT organization within a northeastern United States (US) higher education institution. Though the organization's identity is intentionally kept anonymous for the purpose of this capstone, it is worth noting that the IT organization is not central to the university itself, but rather a specific school within the university.

The organization is broken up across eight formalized operational divisions, with a number of smaller sub-teams (as few as one, as many as nine) per operational division.

Each operational division is led by a Senior Director, each of whom report to the organization's Chief Information Officer (CIO). Each sub-team within each division – and sometimes, even groups of employees within the same sub-team – is led by one or more middle managers, with varying formal titles that denote this ranking. Within each sub-team are a number of regular workers that may share job duties or certain skillsets with middle managers. Workers, and also sometimes managers by way of skillset, encompass a broad variety of roles one might find in any IT group: e.g. support specialists, system administrators, application developers, instructional technologists, and so on. All in all, the Higher-Ed IT Org and its full range of employees are tasked with building, managing and supporting any and all things technical for the school.

While multiple possibilities exist for assessing the level and degree of change(s) that have occurred in my organization with regard to AWAs, the true origin of this capstone began with a seemingly simple thought over a multi-year span (2016-2020) in my current job: *what's changed?* Without context, such a question is meaningless, but it is important to note that sans a slight shift in responsibilities and a promotion along the way, my job mostly remains the same. To one extent, some of the key projects I'm working on now (e.g. a large-scale application suite rewrite) are the same projects I was engaged in years ago. My manager remains the same, my overall team remains largely the same, and the organization as a whole has maintained a consistency as solid as any, with an expected smattering of leaves, hires and new positions. Yet when it comes to an assessment of my daily activities, routine, and *where* and *how* I spend my time working, these measures have experienced a radical shift, and one that was solely the result of a shift towards AWAs. No sooner did a quick glance into my past day-in-the-life 2016

work experience versus my present work experience in early 2020, identified in the following vignette, reveal the change that had occurred...

It's 2016, and an average day at my workplace, "Higher-Ed IT Org". I look around me, and notice my 12 immediate team members all present at their usual desks as I enter the office. We have our morning "stand-up" meeting to catch up on the daily progress of our work, each of us standing in a circle facing each other in one of our office's open areas. Throughout the day, we have a number of in-person meetings – whether one-on-one or team/project based – an assortment of impromptu watercooler conversations, and a sizable amount of heads-down time to focus on our main tasks of the day. In my case, this usually entails a mix of developing web applications, and building a variety of servers and technical systems for the school.

Fast forward to the winter of 2020, where we have yet another average day at my workplace, which is still Higher-Ed IT Org. I look around me, and notice...my own apartment, for this is one of a few days of the week I'll be working from home. As I prepare for our daily stand-up meeting, I log into our organization's preferred videoconferencing software, and attend the meeting from the comfort of my own home office, just as more than half of our 12-person team does on this particular day. Of course, the number of those working in-office versus from home varies daily, and on some days (e.g. Friday) the entirety of the team is likely to be working from offsite locations. Throughout the day, I still attend an assortment of meetings via audio/videoconferencing software, as do many employees on completely different teams in Higher-Ed IT Org. For sure, impromptu discussions still take place, though they're likely to be through a range of different mediums (e.g. online chat platforms), rather than

physically in-person by the proverbial watercooler. Just as well, a healthy amount of heads-down time still persists, and is perhaps even more focused and concentrated than it was before.

As late as 2016, my personal job and office environment mirrored the cubicle-ridden, fluorescent lit “traditional” depiction of an office initially presented above. No balance of AWAs were utilized or considered to be the norm within Higher-Ed IT Org at the time. In fact, our practices in relation to AWAs matched stereotypes that can sometimes permeate backchannel conversations within higher education – e.g. doing things the way they’ve always been done, slow to change, and with bureaucracy at the forefront. Yet it was this same year, during the summer of 2016, that the organization began to experiment with AWAs due to space constraints (Figure 1). Opening up a small program on an opt-in basis for a handful of teams, employees were encouraged to “give up” their own desk in exchange to work from home for a varying number of days per week/month, allowing others to use and book their former desk on days they weren’t physically on-site.

Figure 1. Senior Directors’ Notes on Emergence of AWAs (2016, July 27)

<ul style="list-style-type: none"> · Framework for talking about space · We’ve prioritized teams we wanted together · More official hoteling option for people · Either based on work habits or tendency to work remotely · Put together a committee to determine how this will work logistically · <input type="checkbox"/> will chair · Send out call for volunteers · People will still have their desks, but if they’re not there, it’s okay for someone else to sit there · Not taking space away, just using it more flexibly · Need to figure out how open people are to this · Capture groupings we want to preserve · Set something up in Confluence to start listing priorities and weighting them
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Over time, this effort would grow successfully, and only a year later in 2017 would become a formalized program that most of the organization was able to opt into. Less than a year after widespread rollout of desk sharing, the organization acquired a small additional office on campus (e.g. seating 10-15 individuals) in January of 2018. In congruence with desk sharing's budding popularity, it was announced that this location would be *exclusively* for desk sharing individuals, for the first time prioritizing and designating physical space for such accommodations. Though movement of AWA efforts were ever increasing, perhaps nothing took the organization by surprise like a certain announcement in late 2018.

To the surprise of senior leadership, after employees caught wind of a passing comment made in a school-wide town hall meeting, the IT organization's CIO revealed that the organization would be moving from its present main facility and assortment of ancillary facilities, to a brand-new building a couple of blocks from campus in late 2020. More jarring than the slight location adjustment, for the first time in the organization's history, all desks in the new space would be unassigned and opened up for desk sharing, with even the CIO joining in on the program. Thus, the once opt-in remote work and/or desk sharing efforts gaining organic traction would now be thrust upon all of the organization's staff – regardless of where they were in their personal AWA journey. As of early 2020, and excluding mandated efforts as part of COVID-19, remote work and desk sharing efforts have continued to gain traction amongst select employees and organizational sub-teams. The Higher-Ed IT Org has now begun experimenting with different means of booking shared desks (i.e. via mobile smartphone applications). Additionally, the desk sharing-exclusive office obtained in January of 2018 was relocated

to a slightly smaller location in January of 2020, serving the same purpose as it previously did. Yet amongst all of these changes, it is this in-between phase that the organization continues to work through today, and which employees, myself included, continue to make sense of.

Remote Work, the Higher-Ed IT Org, and COVID-19

As has been lightly touched upon up to this point, the COVID-19 pandemic has undoubtedly impacted the way individuals, both nationally and internationally, view the overall prospect of AWAs, while shaping their personal experiences in relation to this matter. With mandates for millions upon millions of employees across the globe to work remotely, workers were thrown into a jarring situation with little choice, much uncertainty, and a lack of means to figure out how to carry on, both professionally “at work” and personally in an equally altered home life (Clark, 2020). To be fair, those employees fortunate enough to be in a remote work situation could be considered lucky, as millions of others in select industries lost employment altogether, or were employed in sectors where working on-site was still required, thus putting themselves and others at heightened risk of contracting the virus (Clark, 2020). Not strangers to remote work, and also not being essential personnel required to be on-site during this pandemic, HEITO and its people were nevertheless impacted by the efforts to mitigate COVID-19 in many ways.

As of March 16, 2020, 100% of HEITO’s workforce began temporarily working remotely as per a university mandate for all non-essential (physically, on-site) faculty and staff. By the following week, the university itself moved to a model of online/remote instruction and learning, a model which continues to be the core means of delivering

education to students as of this writing (July, 2020). There exists no finite end to the present circumstances, and thus no timeframe for when a realm of relative higher education normalcy will reenter the fabric of HEITO's and others' lives. Concerning these ever-shifting conditions around work, COVID-19 and its impact on the landscape of AWAs and on HEITO will not be considered within this capstone, for reasons concerning the past, present, and future.

With respect to the past, HEITO's AWA efforts date back to 2016 and span a multi-year effort prior to the present conditions, including a survey used for research from the organization in 2019. The decades of formal, academic research pertaining to the dimensions of remote work and desk sharing also predate COVID-19, and remain likely to exclude such events for a time, i.e. until conditions have subsided, and researchers can gather data and comprehensively study COVID-19's effects. With regard to the present, we also need not let months of heightened change bear too much weight on the years of the overall case presented in this capstone, such as by conducting recent participant qualitative interviews or a new quantitatively-based survey of workers in HEITO. Such feedback in a time of rapid change would likely skew opinions and other elements in this capstone in a way that would misalign with the overall scenario, and its years of rooted evolutionary progress. For the future, papers founded upon analysis and impact around COVID-19, whether for HEITO or organizations of varying size and industry, are well deserving of their own exclusive focus. To attempt to make COVID-19 even a secondary focus within the context of this capstone would be to lose sight of the foundation this capstone was ultimately built upon, and the purpose it was intended to serve.

In an era where a pre, during and post-COVID-19 picture can only eventually be painted to understand what changes have resulted from our response to curbing the spread of this virus, this capstone perhaps exists as one of the last pre-COVID-19 papers, evaluating a working world before many were forced to experience remote work abruptly for the very first time.

Capstone Purpose

As much as this topic resonates personally, acting as a driving force in the development of this capstone, AWAs extend well beyond individual importance. In the field of organizational dynamics (OD) and across many organizations, AWAs represent a critical component of organizational structure and culture as a present trend, and one that only seems to be gaining momentum. In general, the population of global workers who partake in semi-regular remote work practices increased by a rate of 159% from 2005 to 2017, while in the United States, an increasing portion of the country's workforce now works "remotely" to some degree – whether from home, on travel, or elsewhere (Hood, Nagy, & Lister, 2018). At the same time, additional data indicates the organizational need/desire for desk sharing, given Fortune 1000 companies' assessment of how physical office desks are regularly unoccupied from 50% to 60% of the time (Hood, et al., 2018).

Therefore, the relevance and importance of alternative work arrangements has already permeated the OD space, and become a key issue worth exploring and addressing in many companies nationally and internationally. However, what has yet to be explicitly studied and is at play both within the context of my organization, and within the body of this capstone, is the assessment of how employees and their organization adjust to the *changing* of their working world around them. Looking at AWAs through the lens of a

transition, and a transition formed from a personal example (HEITO), this capstone provides a unique view to assess such a paradigm shift.

Purposely, this capstone will focus on employees' experience through a company's shift towards the AWA dimensions of remote work and desk sharing. While exploring AWAs and the sub-topics of remote work and desk sharing, we will highlight extensive research surrounding what occurs when and as employees *adapt* to such practices across organizational dimensions. e.g. What happens to various measures (job performance, work-life balance, career advancement, etc.) for employees in organizations that are adopting and adapting to AWAs? What happens when a workplace physically transitions to one where AWAs become and are considered the norm? What strategic implications exist throughout the levels of organizational hierarchy in adopting and adjusting to such changes? What role does/can technology play in adapting to AWAs? All of these questions point back to the notion of assessing this shift through the senses of employees themselves, and how they "make sense" of such change(s) overall.

To touch on the topic of making sense, Karl Weick pioneered organizational research that defined *sensemaking* as "the ongoing retrospective development of plausible images that rationalize what people are doing," (Weick, Sutcliffe, & Obstfeld, 2005, p. 409). From a layperson's perspective, making sense of an organizational situation, such as HEITO's transition, is a collaborative process that relies on development of shared meaning across many employees around an experience (Weick, 2012). And while shared meaning has both objective and subjective elements, Weick himself notes how "Sense may be in the eye of the beholder, but beholders vote and the majority rules," (Weick, 1995, p. 6).

Thus, to balance our objective and subjective interpretation of this shift, while an abundance of current research on AWAs will be explored, this data will be used to buttress new research and information gleaned from an inward-focused study on the Higher-Ed IT Org itself. A survey conducted in 2019 across half of HEITO's employees will be used to gain unique, individual perspectives on AWA adaptation and sensemaking while the effort is ongoing. The data surveyed will be contrasted with our formal literature and research to form new findings on what the evolution of AWAs in a company looks like on its people, and what strategies employees' utilize at various levels for dealing with this change. Whether focusing on a standard-level worker, middle manager, or any senior executive as noted in the earlier ranks of the Higher-Ed IT Org, we'll seek to cross-pollinate opinions, strategies, and tensions around the change, while paving a path for what successful execution of AWAs look like during transition, and how such a change can be seen through to completion.

Because HEITO itself is an organization, like others, that has established procedures and processes that are highly successful, while possessing its share of expected flaws across select measures, this organization acts as a realistic model of assessing such change over time. With little precedent for an effort that is still well underway and has been in-progress for years, we evaluate both the macrosystem of HEITO itself in relation to the change, and the microsystems of several related measures (e.g. AWA dimensions). This capstone should serve as an honest critique of HEITO's evolution towards AWAs, yet not criticism; using the organization as an objective lens for evaluation as many other organizations could similarly serve, though from a different set of perspectives.

Overall Outline

In Chapter 2, we'll perform a literature review to examine the full breadth and depth of AWAs. We'll define and explore the field of AWAs themselves, as well as remote work and desk sharing, and outline the direct shift towards AWAs that has occurred in companies especially throughout the 21st century.

In Chapter 3, we'll explore secondary research around the impact of adopting and adapting to AWAs, separately examining remote work and desk sharing across many measures of impact. Subsequently, we'll evaluate decision strategies that occur at the organization and manager levels in AWA adaptation, and the role technology and communication plays in such shifts towards AWAs.

Chapter 4 will touch on key research methods used for studying AWAs overall by describing the background and methodology used in conducting the survey with HEITO's employees. This will set up the employee-based study by framing survey questions in relation to our main research question.

In Chapter 5, we'll outline the results of the survey disseminated within the Higher-Ed IT Org, noting how employees are making sense of these changes.

Finally, Chapter 6 of the capstone will interpret, evaluate, and contrast the research data gathered in Chapter 5 with that of the existing literature and research noted in Chapters 2 and 3. We'll form a more complete picture of the assessed organization's transition to AWAs as viewed by its employees, examine expected and unexpected outcomes, touch on areas for future potential research, and highlight major takeaways in the field of AWA adaptation.

CHAPTER 2

LITERATURE REVIEW

Alternative Work Arrangements (AWAs)

To write a capstone centered around the study of adaptation to alternative work arrangements, it becomes imperative to explore just what exactly AWAs themselves are. While we presented a simplified explanation of AWAs during the introduction, stating how AWAs are merely working conditions that deviate from the norm, this only scratches the surface of what AWAs fully encompass. The Georgetown University Law Center's "Workplace Flexibility 2010" study (2006) defines the landscape of AWAs more specifically as, "any one of a spectrum of work structures that alters the time and/or place that work gets done on a regular basis" (p. 2). Similarly, McNamara, Pitt-Catsouphes, Brown, and Matz-Costa (2012) define AWAs as "the ability of workers to make choices influencing when, where, and for how long they engage in work-related tasks" (p. 936). Both definitions bear some similarity to how we initially defined AWAs. However, it is worth pointing out a distinguishing characteristic of most AWA research, in relation to how we'll normalize some inconsistencies for the purpose of this capstone.

While both the Georgetown University Law Center and McNamara, et al. were indeed talking about the field of AWAs in their previous quotes, they were doing so under one of a series of related terms and acronyms that permeate the space of AWA research. Specifically, the "Workplace Flexibility 2010" (2006) study was in fact centered around the definition of *flexible work arrangements*, or FWAs, while McNamara, et al. (2012) was instead focused around *workplace flexibility* and/or *flexible work options*, or FWOs. Were you to gather some research from Leslie, Manchester,

Park, and Mehng's (2012) piece in *The Academy of Management Journal*, you'd instead be learning about the same topic under the term *flexible work practices* (FWPs), or *nonstandard work arrangements* (NSWAs), as defined by Stavrou, Parry, and Anderson (2015) in their *International Journal of Human Resource Management* article. AWAs, FWAs, FWOs, FWPs, NSWAs – this is only a sample of terms, and far from an exhaustive list. Without a doubt, the number of terms used to define this topic is daunting, and can make the task of researching this field even more complex than initially perceived. Suffice it to say that it is for both consistency and simplicity's sake that we exclusively refer to this field of research as *alternative work arrangements*, or AWAs, throughout this capstone.

Focusing back on our two previously noted definitions, AWAs ultimately represent a *spectrum*, or set of choices, that alter one or more dimensions of the concept of work for an individual, teams/groups of employees, or an entire company. These choices tend to influence and center around the time (*when/how long*) and/or place (*where*) of work, rather than directly influencing the work itself (*what*) that occurs, or the meaning (*why*) behind the work, its purpose to the organization, the mission, etc. As mentioned, the *dimensions* to these work concepts, as we'll primarily refer to them from here on out, are subject to significant variability. Some, such as Sánchez-Vidal, Cegarra-Leiva, and Cegarra-Navarro (2012) consider five dimensions that can frame AWAs within organizations, being:

...(1) practices that ease the flexible use of time, such as flexitime, annual hours, credits for hours and compressed week, (2) practices that provide spatial flexibility to workers, such as teleworking or videoconferences, (3) time reduction, such as part-time work and shared work, (4) work leave, such as maternity and paternity leave in excess of the official amount and leave of absence and (5) employee assistance and counselling [programs]. (p. 647)

Others, such as the Georgetown University Law Center (2006), narrow this down to only three dimensions of AWAs that include:

...(1) flexibility in the *scheduling* of hours worked, such as alternative work schedules (e.g., flex time and compressed workweeks), and arrangements regarding shift and break schedules; (2) flexibility in the *amount* of hours worked, such as part time work and job shares; and (3) flexibility in the *place* of work, such as working at home or at a satellite location. (p. 2)

Not surprisingly, much as researchers choose to define the concept of AWAs under alternate names and acronyms at their own discretion, this too extends to a rather flexible definition of the dimensions of AWAs. While the Higher-Ed IT Org has, and does, actively employ a number of AWA practices that extend to many of the dimensions noted, only select dimensions are of importance for this capstone. As one example, Katz and Kreuger (2018) made significant discoveries in the realm of AWAs in their recent *Industrial and Labor Relations Review* piece, showing that alternative work arrangements

...rose from 10.7% in February 2005 to somewhere in the 12.6 to 15.8% range in late 2015. The increase over the past decade is particularly noteworthy given that the [US Bureau of Labor Statistics' Contingent Work Survey] showed a more modest rise in the percentage of workers engaged in alternative work arrangements from 1995 to 2005. (p. 383)

Ordinarily, such information would serve as relevant data for this capstone.

However, the opportunity to rely on such data for the purpose of this capstone becomes nullified once observing that, with regard to AWA dimensions, Katz and Kreuger (2018) define AWAs as “temporary help agency workers, on-call workers, contract company workers, and independent contractors of freelancers” (p. 383). This presents an important distinction for all AWA literature and research presented in this capstone from this point forward. For the purpose of this capstone, we'll be focusing on AWA literature that specifically includes *at least* remote work or desk sharing, and thus the place/physical

space/“where” dimension, so as not to conflate or misrepresent findings in one area of AWAs being attributed to another. All AWA references noted will be inclusive of this dimension at a minimum, though may include other dimensions of AWAs as well.

However, narrowing the focus of AWAs down to a particular “where” dimension isn’t quite enough. Because the shift occurring with the Higher-Ed IT Org is focused around the change to remote work from a standard full-time, in-office work routine, *and* a change to desk sharing when physically working on-site, our selected “where” dimension – and what may be considered one for some – is in fact two AWA dimensions when considered for this capstone.

Remote Work

Within this capstone, *remote work* serves as one of the two observed AWA dimensions that are at play, and act as primary fixtures of organizational change within the Higher-Ed IT Org. Not dissimilar to the many alternate terms used for AWAs themselves, or the variety of dimensions that encompass AWAs, remote work also takes on the form of many monikers throughout pertinent literature in the field. Biron and Veldhoven (2016) describe many of these substitute terms within their research, such as telework(ing), telecommuting, flexplace; however, we’ll simply refer to this AWA dimension as remote work(ing) for this capstone. Regardless of what one calls it, as the authors themselves describe, the definition remains constant:

[Remote working] is an alternative work arrangement that allows employees, for at least some portion of their work schedule, to use information and communication technology in order to carry out tasks in locations other than the primary or central work spaces in which they are usually performed (the office or workstation). (Biron & Veldhoven, 2016, p. 1317)

Some, like Gainey and Clenney's (2006) assessment of individual perceptions around remote work and flextime, define this a bit more concisely, while also noting the difference in the frequency of days/times that remote work takes place:

[Remote work] programs permit flexibility by allowing employees to work from different locations. In a nutshell, [remote work] is the practice of using electronic communication technology to perform work from remote locations. Some employees telecommute on a full-time basis, while others may only spend one or two days a week outside of the traditional workplace. (Gainey & Clenney, 2006, p. 14)

Ultimately, the *flexibility* noted here by Gainey and Clenney is key, as the Higher-Ed IT Org has no set rules as to how often, or when, employees may work remotely versus in-person at the office. This is a decision instead left up to the employee and their manager. Yet the flexibility aspect provides another important distinction with remote work in the era of grappling with COVID-19. Mainly, remote working measures instituted for COVID-19 are not provided with inherent flexibility, or much of any opportunities for employees to choose location (other than within one's home), where or how frequently the remote work takes place, and more. Such circumstances themselves might even call into question the idea of if/when remote work is no longer "remote" – i.e. with *remote* referring to the physical center of the physical office(s) where work commonly take place. i.e. If 100% of HEITO's workforce is mandated to work offsite for months, is this no longer considered "remote work", and rather just a new, altered form of work itself? Though we won't dwell on such matters indefinitely, the ramifications around COVID-19 and its impact on remote work highlight how such a situation, and its unique conditions, are overall less akin to the definition of remote work we'll be addressing throughout this capstone.

However, not all subscribe to the notion that remote work is a unique entity, as it has been defined up to this point. Some, like Hill, Ferris, and Mårtinson's (2003) study, centered around a work/life issues survey conducted for IBM in 2001, see distinctions between the different variants of the remote work dimension. Specifically, they note telework as being a replacement of IT tools and functions (e.g. videoconferencing) for work-related travel, or "moving the work to the workers instead of moving the workers to work", and telecommuting as "periodic work out of the principle office, one or more days per week," (Hill, et al., 2003, p. 223). For our purposes, the Higher-Ed IT Org remote work model encompasses both concepts fluidly, and Hill, et al.'s perspective can be considered a fine-grained deviation from the norm.

Overall, the dimension of remote work has roots back to its initially-known moniker, *telecommuting*, which was first coined in 1973 by National Aeronautics and Space Administration (NASA) engineer Jack Nilles (Allen, Golden, & Shockley, 2015, p. 41). With the primary goals of removing traffic issues from the realm of workers' daily commutes, while also reducing energy consumption, this idea would eventually catch the eye of agencies at the US federal and state levels, who would begin examining the feasibility of implementing remote work arrangements for government employees (Allen, et al., 2015, p. 41). A multitude of factors would further the growth of remote work throughout the coming decades, while remote work itself could be seen as an answer to increasing complications and challenges of the modern working world.

In the 1970s, when IBM faced a dearth of programmers necessary to keep their evolving business afloat, remote work became the answer to recruiting and retaining geographically diverse workers (Allen, et al., 2015). The proliferation of new

technological platforms throughout the 1980s, such as the laptop and early cell phones, would become further drivers that would facilitate remote work in companies (Allen, et al., 2015). In the 1990s, with amendments to the Clean Air Act that required employers to develop commuting options/programs, and the Americans with Disabilities Act (ADA) which expanded the hiring of disabled workers, remote work became a primary option for building more sustainable and diverse workforces on a multitude of levels (Allen, et al., 2015, p. 41). This remote work-centered push would itself move into the 21st century, helping to form organizations like the International Telework Association and Council (ITAC), led by Jack Nilles (2001) who would produce the seminal “Telework America Survey 2000”, documenting the comprehensive landscape of remote work across the country. This continuing shift towards AWAs, as we’ll more explicitly explore in a following section, is in many ways an accumulation of decades’ worth of reshaping how employees, and the world, “works”.

Yet the shift occurring within the Higher-Ed IT Org entails not just one, but two AWA dimensions, and while this next dimension may sometimes be considered a sub-dimension in the realm of remote work, in this scenario, it stands firmly on its own.

Desk Sharing

Whether you choose to call it hoteling, hot desking, “non-territorial working”, or one of the many other names this AWA dimension holds, what we’ll term as *desk sharing* throughout this capstone stands as the second AWA dimension at play within the Higher-Ed IT Org. While remote work might precisely shape where and how work takes place, often involving locations outside of the office environment, desk sharing revolves around

these measures within the context of the physical office environment. Davenport and Pearlson (1998) define this in the following way:

[Desk sharing] is another type of virtual work. Hotel-based workers come into the office frequently, but because they are not always physically present they are not given a fixed office space. Instead, they can reserve a “hotel room” (more likely a cubicle) where they can receive [...] calls and link their laptop computers to the network. (p. 53)

Even prior to tracking the history on this AWA dimension, providing some basic context and motives behind why organizations explore desk sharing can serve as a definition of sorts. Kim, Candido, Thomas, and Dear (2016), as part of their recent in-depth study on desk sharing, did just that; providing a hybrid of definition mixed with a broad contextual reason for the change:

In more recent years, the pursuit of further office space efficiency has broken the link between workstation and employee through [desk sharing], which refers to workstations that are shared by more than one individual and typically claimed/booked on a daily/temporary basis. (p. 203)

In such a model, what’s mine in the office ultimately becomes everyone else’s – other than a handful of personally-assigned belongings (e.g. laptop, cell phone), with the idea of *efficiency* at the heart of such a change. This efficiency model remains true within HEITO, where the value of physical space exists as an ever-rising stock at the university, and the opportunities for reducing footprint and “giving up” space for others who may need it is a form of pseudo-philanthropy and goodwill amongst senior leadership. Yet much like the history of remote work examined previously, desk sharing traces its lineage to long before the 21st century.

As noted by Juriaan van Meel (2011) for research done through the Technical University of Denmark, newer 21st century-based ways of working such as mobile/paperless offices, videoconferencing and flexible workspaces themselves “are by

no means new”, dating back to the late 1960s and early 1970s, while also being anomalies for once conservative workplace cultures (p. 357). However, much of this experimentation with desk sharing principally dates back to an early 1970s study conducted by none other than (again) IBM, assessing product engineers moving into a new office space (Meel, 2011, p. 358). This 1973 study focused on work context and quality enhancement, and was designed to “improve and increase the sharing of problems and experience” within the IBM team by allowing employees to pick from an assortment of desks, work benches, and quiet working areas while having to give up their personal workspace (Allen & Gerstberger, 1973). With the year-long study being successful, as employees’ feelings towards the new space shifted favorably after move-in, and communication amongst the team improved, this research would become a significant stepping-stone towards advancing desk sharing (Meel, 2011). However, it was not the only effort studying detaching the worker from their desk at the time, with other efforts principally being based on technology.

Simultaneously, a highly lauded team of scientists at the Xerox Palo Alto Research Centre (PARC) were already envisioning their *office of the future*, while conceiving the “paperless office” concept through a series of inventions, including the graphical user interface (GUI) and the computer mouse – inventions that would later change the technological world as we know it (Humphrey, 2014). Yet long before Xerox, AT&T had developed its first “picture phone”, debuting it at the 1964 World’s Fair in New York City (Meel, 2011). While that particular invention ended up being a commercial bust, by the late 1970s and early 1980s, organizations like the British Post Office in the UK began rolling out videoconferencing technologies called “confravision”

used for long-distance meetings (Meel, 2011). In truth, many of these technical innovations would aid in advancement of desk sharing as a viable alternative in their own way(s), yet continue to remain as exceptions to the rule of the classic office environment. This would mostly change within the 1990s, when consultancies, office furniture companies and others became privy to the benefits and growing receptiveness towards desk sharing, and the technological innovations that could assist in such arrangements (Meel, 2011). And while other desk sharing research experiments would yield opposite results to Allen and Gerstberger's (1973) findings, such as 1994's assessment of advertising agency TBWA\Chiat\Day that resulted in "incessant griping" and "employee insurrections", desk sharing's popularity would continue into, and now throughout, the first two decades of the 21st century (Humphrey, 2014).

A 21st Century Shift Towards AWAs, and Why

When we describe the high degree of shift that has occurred in organizations towards AWAs within the 21st century, we specifically see a shift of far greater magnitude compared to decades before in the 20th century. As noted in the aforementioned definitions of remote work and desk sharing, both AWA dimensions have legacies, and were studied in many ways throughout much of the latter half of the 20th century. Yet an uptick has occurred that has made AWAs an even more viable and likely-pursued path for HEITO and other organizations. Specifically, we point back to some figures noted at the outset of this capstone; being 43% of current US workers spending at least some of their time working remotely (Choudhury, et al., 2019), and the population of semi-regular remote workers increasing by 159% from 2005 to 2017 (Hood, et al., 2018).

Similarly, according to Nilles' and the ITAC, while only 28% of individuals surveyed in 2000 had employers that allowed or provided some form of remote working policy, this is a figure that has seen a drastic shift as well (Nilles, 2001). In 2014, the Society for Human Resources Management (SHRM) reported that 59% of employers offered some form of remote work option(s), according to their survey across 275,000 of its members, more than doubling that figure from less than 15 years ago (Allen, et al., 2015). However, this increase has not only impacted the private world, but growth is evident in the public sector and from a national policy standpoint as well.

Mainly, the US's introduced Telework Enhancement Act of 2010 required all federal executive agencies to craft policies that allow eligible employees to work remotely, with additional stipulations of each agency assigning a "telework managing officer", who implements iterative policy development and training programs on remote work for each agency (Allen, et al., 2015). Measures like this act would have broad impacts at the government level, allowing a third of federal government workers to work remotely during crises such as Hurricane Sandy in 2012, and showing results such as worker eligibility for remote work increasing by 16% in just one year from 2011 to 2012 (Allen, et al., 2015). Furthermore, by 2014, 16 states had measures or executive orders in place to encourage remote work for state employees (Allen, et al., 2015), and the COVID-19 response efforts from several US states, and entire countries, to mandate remote work for those with jobs capable of doing so only further this pattern (Clark, 2020).

Thus, in the past two decades alone, we have witnessed and are likely still within the midst of a drastic shift towards new ways of defining how we work in the 21st

century. In relation to the *why* – not why the overall shift has taken place, but rather why the Higher-Ed IT Org is now undergoing a shift of its own – many theories exist that might explain this reasoning. To touch on even a small sample of them would require a separate capstone unto itself, and though we will provide greater answers and research conducted on the Higher-Ed IT Org later in this capstone explaining this, it is worth pointing out a few key ideas.

First, the overwhelming majority of roles within the Higher-Ed IT Org fall under a “white-collar”/skilled worker categorization, based on associated research and personal observation. This would make HEITO a logical, and eventual, candidate for such AWA measures, whether organically adopted or prescribed by senior leadership. As directly noted by Kotey and Sharma (2015) on their research of the prevalence of AWAs amongst small and mid-sized Australian companies:

Skilled workers require less supervision, they have autonomy and control over their work and are in a position to negotiate employment conditions that suit their circumstances [...]. The findings reveal that scientific, research and IT professionals are provided with a variety of [AWAs]. [...] In contrast, unskilled employees rarely have [AWAs]. (p. 2766)

The elements of both autonomy and control are well at play within the Higher-Ed IT Org, and the roles themselves align with that of Kotey and Sharma’s (2015) research. However, it is worth noting that not all IT roles, certainly with the Higher-Ed IT Org and in general, are conducive to remote work and/or desk sharing. Some IT roles require an on-site presence to repair, support, maintain, etc., physically-based technology infrastructure, or to staff support locations where in-person help is offered and provided, impacting those individuals’ ability to engage in remote work. For desk sharing, groups that require a large number of tools, devices and additional components to support (often)

physical infrastructure require fixed locations to store and maintain such parts, being equally not conducive for such work. More interestingly, some groups within the Higher-Ed IT Org have only become prime candidates for AWAs within the past few years. This includes my personal team, who once relied on a physical presence to maintain servers and infrastructure in two on-site campus datacenters, but will have moved and possess predominantly virtually-managed and cloud-based infrastructure as of late 2020.

Second, others point to a shifting contract in recent years between workers and employers, where protean careers that are “internally-oriented, flexible, mobile, and may involve both horizontal and vertical growth” have tilted towards becoming the norm for younger employees (MacDermid, Lee, Buck, & Williams, 2001, p. 306). Or, for those like Kim, et al. (2016), some may instead think of this shifting contract stemming from the organization’s bottom-line, viewing a primary motivator of AWAs as the “tangible economic benefits from maximizing space efficiency” (p. 204). All are true to an extent, and likely apply in some way to the Higher-Ed IT Org, and the overall landscape of AWAs within the 21st century.

And third, as a final thought to this section, it is worth noting that in the realm of both the Higher-Ed IT Org and other companies’ shifts towards AWAs, the shift to remote work and desk sharing are far from mutually exclusive events. Rather instead, the interconnections between AWA dimensions are summarized nicely by the following:

Many of today’s new workplace strategies acknowledge that, while it may be necessary and cost-effective to cut down on employees’ personal spaces, when you take something away, you have to give something else. And what’s being added – flexibility, mobility, amenities – are what’s making these alternative workspaces thoroughly modern. (Greco, 1999, p. 12)

For the Higher-Ed IT Org, the present ability to work regularly from home is sold as a joint measure of giving up your existing desk for desk sharing, and the same relationship is true from the reverse perspective. While some may not look forward to the move to an office where all desks are shared and not specific to a given individual, the promise of a (floor within a) brand-new building and associated amenities acts as a transactional selling point from that end as well. Not only is this interaction at play for the shift occurring within HEITO, it exists as an essential pattern of many organizational AWA efforts that highlight a singular shift to cover many AWA dimensions.

CHAPTER 3

SECONDARY RESEARCH

The Impact of Remote Work

Having looked at what existing literature says concerning AWAs, many questions remain regarding the efficacy of such practices, and how these measures apply in relation to HEITO. In general, a majority of related research for this capstone bears a distinct shift towards the realm of remote work, more so than that of desk sharing. Furthermore, the premise of each academic paper and research study is based on a varying number of foci, in regards to assessing what happens to workers when remote work is adopted, and adapted to within an organization. After examining the total amount of categories across this research, I found that for this capstone, research around remote work could be distilled into six distinct categorizations, being: *1. work performance, 2. job satisfaction, 3. recruiting/retaining workers, 4. career advancement, 5. work-life balance and 6. diversity and inclusion.* For each category, we can assess its impact with relation to the AWA dimension, and assign it a score stating whether its impact is: *largely positive (+2), partly positive (+1), neutral (0), partly negative (-1), or largely negative (-2),* in consideration of all factors and literature studied. We begin with an assessment on what happens to employees when they adapt to remote work, starting with a look towards *1. work performance.*

Earlier, we mentioned the prominence IBM has had within the realm of AWAs, and in pioneering many efforts centered around remote work. Perhaps not surprisingly, IBM has conducted a number of studies over the years that attempt to measure the success (or lack thereof) of work performance related to implementation of AWA

policies, which bears a range of interesting results. IBM conducted a study in 1998 that showed remote work, regardless of where the work was performed, was related to improved workplace productivity and higher job performance rankings (Hill, et al., 2003). However, another study conducted by IBM on its workers just three years later would find conflicting results, instead showing no relationship in performance rankings between virtual (i.e. at home or a collocated facility) workers vs. traditional, on-site employees (Hill, et al., 2003). Moreover, multivariate analyses from this latter study would find remote working conditions to be a predictor of poorer job performance (Hill, et al., 2003). In the ultimate sense of irony – compared to the company’s stance it once had decades before – IBM would largely reverse course from its once pro-remote stance in March of 2017, publicly announcing that thousands of the company’s employees would be forced to co-locate at one of a number of IBM’s physical offices, simultaneously eliminating their ability to work from home (Useem, 2017). However, IBM is far from the first company to engage in similar pullbacks of remote work – with Yahoo performing a similar move on its employees due to performance-related issues (e.g. speed, quality) back in 2013 (Gajendran, Harrison, & Delaney-Klinger, 2014). With such conflicts within the same companies over time, how does one make sense of the performance impact of AWAs?

To start, a significant portion of existing data strongly suggests one or more positive correlations with workplace performance in relation to AWAs; in this case, predominantly focusing on remote work. In one study, individuals with frequent remote work arrangements that had strong, positive supervisory relationships were shown to be amongst the highest employees in job performance, along with other areas such as job

satisfaction and commitment (Allen, et al., 2015). Additionally, Nilles (2001) and the ITAC found that a majority of remote workers self-reported equivalent or increased productivity after/once joining remote working engagements on average by an improvement of approximately 15% (p. 4). By Nilles' (2001) estimation, and without adjusting for inflation from this survey's finding two decades ago, "the average teleworker had a telework-related increase in productivity worth \$9,172 in the past year," (p. 32) excluding other facilities and space-related savings. Moreover, an aggregate assessment of AWA benefits from across approximately 900 academic papers and journals from the 1970s throughout 2009 revealed, on average, business-case support for AWAs based on individual performance or productivity improvements in 31% of all works cited (Koivisto & Rice, 2016).

Yet another unique, positive measure of performance in relation to AWAs comes by breaking down "performance" into classifications of task performance and contextual performance (Salolomo & Agbaeze, 2019). Specifically, *task* performance describes "activities that provide indirect support for the organization's core technical processes", or those that align with formal reward systems (Salolomo & Agbaeze, 2019, p. 540). Conversely, *contextual performance* pertains to "individual effort [...] not directly related [...] to main task functions", that is, activities that may go formally unrecognized but ultimately shape the "social, and psychological contexts" of the organization (Salolomo & Agbaeze, 2019, p. 540). In keeping with this theme, Gajendran, et al. (2014) noted how specifically for those less formally-measured contextual performance matters, remote workers were on-average ranked as higher performing when measured by their supervisors, compared to traditional in-office workers. Similar positive findings were

also noted on the task performance side, particularly when a higher degree of autonomy within the AWA arrangement was conveyed by employees (Gajendran, et al., 2014). The nod to autonomy speaks partially to the concept of *social exchange theory*, where individuals granted the freedom to join and utilize such flexible policies will ultimately reciprocate (implicitly or explicitly) with more favorable work attitudes and behaviors (Kossek, Lautsch, & Eaton, 2006).

While Nilles (2001) and the ITAC's study found a majority of remote workers experienced a productivity increase of 15%, they additionally noted how less experienced employees (i.e. with the company four months or less) could incur negative productivity dips by as much as 25%. Relatedly, select types of work, such as those with high task interdependence have been found to have a negative correlation to productivity with remote workers, due to challenges in navigating collaborative work remotely and experiencing some degree of professional isolation (Allen, et al., 2015). The same studies from Allen, et al. (2015) suggest how the highly individual nature of productivity benefits can contribute to an over-representation of positive findings, in some studies/data. Specifically:

It is important to keep in mind that most telecommuting research has used non-experimental study designs, precluding inferences of causality. It is conceivable that only the highest performing or most conscientious individuals are given the opportunity to telecommute because they are highly trusted. In such cases, the higher productivity of telecommuters cannot be attributed to the arrangement itself. A similar argument could be made for high-performing firms; it may be that only those that are performing well can afford to take the "risk" of implementing telecommuting arrangements. The best way to tease apart issues of causality is through random assignment of participants (or similar organizations) to either a telecommuting or standard work arrangement. (Allen, et al. 2015, p. 50)

Similar theories also seek to explain an overabundance of positive findings by the *halo effect*, where positive impressions of AWAs stemming from certain areas play an

impact on survey and research data (Hill, et al., 2003). This was noted especially for data where self-reported performance and other benefits are gathered and measured, and cases where others (e.g. supervisors) who themselves are engaged in AWA arrangements are asked to evaluate arrangements in relation to other employees. And, for those less inclined to form boundaries between their remote work and personal life arrangements, elements such as procrastination (without formal monitoring), and childcare/home responsibilities can become performance burdens once blended with remote work employment (Allen, et al., 2015). With all of that said, just where do we stand in relation to AWAs and work performance?

Much of the analyzed research mainly points to a multifaceted space – much like that of AWAs themselves – where a measure like productivity has the ability to be both increased and/or decreased across workers within an organization. As IBM has proven, even those organizations that were once AWAs’ most ardent supporters can become its detractors over time, and the same policies that provide gains in performance may negatively impact some for the same reasons others benefit from it. In this case, perhaps the best advice in addressing performance comes from Allen, et al. (2015), in noting how to formally address concerns with rolling out AWAs for those organizations that wish to explicitly evaluate performance:

[Monitoring and evaluation of employees] is facilitated if a formal contract is established in which the conditions of the policy are outlined [...] and specific criteria for performance evaluation are stated. KPMG, for example, requires that at least one of the following success metrics be included in the contract as a means to evaluate telecommuter performance: work volume/productivity, telecommuter satisfaction, client satisfaction, coworker/team satisfaction, effect on coworkers or team, work quality, work-process redesign, senior-management perception/ buy-in, individual and/or team performance, chargeability, attendance/punctuality, morale/loyalty, turnover/retention, recruitment (attraction), public relations, and career development. (p. 59)

The old adage of “you can’t manage what you can’t measure” likely applies here, and those looking to judge how their personal, subordinate, or overall organizational performance is impacted by AWAs will need a plan to assess and adapt as needed, after making the critical decision of what to base performance on. Considering this, we can say *1. work performance* incurs a *neutral* (0) impact, for the most part, with the adoption of remote work.

As far as *2. job satisfaction* is concerned, myriad studies can confirm a positive correlation of satisfaction with one’s employer and employment arrangement for those who engage in AWAs (Kossek, et al., 2006). While this could be validated in isolation, such as with Charron and Lowe’s (2005) assessment of public accountants who reported greater job satisfaction in AWAs compared to those working in standard in-office arrangements, this can be assessed more broadly as well. As was noted with work performance and Koivisto and Rice’s (2016) four-decade assessment of over 900 AWA academic papers, job satisfaction improvements were mentioned as a positive supporting reason for AWAs in 57% of those works. However, a deeper dive into job satisfaction reveals even more than some of the simple associations noted above.

With respect to remote work, AWAs become a likely predictor of positive or increased job satisfaction due to the increased individual autonomy and flexibility granted in attending to personal needs (Morganson, Major, Oborn, Verive, & Heelan, 2010). Because personal needs often relate to home-based activities, it is not surprising that home-based remote workers report higher satisfaction compared to client-based or satellite-location workers (Morganson, et al., 2010). This is mostly due to the “demanding schedule and reduced flexibility” and the impacts of being on the “periphery

of organizational life” without additional-home based benefits, for client-based and satellite workers, respectively (Morganson, et al., 2010, p. 582). Therefore, even within the realm of remote work, classifications exist that influence job satisfaction beyond the choice of being in-office versus remote. Just as interesting, while Morganson, et al.’s (2010) research initially found that main office and remote workers had relatively equal amounts of job satisfaction, after controlling for differences in autonomy, flexibility, etc., an edge in satisfaction becomes apparent for remote workers.

Yet another unique relationship exists between the amount/frequency of remote work in relation to job satisfaction. Golden and Veiga’s (2005) research found that with regard to *telework intensity* (i.e. frequency), the relationship between the amount of remote work and job satisfaction is curvilinear, resembling an inverted U-shape parabola (Morganson, et al., 2010). Consequently, those with moderate remote work levels reported the highest job satisfaction overall, ultimately plateauing at around 15.1 hours per week of remote work (Allen, et al., 2015). This curvilinear pattern was again mostly attributed to the social and professional isolation that can occur with frequent/above-average remote work levels and that at a certain threshold, such isolation may offset any benefits in satisfaction gained through remote work overall (Allen, et al., 2015).

Similarly, it is Allen, et al.’s (2015) research that details additional factors believed to serve as contributing elements towards job satisfaction, including: technical and human resources (HR) support for remote work, amount of remote work training (for the organization), and personality types with greater desires/need for order and autonomy.

To flip the concept of satisfaction to counter what has been discussed up until now, how might *dissatisfaction* play into the utilization of AWAs? With respect to the

accounting professionals studied in Frank and Lowe's (2003) research, those who leave the profession entirely often do so due to the long hours and travel required. These employees often move to accounting jobs in industry that provide some degree of AWAs, which in turn will improve measures of satisfaction with their careers, among other areas (Frank & Lowe, 2003). Furthermore, Nilles (2001) found that in a similar manner to work performance measurements, a decrease in job satisfaction can be found in newer remote workers or those less experienced with AWAs. However, with respect to AWAs overall, "reported job satisfaction tends to be proportional to length of experience teleworking," (Nilles, 2001, p. 35). Yet with the rapid changes of technology in the remote work space since these studies were conducted, it remains unclear whether if/how such findings would deviate today, compared to their studied impact in the early 2000s. Given such doubts, and an overall picture that identifies positive findings for job performance with select caveats, we can say *2. job satisfaction* incurs a *partly positive* (+1) impact with the adoption of remote work.

As to the measures of employers' ability to *3. recruit/retain workers*, AWAs also play a prominent role within this area. The United States government's introduction of the Telework Enhancement Act of 2010 for its federal employees had its top-stated goals of the act being "to aid in the recruitment and retention of talent; to improve the ability of the government to operate during security incidents, national disasters, or other emergencies; and to help employees better manage work and family roles," (Allen, et al., 2015). For other companies like Cisco, while not being the primary reason for AWAs' implementation, they see retention and recruitment as a joint effort where the bottom line is key, e.g. "cost savings on office space and energy and attraction and retention of

desirable workers” (Allen, et al., 2015). To others, in the modern-day “talent war” that occurs between employers for highly-skilled employees, because “turnover of skilled workers is an expensive proposition”, the ability to work remotely is viewed as a mitigating factor in retaining a company’s best and brightest (Hill, et al., 2003). This allows companies to both attract employees beyond the regular geographical boundaries of their own offices and surrounding region, while also retaining those who relocate to other areas beyond a commutable distance (Hill, et al., 2003). Ultimately, the employer benefits through “lower recruiting and training costs, maintaining experience in positions, and personnel continuity” (Frank & Lowe, 2003, p. 144).

Though the reasoning for why AWAs are a factor in retaining/recruiting employees may seem logical, data exists that sufficiently backs such findings as well. Koivisto and Rice (2016) again found turnover/retention improvements in 46% of their works studied as positive impacts of AWAs, and this has been confirmed through other direct studies from organizational-related practitioners on specific fields, such as accounting, as noted previously (Frank & Lowe, 2003). Additionally, Nilles’ (2001) and the ITAC’s research identified the growing importance of AWAs with regard to retention and recruitment, which was even well apparent nearly two decades ago. Specifically, a majority of remote workers at that time ranked their ability to continue remote work as an important characteristic in seeking out a new job (Nilles, 2001). Similar to many of the previously noted cases, Nilles’ (2001) also found that this characteristic did not apply for employees with six months or less of work experience. However, of employees who considered other jobs but chose to remain with their existing employer, 64% of respondents ranked their ability to work remotely as an influencing factor in staying with

their employer, and 29% as a major/decisive factor (Nilles, 2001). Salolomo & Agbaeze (2019) also found that job satisfaction itself was a “key tool” in both employee retention and goal attainment in studying the impact of AWAs on Nigerian bank employees.

While some examined research runs counter to this, such as Frank and Lowe (2003) who noted how AWAs were shown in some cases to have little to no impact on retention, the majority of recent research – as AWAs have simultaneously increased in prevalence and use – seem to indicate a *largely positive* (+2) correlation on the whole for 3.

recruiting/retaining workers.

More than most impact measures of AWAs, it is 4. *career advancement* that possesses the most conflicting results and greatest concerns with regard to adaptation and impact, though still maintains a split balance of research that highlights both positives and negatives. In no other research than Frank and Lowe’s (2003) assessment of accountants are these concerns captured as succinctly as:

...the absence of being in the office has caused some to be concerned with how the lack of “face time” will impact their careers. [Remote workers] are apprehensive that working at home will promote a perception of being “out of sight, out of mind,” resulting in being passed up for promotions, missing out on professional development opportunities and networking, and threatening job security [...]. Managers often find that control, supervision, and performance appraisal of telecommuters is difficult because (2) their work arrangement deviates from standard practice and (2) with little face time they have to put more trust and reliance upon technology [...]. (p. 147)

Frank and Lowe (2003) further highlight the additional impact this has (advancement-wise) with respect to work groups and projects, by not being “present” and able to work on efforts as a standard in-office population of workers might. Such perceptions speak to the need of organizations to make it clear that AWAs will not cause negative consequences for employees, and/or to provide extended encouragement and

access to AWAs beyond formal programs (Koivisto & Rice, 2016). Other research has found scenarios where remote workers complained of missing formal and informal opportunities at the office, and were personally concerned about isolation and exclusion, feeling “out of the loop” and insecure about aspects of their organizational membership (Morganson, et al., 2010, p. 583). Additionally, Charron and Lowe (2005) noted how nearly two-thirds of their observed accountants had similar concerns around advancement and perceptions of AWA adoption, describing this as a “vicious cycle” of judgment that justifies such concerns (p. 193). Given the aforementioned data, can any good can come from the realm of advancement with respect to AWAs?

For one, some research has shown the negative perceptions of advancement when using AWAs are mostly based on initial fears that unfortunately act as a barrier to AWA implementation, but are still worth the risk of testing out. Charron and Lowe (2005) found that regardless of how someone may /not be promoted by comparison to others or how their salary may differ, becoming participants in AWAs alone is enough to mitigate most advancement concerns by the same employees that initially bring them up. Furthermore, and as noted by Hill, et al.’s (2003) IBM study, once engaged in AWAs, remote workers were actually more likely than traditional in-office workers to view their opportunity for career advancement optimistically. Though to some extent, these findings were unique, as explained by Hill, et al. (2003):

One possible explanation is that flexible work arrangements have been used in IBM so extensively, and for so long, [because] they have been normalized. So many employees work in the virtual office and the home office that work venue no longer is seen as an impediment to career development. Also, IBM is a technology company and its employees are provided with tools to effectively reduce the need for face-to-face interaction. (p. 233)

Thus, for an organization that has gone through the process of tightly integrating AWAs into the regular practices of their workplace, the company's culture, and similar factors, these concerns are effectively eliminated. The Higher-Ed IT Org bears many similarities in this case when compared to IBM in the line of work they perform, though AWA processes and practices are not normalized as universally across the organization. Additionally, Hill, et al.'s (2003) study found that for remote workers at IBM, regardless of location, career opportunities were either not impacted or positively correlated with such AWA measures, while in companies without tight AWA integration, in-office workers experienced less advancement. This study provides some key parting takeaways: with advancement in mind, the organization and its receptiveness to technology as supplements for in-office meetings, interactions, etc., in addition to the overall integration of AWAs within the company, such factors strongly determine how advancement of workers within the organization are impacted by AWAs. Therefore, while HEITO and other more technically-inclined organizations may be able to mitigate negative career advancement concerns, on the whole, it can be said that *4. career advancement* can experience a *partly negative* (-1) impact in remote work adoption.

With the previously discussed mixed results of career advancement comes yet another element of AWAs bearing a similar resemblance in the conflicted balance of both pros and cons, being *5. work-life balance*. Described by Salolomo and Agbaeze (2019) as the "effective management of multiple responsibilities at work, at home, and in the other aspects of life," (p. 537) the addition of AWAs to an individual's work equation can bring many positives in the realm of managing the multiple obligations of life. In the realm of recovery, i.e. allowing an individual to "recharge their batteries", receive relief

from stressors and replenish psychological resources, Biron and Veldhoven (2016) found that employees required less need for recovery when working from home, compared to working in-office, along with a marginal increase of concentration as well. The authors found a threefold sense of reasoning that accounts for this.

First, because remote working involves less commuting, it offers lessened resource depletion in dealing with traffic, mental workload while driving, and time away from the home and other responsibilities (Biron & Veldhoven, 2016). Second, when employees work from home, they are less likely to experience negative impacts of social interactions at work, i.e. where social relationships are exchanged for time, attention and effort (Biron & Veldhoven, 2016, p. 1320). And third, the case of compressing and compounding meetings and social exchanges to in-office workdays, leading to increased social exhaustion on in-office days, will cause a related decrease in remote workdays (Biron & Veldhoven, 2016). Thus, the recovery benefits of remote work are at least partly at the expense of the potential for increased social exhaustion while at-work; however, a somewhat even balance of remote and in-office work may mitigate these concerns. Specifically, an average of 2.5 home and office days (five total) within a given week, or an alternating arrangement of N home days followed by N in-office days (e.g. 3) would improve these measures (Biron & Veldhoven, 2016).

Hill, et al.'s (2003) study of IBM found a similar push and pull in the realm of work-life balance, explicitly noting that while working from home was a significant predictor of work-life balance and personal/family success, this was not true of all remote work arrangements, i.e. where an employee lacked a dedicated workspace or "office" to carry out their work. In their own words as to the reason for these findings:

One possible reason is the lack of externally imposed physical boundaries. Virtual office workers may have difficulty knowing when they are at work and when they are home. Another explanation is that giving virtual office employees work-enabling tools may increase their *time density* or ability to do multiple disparate things at the same time [...]. This also may negatively impact virtual office workers' view of work/life balance. (Hill, et al., 2003, p. 234)

The aspect of *boundaries* within the work-life balance concept was in fact a common theme amongst some research, highlighted by Kossek, et al. (2006) in the importance of developing a boundary management strategy given the permeability of both work and life domains. As they describe:

...contrary to the popular press, an integration of work and family boundaries does not necessarily correspond with less family-to-work conflict. This finding may be due to increased role transitions and process losses from having to switch back and forth and refocus between work and family roles. An integration strategy may also allow for greater permeability between roles. When something good or bad is happening in one domain, it may be more difficult to buffer good or bad things entering the other life space. This suggests that individuals may need to have the opportunity to keep work away from family. (Kossek, et al., 2006, p. 362)

With respect to the Higher-Ed IT Org, while some jobs possess inherent boundaries that prevent such work from shifting over to other domains when not on-site, many roles allow most/all work to be completed virtually. Furthermore, some roles have on-call expectations, whether from external customers or for internal escalation purposes, that further blur lines between domains and speak to this boundary issue. Perhaps even more concerning, when boundaries are ill-defined, problems can worsen to where additional hours are worked and required (whether explicitly or implicitly), and interruptions and distractions increase or become common outside of regular work hours (Sarbu, 2018). In total, this arrangement may lead to a scenario where any work-life benefits are now offset by the inability to separate and reconcile professional and

personal interests, and cause an increase in conflict between work and family matters (Sarbu, 2018).

To refocus on more positive work-life balance elements, an improvement in time with children and family was found for employees who engaged in a Results Only Work Environment (ROWE), where autonomy was granted to when and where employees could work compared to a traditional office environment (Hill, Tranby, Kelly, & Moen, 2013). Furthermore, an increase in family-based activities, such as the meals mothers ate with their children (by 14%, in this case), was also found due to such arrangements (Hill, et al., 2013). Though interestingly, while the overall time spent with children by parents was not found to increase, the perceived difference and observed increase in activities was found to be partly due to a reduction in stress. Such stress reductions are found to be the result of multiple factors from AWA arrangements, including: fewer interruptions, less involvement with inter-office political disputes, and decreases in the frequency of information exchange (Allen, et al., 2015). AWAs certainly have an impact on the balance of work and family matters, and while some positives may exist to balance out the initially noted negatives, at best we can conclude a *neutral* (0) impact with respect to 5. *work-life balance* overall.

Lastly, when considering the various characteristics (gender, race, ethnicity, age, opinions and perspectives) that make up a company's employees and their influence within the organization, 6. *diversity and inclusion* (D&I) is a critical component and strength many modern companies have turned their attention towards. With research showing how diversity within a company increases performance across several measures – e.g. innovation and new ideas, corporate growth, financial gains – it should not be a

surprise that measuring AWAs against aspects of D&I is another critical element worth evaluating (Phillips, 2014). While not all characteristics of diverse organizations have seen extensive research with respect to AWAs, D&I results in many ways resemble the pro/con variance of past addressed areas of impact.

More than any other aspect of D&I, gender both in current and historical research has been a topic studied within the landscape of AWAs. With Nilles' (2001) and the ITAC's research, it was found that while home-based remote workers tended to be more male (65% of an even gender distribution survey) and had an average age within the early 40s, other mobile/remote-based workers (e.g. purely mobile, or from coworking spaces) had a nearly equal gender distribution, and had an average age within the early 30s. However, Nilles (2001) also found that female remote workers were eclipsing male workers (20% vs. 15%) amongst the proportion of new remote workers. Roughly around the same time frame of the early-mid 2000s, for select fields like accounting, the majority of workers engaged in AWAs were women (Charron & Lowe, 2005). Furthermore, Charron and Lowe (2005) also found that younger employees were more likely to view AWAs through a gender-free/agnostic lens, while this was not universally true of older employees. This speaks to the need to offer educational programs around AWAs that perhaps have needs, materials, etc. targeted towards specific demographic groups (e.g. males, older employees) to alleviate concerns of who is or should be engaged in AWAs, and to gain support for AWAs overall (Charron & Lowe, 2005).

Beyond the gender distribution of workers, select studies revealed biases that have or did exist, but may be shifting within the realm of AWAs across gender lines. Specifically, Frank and Lowe (2003) found that while women in accounting who engaged

in AWAs had experienced biases regarding performance evaluations and career support compared to men from studies in the 1980s and 1990s, they could not find a main effect for gender in evaluating those same measures in 2003. Frank and Lowe (2003) did find in their study that males in accounting who engaged in AWAs would be perceived more negatively in performance ratings. For the authors, in fields like accounting where stereotypically masculine traits (e.g. aggressiveness, competitiveness) were still found to be valued within higher ranks of leadership, men engaging in AWAs would be deviating from assumed gender roles, eliciting a negative stigma and being more reluctant to adopt AWAs due to the fear of perception at work (Frank & Lowe, 2003). And while this may seem to be an outmoded view of gender roles with respect to AWAs, it bears surprising relevance to more current research.

Relatedly, data shows on the whole that outside of Scandinavian countries, men's adoption of AWAs is much lower in other developed nations, including Australia where such stereotypically-oriented traits still prevail and have constrained accepted roles for men and women with AWAs (Borgkvist, Moore, Elliott, & Crabb, 2018). Conversely, Scandinavian countries maintain a gender equity policy that extends to both men and women at the national level, also believing that such policies extend to a mentality well beyond the defined, formal measures prescribed by the government (Borgkvist, et al., 2018). Borgkvist, et al. (2018) believes these deviations across gender lines also stem from the very way AWAs are pitched universally, i.e. as an organizational privilege and an individual choice, which offers "no challenge to organizational culture nor [alters] the narrative around men's [AWA] uptake" (p. 713).

Though some of these comparisons expose biases and generalizations resulting from gender, McNamara, et al. (2012) conversely found through their studies that there was only limited support that access to/utilization of AWAs was impeded across lines of gender, among other factors. Furthermore, Barham, Gottlieb, and Kelloway's (1998) study of a financial services company in Ontario, Canada found that managers were willing to grant AWAs to both men and women, though were on the whole more willing to grant AWAs to regular workers compared to managers. While the main effect was not conditioned by gender, female managers were more willing to grant AWAs to employees than male managers (Barham, et al., 1998). The financial services company also exhibited a larger population of women in management ranks compared to other similar Canadian companies, e.g. 41% of managers were women and 77% of the workers were women (Barham, et al. 1998). Carleton and Kelly (2019) additionally found through their recent study that while women chose AWAs ultimately for different reasons than men, gender had no apparent impact on the AWA element of job satisfaction, as previously discussed.

An interesting finding was observed by McNamara, et al. (2012), showing that an increase in education (e.g. a bachelor's degree or more) was associated with greater access to control dimensions of AWAs, extending beyond level of education to occupation. Confirming findings from our previous discussion around the 21st century shift taking place, workers in computer and mathematical occupations were far more likely to have access to AWA benefits, while those in more production-level occupations were less likely to have access to utilize AWAs (McNamara, et al., 2012). Relatedly, the authors found that demographic considerations (race, gender), and family factors were

second in access to and utilization of AWAs when compared with education and occupation (McNamara, et al., 2012). Nilles' (2001) research also found an increase of college-educated workers in AWA arrangements (e.g. 79-82%) compared to individuals in standard in-office arrangements (60%).

Further in support of education and occupation-based findings by way of a slightly different path is He & Hu's (2015) research, which focused primarily on the relationship between income and remote workers. The authors found that amongst an evaluated sample size of 7,500 workers within the Chicago metropolitan region, lower-income (i.e. \$50,000 or below) households were less likely to work remotely, which itself aligned with related findings through the 2002 Southern California Association of Governments Telework Survey (He & Hu, 2015). Additionally, He & Hu (2015) found that for both high and low-income groups, having a college degree contributed to a higher likelihood of being a remote worker, as did the occupation of that worker; specifically, not working within the retail sector.

With regard to D&I and AWAs, the ability for such arrangements to open up opportunities to those with physical and other disabilities should not be underestimated. With the passage of the Americans with Disabilities Act (ADA) in 1990, remote work in particular became a far more viable option for employers to be able to expand their hiring pool to disabled workers (Allen, et al., 2015). Remote work was also recognized by the Equal Employment Opportunity Commission, which allowed workers with environmental sensitivities, mobility impairments, chronic pain or fatigue, etc. to utilize remote work as a "reasonable accommodation" to these symptoms (Allen, et al., 2015). This is also true of the ADA, which requires companies with 15 or more employees to

provide reasonable accommodations for employees even when other non-disabled employees have no remote work/AWA support (Allen, et al. 2015).

For a final note on measures of D&I, while much of this section has addressed the diversity standpoint of the field, little has specifically focused around inclusion. However, Morganson, et al.'s (2010) research was one notable piece highly centered around the notion of workplace inclusion, in their case defined as "one's sense of belonging to the organization," (p. 583). Morganson, et al. (2010) ultimately found that main office workers did report higher levels of inclusion within the workplace compared to remote workers. However, more specifically in relation to D&I, primary work location showed an 18% variance in inclusion beyond other diversity and demographic related variables such as gender, work status and tenure (Morganson, et al., 2010). As with other areas of impact around AWAs, D&I represents a core component of how AWAs impact the lives of workers, particularly around certain groups where positive evidence and impact are clear, such as the disabled, and those cases where socioeconomic factors can have negative consequences, e.g. education, job field, income. However, across other D&I aspects, assessing the impact of AWAs on D&I provides less of a clear picture than we may hope to leave with, and it is due to this difference that we assess *6. diversity and inclusion* to have a *neutral* (0) impact with respect to remote work.

In total, this leaves us with the following assessment of impact on the noted areas of the remote work AWA dimension:

Table 1. Measures of Impact on Remote Work

Remote Work Impact Category	Score (-2 to +2)
1. Work Performance	0 (<i>Neutral</i>)
2. Job Satisfaction	+1 (<i>Partly Positive</i>)
3. Recruiting/Retaining Workers	+2 (<i>Largely Positive</i>)
4. Career Advancement	-1 (<i>Partly Negative</i>)
5. Work-Life Balance	0 (<i>Neutral</i>)
6. Diversity and Inclusion	0 (<i>Neutral</i>)
	Total Score: +2 (-12 to +12)

The Impact of Desk Sharing

While remote work has variable impact across many measures, desk sharing bears an impact that touches a wholly separate range of factors. Unambiguously, desk sharing factors are mostly centered around the concept of change within the physical office environment, and how such environmental changes influence employees throughout an organization. Unlike our analysis of remote work, desk sharing-related research remains a less-commonly assessed topic compared to remote work, and/or other AWA arrangements on the whole, and does not fit easily into any well-defined, overarching categories. Simply, not enough research exists to align desk sharing with the six aforementioned remote work-related categories. Yet employees do experience a fully unique set of challenges and changes in their adaptation to desk sharing arrangements, and I found three specific categories worth measuring impact, being: *1. space utilization*, *2. personal space/privacy*, and *3. communication behaviors*. Similar to remote work, for these categories we'll assess them with the same -2 to +2 rating system, though we'll discuss the categories in a slightly less linear fashion than what was done previously for remote work.

To start with a discussion about *1. space utilization*, and as stated by Audrey Ellison Schreifer (2005) in her workplace strategy assessment in the *Journal of Corporate Real Estate*, much as many modern organizations have been shifting towards AWAs, the same is true of the physical workspaces utilized by such companies.

Schreifer (2005) notes that

The trend in corporate offices today is to have fewer and smaller individual workspaces and a greater portion of the space dedicated to interactive uses in an array of functions and sizes. The main function of the workplace is shifting toward intense interaction. Space is being optimized for all types of collaboration, ranging from large formal meetings to chance interactions as two people pass in the corridor. For quick transitions from one mode of working (collaborative) to another (heads-down), "thinking spaces" are needed for periods of concentration. A corporate facility must provide the right mix of these spaces and also support virtual interaction with globally dispersed teams of colleagues, partners and customers. (p. 223)

Given the above, one can postulate that the reasons for the Higher-Ed IT Org's change align with the available data. Specifically, as noted by Davenport and Pearlson (1998), the most common combination of AWA implementation assessed through their findings was remote working paired with desk sharing, as is now and will exclusively be the case for HEITO once moved into the group's new facility. With corporations finding that office environments are only used between 30% and 50% capacity at any given time, and with each desk sharing worker (compared to an in-office worker) resulting in savings from \$6000 and \$7500 annually, real estate and financial reasons remain salient as companies look for ways to maximize space and reduce costs (Schreifer, 2005). Though not all financial data for such arrangements points in a positive direction.

Davenport and Pearlson (1998) also found that cost savings gained through desk sharing were sometimes offset by higher costs for technology, home office furnishings, and real estate lease negotiation issues, in some cases costing firms up to \$10,000 a year

per worker. However, the authors noted many of these negatives were mitigated depending on the size of the company and scope/preparations for the effort, as reductions in office space by 25% to 67% yielded savings between \$50 and \$100 million dollars for corporations like AT&T (Davenport & Pearlson, 1998). Furthermore, as noted by Nilles' (2001) and the ITAC's research, with roughly 18% of their studied remote workers indicating they shared desks with others when working on-site, this group of particular workers two decades ago accounted for a reduction of 1.6 million workspaces required to be provided explicitly by employers. At scale, these numbers can add up, and explain the massive savings companies such as AT&T can benefit from. Yet, because a shift to desk sharing can be such a jarring change, this entails the need for a workspace strategy that can "address the social, physical, and technical components of the work environment as well as financial considerations," as noted by Schreifer (2005, p. 229). Given this assessment, what would a workplace look like that has been adapted towards work in the 21st century, and one where desk sharing is a core component of the way employees work within the space?

In many cases, the workspaces that have desk sharing as a core tenet of operational procedure have themselves become known under their own moniker, activity-based flexible offices (A-FOs). Describing the main distinguishing feature of such spaces, Wohlers and Hertel (2016) note

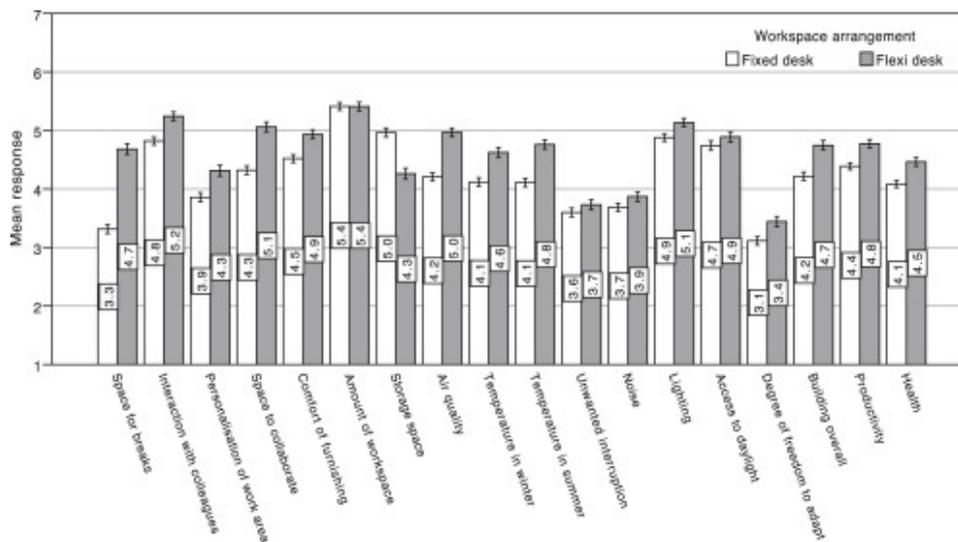
...the most striking feature of this office concept is that it provides different working locations that match the requirements of different kinds of work activities. A-FOs are open-office environments comprising a variety of additional open, half-open and enclosed activity-related working locations without assigned workstations. Organisations implementing A-FOs intend to respond to emerging work requirements, often caused by the increasing emergence of knowledge work, by providing space for both concentrated work and opportunities for conversation and collaboration [...]. (p. 467)

More than just providing a different variety of spaces, of equal importance in desk sharing offices is the way in which these spaces make up the total sum of the office environment, and how different spaces become more or less important. JoAnn Greco (1999) notes that the downsizing/elimination of private offices in such arrangements often results in larger public and amenity-driven areas to cater to the change in work environment. This could be anything, from game rooms and kitchens/cafes, to more pragmatic spaces such as quiet rooms allowing for heads-down time, or collaborative conference rooms and desk setups allowing for barrier-free communication (Greco, 1999). In one case, the company Liminality accommodated their desk sharing arrangement by adding “cones of silence” – small, 48-square foot rooms designed for one person for calls/quiet work, as well as “club” rooms designed for collaboration with whiteboards and flexible furniture (Greco, 1999). From all of these factors above, we may claim that 1. *space utilization* incurs at least a *partly positive* (+1) measure of impact with desk sharing; from cost savings on the employer side, to an increase in overall variety of space types on the employee side.

Yet to touch back on a common factor that occurs from how desk sharing workspaces are designed, 2. *personal space/privacy* will likely shift when moving to a desk sharing model. In some cases this may not be viewed in a pejorative sense, with data proving this to be true as well, such as Kim, et al. (2016) noting that in their assessment of desk sharing workspaces across 20 Australian companies’ offices, the reduction of personal space (from 79 to 46 square feet) was compensated by a substantial increase in break-out/collaborative space by 67%, and meeting areas by 22%. This resulted in fixed office and desk sharing employees being equally satisfied in the amount

of space available to them, and shows how a balance of space utilization can in fact offset concerns in personal space to maintain satisfaction among desk sharing individuals (Kim, et al., 2016). Interestingly enough, this same study yielded 16 of 18 measures (Figure 2) where desk sharing participants had more positive ratings of their work environment compared to fixed desk users (Kim, et al. 2016). In this case, the two measures where desk sharing workers provided lower scores of their physical office environment were with respect to the amount of workspace (equal), and storage space (less) (Kim, et al., 2016).

Figure 2. Mean scores for desk sharing vs. fixed desk users (Kim, et al., 2016)



As a common strategy of such desk sharing spaces, typically fewer workstations/desks are provided than the total number of employees, primarily to combat the low-occupancy numbers in traditional fixed desk offices as noted earlier (Chafi & Rolfö, 2019). This percentage of desks available to the total workforce is often targeted around 70 percent or slightly less, i.e. to account for employees working remotely, out sick, or engaging in other assorted AWA arrangements (Chafi & Rolfö, 2019). However, the most frequently cited issue, by 26.8%, in Kim, et al.'s (2016) research was the

insufficient number of desks in desk sharing offices on busier days, e.g. for an organization where 100 workstations were shared by 130 people. Following these issues for Kim, et al.'s (2016) participants were: difficulty in finding colleagues (21.6%), wasted time in desk location setup/teardown (12.4%) and an inability to meet personalization and/or ergonomic needs (11.3%). Without a doubt, pros and cons exist in the realm of 2. *personal space/privacy*, which lead to possessing a largely *neutral* (0) level of impact when evaluated in total.

With regard to 3. *communication behaviors*, for a deeper comparison into the positives and negatives of desk sharing, Chafi and Rolfö (2019) identified in their recent comprehensive study that desk sharing workspaces provide benefits such as increased autonomy, opportunities for concentration, decreased sedentary time as well as improved communication and knowledge transfer. However, Davenport and Pearlson (1998) conversely see communication with regard to desk sharing as a negative, highlighting the need for managers to find balance between task-oriented and relationship-building communications, e.g. when workers are disparately located and not seen as frequently. Similarly, Chafi and Rolfö (2019) indicated that negatives of desk sharing included difficulty physically or virtually locating colleagues, lessened interpersonal relationships, time loss and an overall lack of privacy. Additionally, desk sharing arrangements can ultimately cause workers to shift over time to utilizing remote work (i.e. from home) more often, whether intended or not, as such an arrangement lacks advantages such as locating people and work tools, and the sense of belonging that regular physical offices are expected to possess (Davenport & Pearlson, 1998).

While allowing workers to pick their desks on a regular (i.e. daily) basis has been known to generate a sense of autonomy and control over the work environment, and with social identity theory/reciprocity at play which can result in greater work satisfaction, unexpected results relating back to communication behaviors may arise as well (Kim, et al., 2016). As one example, research has shown that employees with assigned desks are shown to more strongly identify with their immediate work teams, versus those engaged in desk sharing that instead identify more strongly with the organization (Wohlers & Hertel, 2016). This is seen to be the result of irregularity in communication frequency, as when colleagues sit and communicate more with those outside their team, team identity becomes less prominent (Wohlers & Hertel, 2016). Additionally, Wohlers and Hertel (2016) noted the negative attitudes and behaviors that can stem from territory loss with such arrangements, and desire for consistency with communication and other areas. Studies of employees' choice of workstation have shown that employees do not switch their workstation as often as they should to match task requirements. Speaking to this point specifically, Wohlers and Hertel (2016) mention the following:

Indeed, employees' choice of workstations is often determined by personal preferences (e.g. sitting close to a friend) instead of task requirements (e.g. sitting in a communication zone although the employee needs to concentrate). If A-FOs are used in this manner, they seem to provide no advantages over open-plan offices or are even worse, as they limit employees' possibilities for demonstrating ownership. In line with that, managers need to understand and pay attention to the reasons for employees' choice behaviour. We have argued that by choosing the same workstation in a non-territorial work environment, employees might want to regain feelings of ownership and personal control to compensate for a loss of territoriality. Thus, in order to make employees establish a good task-environment fit, it seems helpful to provide employees new opportunities for personalising their work environment. For instance, organisations can offer personalised notebooks and smartphones or let employees participate in interior office design and decoration. That way, employees are able to communicate their personality to others and develop feelings of ownership. Moreover, research has already

demonstrated that personalisation is a powerful means to reduce the negative effect of low levels of privacy on emotional exhaustion [...]. (p. 481).

Perhaps more than other categories in the desk sharing realm, the potential for negative impacts and unintended consequences remains higher in the realm of communication behaviors, while also impacting other areas such as space utilization and personal space in the process. Though mitigating factors (e.g. degrees of autonomy, control) can be used to offset such effects, *3. communication behaviors* can be considered to incur and elicit a *partly negative* (-1) impact in the desk sharing space.

Speaking to the points of autonomy and control, the organization should ideally provide personalized flexibility in myriad ways to account for the lack of personalization users receive in a desk sharing environment. Relatedly, Chafi and Rolfö (2019) found that exerting a sense of control (i.e. via policies) to ensure variability with desk and workspace selection is pivotal to ensuring success of such arrangements. The authors evaluated 105 employees across four Swedish organizations, with each organization possessing different desk sharing and speech-related rules and policies to observe their consequences on work conditions. The rules used and their implementation, i.e. implicit, explicit, ambiguous, or a mix of two or more (Figure 3) tested a number of work conditions, behaviors and elements of impact (Figures 4 and 5) across the different scenarios. For Figures 4 and 5, positive results on the consequences of rules by participants are indicated in green, while failed results by participants are indicated in red.

Figure 3. Desk sharing and speech rules for the four cases (Chafi & Rolfö, 2019)

Desk-sharing rules		Case 1		Case 2		Case 3		Case 4	
R1.	To remove belongings by the end of the day	Explicit	☉	Explicit	☉	Implicit	☉	Explicit	☉
	To remove belongings during the work day	-		Explicit: duration of unattended use ≤ 120 mins	☉	Implicit: ambiguous duration of unattended use: 30-120 mins	×	-	
R2.	To use the same desk in open zones in consecutive days	Ambiguous: whether or not allowed	×	Implicit: allowed	☉	Ambiguous: whether or not allowed	×	Ambiguous: whether or not allowed	×
R3.	To use the scarce zones in consecutive days	Ambiguous: whether or not allowed	×	Implicit: allowed	☉	Ambiguous: whether or not allowed	×	Ambiguous: whether or not allowed	×
Speech rules		Case 1		Case 2		Case 3		Case 4	
R1.	To interact with colleagues	Explicit: not allowed in the strictly quiet zone	☉	Explicit: not allowed in the semi-quiet zone	☉	Ambiguous: whether or not allowed in some zones	×	Ambiguous: whether or not allowed in all zones	×
R2.	To speak on the phone	Explicit: not allowed the strictly zone	☉	Explicit: allowed in all zones	☉	Implicit: allowed in all zones	×	Ambiguous: whether or not allowed	×
		Implicit: not allowed the semi-quiet zone	☉						

☉ High degree of compliance: observed and reported ☉ Exceptions of disregarding rules: observed and reported
 ☉ High degree of disregarding rules: observed and reported ✕ Different interpretations and extents of rule breaking were reported.

Figure 4. Work condition results of desk sharing rules for the four cases (Chafi & Rolfö, 2019)

Work conditions	Case 1	Case 2	Case 3	Case 4	Reported factors regarding consequences of desk-sharing rules
Autonomy					Opportunity to choose different workstations Difficulties in finding available workstations Limited opportunities for personalization Social pressure for changing/choosing specific workstations
Physical resources					Decreased sedentary time Complications with adjusting workstations Inconvenient transporting/setting up of belongings
Mental resources					Decluttered workspaces Increased planning and setup time Limited access to printed documents
Intra-team resources					Increased access to team members and management Facilitated spontaneous interactions Facilitated collaborations and side-by-side work Difficulties in finding and gathering colleagues Increased risk of isolation from team members Missing out on social activities Risk of feeling alone and unnoticed Difficulties in grasping colleague's well-being
Inter-team resources					Increased inter-team interactions Increased understanding of inter-team colleagues Decreased hierarchies Lack of familiarity with the social surrounding

Figure 5. Work condition results of speech rules for the four cases (Chafi & Rolfö, 2019)

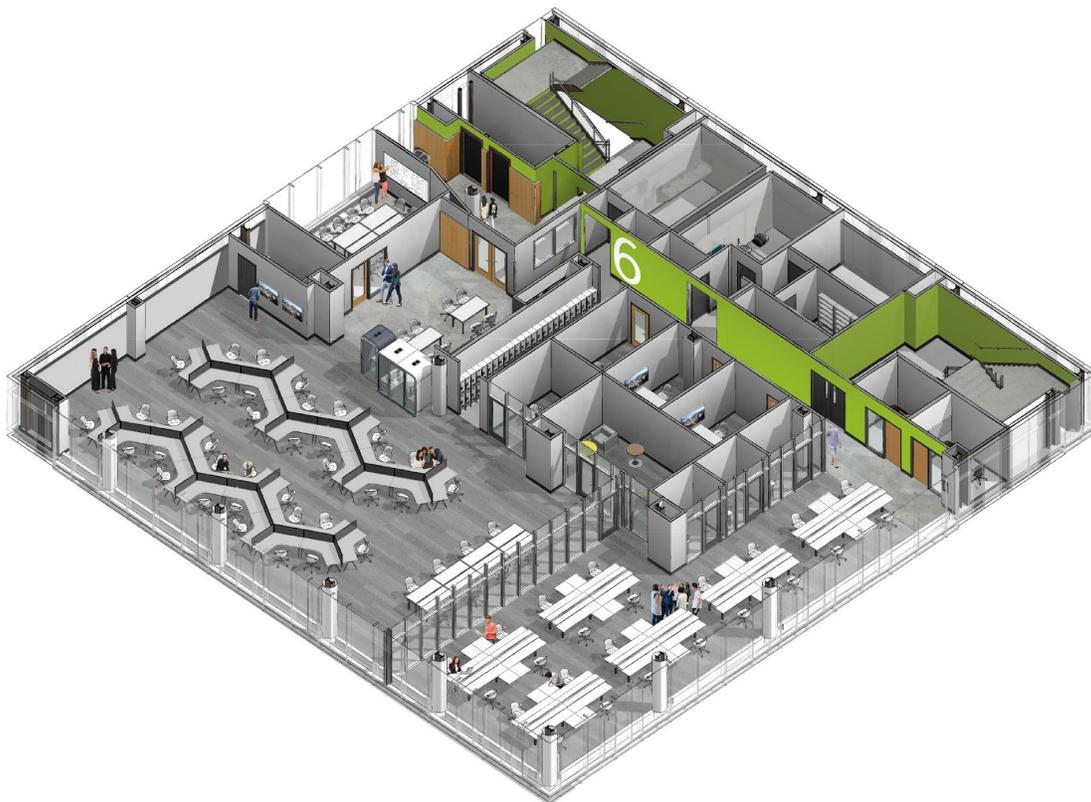
Work conditions	Case 1	Case 2	Case 3	Case 4	Reported factors regarding consequences of speech rules
Autonomy					Opportunity to choose between strictly quiet, semi-quiet and interactive zones
Mental resources					Shielding oneself from interruptions by colleagues in quiet zones Avoiding distractions from others' phone conversations in quiet zones Exposure to too many conversations in interactive zones
Inter- and intra-team resources					Quick exchanges of information in interactive zones Overhearing conversations in interactive zones Missing out on important information in quiet or semi-quiet zones Limitations on initiating conversations in quiet or semi-quiet zones

To sum up the author's findings, Chafi and Rolfö (2019) found that identifying rules/policies for desk sharing and speech patterns in desk sharing offices was a critical step in any arrangement, as was done with their five selected rules. In their case, these rules were: (R1) to remove belongings from the desk when finished, with an explicit maximum reservable duration, (R2) restrictions on choosing the same desk on consecutive days, (R3) restrictions on booking small/quiet-use rooms on consecutive days, (R4) allocating zones where conversations and interruptions are allowed/forbidden, and (R5) allocating zones where phone calls were allowed/forbidden (Chafi & Rolfö, 2019). Furthermore, the authors found that when employees were involved from the beginning of the planning process, this increased their acceptance of the environmental change to desk sharing, and led to unified understanding of the rules and less cases of disobedience (Chafi & Rolfö, 2019). Lastly, and perhaps most important, the *explicit* communication of the rules was key to ensure secure choice of action, as the absence of explicit rules and clear communication of those rules led to implicit rules, assorted interpretations of actions and rule-breaking (Chafi & Rolfö, 2019).

To round out this discussion on desk sharing arrangements, it makes sense to provide at least a partial evaluation of HEITO's future office, and if/how it aligns with the topics discussed within this section. While the Higher-Ed IT Org's future building

remains under construction, many of the principles noted here appear to have been adopted, based on available renderings and floor plans of the proposed space. Specifically, separate zones of desks have been identified for collaborative use and quiet use, the latter separated by a glass partition (Figure 6) and with more prominent dividers between desks. This bears a unique distinction from the current utilized office space(s), which have desks of a consistent configuration across the building, and no physical or other distinctions as to speech level, the desk purpose or its use.

Figure 6. Tentative rendering of new Higher-Ed IT Org office (2019)



Similarly, in the new building, smaller rooms/booths exist for making phone calls, while an assortment of meeting rooms around the core and perimeter of the space accommodate groups from 3 to 12 people. Existing buildings have a smaller number of bookable conference rooms, and these rooms have less variety in terms of size/space. No phone booths or single-use conference rooms exist within the current offices as well.

Collaborative areas also exist in the new office, such as a kitchenette, and mixed non-reservable furniture to be used as temporary touchdown space; with the former present in the existing offices (in smaller form), and the latter not at all. Given the previously-stated measure of shared desks covering 70% of the workforce, the new building's count of reservable desks specifically is 60, for a workforce of ~100. Including casual/non-reservable seating spaces (excluding meeting rooms) makes this total 78 seats, or near 100 total when including meeting rooms. Due to the organization already expecting that a subset of its population (e.g. approximately 25%) will remain in other offices around the campus, it could be surmised that this should adequately accommodate employees.

That said, much of the existing space design and core choices for the new facility have not *directly* involved workers or managers, and were predominantly decided by Senior Directors and the CIO, who conveyed the decisions to others after they were made. Public showings/feedback sessions were provided for select elements of the space, e.g. to test assorted office furniture, and opportunities were provided (physically in meetings, virtually via chat communication software) to provide feedback, ask questions, etc. on the decisions being made. Presently, the CIO and Senior Directors are in the process of establishing a "Space Committee" used to gather feedback on decisions and details as the construction of the building draws closer to completion. Most critical discussions with respect to this space as discussed here, however, have already been made.

In total, and to reference back to our previously noted categories, this leaves us with the following assessment of impact on the noted areas of the desk sharing AWA dimension:

Table 2. Measures of Impact on Desk Sharing

Desk Sharing Impact Category	Score (-2 to +2)
1. Space Utilization	+1 (<i>Partly Positive</i>)
2. Personal Space/Privacy	0 (<i>Neutral</i>)
3. Communication Behaviors	-1 (<i>Partly Negative</i>)
	Total Score: 0 (-6 to +6)

Decision Strategies – The Role of The Organization

Though much of what we've discussed throughout this secondary research already contains a fair amount of implications around strategy, it remains important to consider this from a more in-depth perspective. How the organization chooses to implement AWAs, the many factors that are involved strategically around processes and behaviors used to obtain organizational outcomes, and its impact on the organization entails much more than meets the eye. As of early 2020, it is estimated that roughly 30% of the Higher-Ed IT Org's staff are active participants in the organization's AWA efforts, excluding any mandated COVID-19-related measures. In this case, the 30% of workers encompasses those who are utilizing both remote work and desk sharing on a regular basis, i.e. at least once per week. Considering this effort itself dates back to 2016 and has had a gradual approach in terms of implementation (through some form of intention), this can be considered either a success, or perhaps underachievement given the larger transformation now expected of the whole organization by year's end. With that said, perhaps it is interesting to discuss the landscape of the organization through a few lenses.

Without a doubt, and as noted throughout parts of this capstone until now, *autonomy* plays a critical role in the movement towards AWAs both as an overarching organizational paradigm, but additionally within the context of a single company.

Defined by Allen, et al. (2015) as “the extent to which a job allows the freedom, independence, and discretion to make decisions and to choose the method by which job-related tasks should be completed” (p. 51), autonomy has been granted to employees of the Higher-Ed IT Org in many ways. In one sense, their *choice* to participate in the company’s AWA arrangements for the past few years overall, when they’d like to begin participating, and other areas represent the personal freedoms granted to individuals in this effort, independent of the reported freedoms remote work and desk sharing themselves would bring.

This positively aligns with principles noted by Spreitzer, Cameron and Garrett (2017), who identified in their research on AWAs that to ensure success of such efforts, AWAs should be advocated for employers/by employees through employee choice, which bears a correlation to higher-skilled (i.e. white collar) roles that follow this pattern of adaptation. Conversely, it is those that are in lesser-skilled (i.e. blue collar) roles where AWAs are often forced by employers, and ultimately spell precarious implications for workers in the long run, e.g. in cases where the same AWA benefits were given to either group of workers (Spreitzer, et al., 2017). These findings tie into satisfaction concepts like self-determination theory, which states that such choice-based satisfaction is a pre-cursor of work-related outcomes such as job satisfaction, motivation, and work-life balance (Wohlers & Hertel, 2016). However, even considering the alignment of the Higher-Ed IT Org with that of white-collar roles and the findings of Spreitzer, et al. (2017), Stavrou, Parry and Anderson (2015) found that employees are overall less likely to accept the use of AWAs if a company was introducing them for external reasons rather than a genuine desire to benefit employees. And while it may seem that autonomy has

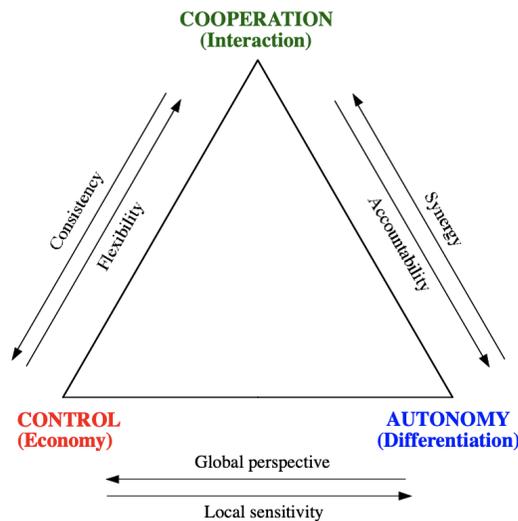
been granted to HEITO employees, and has been done for their benefit, to look at this implementation of AWAs solely through an autonomy lens would be to ignore an equally omnipresent counterpart that simultaneously exists.

Referring back to the Figure 1 notes that signified the birth of this effort, the Higher Ed IT Org's movement towards AWAs was the result of a senior leadership collective assessment, and decree based on observation. Employees of the organization did not form their own assessment to request such a change, or establish a committee to evaluate and recommend AWA options and possibilities for adoption; however, the pilot effort itself (once implemented) added the element of choice. Additionally, any idea of such an effort for AWA adaptation being used solely to benefit employees likely ended with the announcement of the Higher-Ed IT Org's new AWA-only facility in late 2018 (to be opened in late 2020), an additional mandate on the matter. These factors seem antithetical to the argument that autonomy was a driver in these efforts. Instead, these factors highlight an effort where *control* reigns supreme, at least for those in the organization who have the ability to make such decisions. To be certain, this seemingly paradoxical balance between autonomy and control has been documented well outside the bounds of this particular capstone, and for organizations like HEITO.

Robert Keidel's (2010) book, *The Geometry of Strategy*, provides a seminal model for assessing organizational political structures and strategies, and how these strategies map to a few key concepts. Keidel (2010) views the relationship between autonomy and control – with a third factor, cooperation – as a strategic concept known as triangular thinking, where “every organizational strategy problem reduces to a play on these three relations” (p. 63). In this case, each relation (e.g. autonomy and control,

control and cooperation, cooperation and autonomy) in effect models a Venn diagram that, depending on the intersection of these aspects, shows the push-pull relationship and tradeoffs made when one element supersedes another (Keidel, 2010).

Figure 7. Organizational Strategy Tradeoffs (Keidel, 2018)



Describing the specific relationship that exists between autonomy and control, Keidel (2010) writes

Autonomy versus control is the classic field-versus-headquarters dilemma: nitty-gritty versus big-picture. Those in the field are “where the rubber meets the road,” as the famous tire commercial used to put it. They are in touch with customer needs and geographical nuances in a way that remote corporate managers and staffers rarely can be. What field personnel tend to lack, however, is a view of the whole. (p. 63)

Perhaps in this case, such a battle can be thought of as: who is in the driver’s seat of the Higher-Ed IT Org’s AWA efforts? It seems that the global aspects (control) outweigh the local sensitivity (autonomy) in HEITO’s decision in shifting towards AWAs. Yet the elements of autonomy, control and cooperation are also analogous to other organizational patterns that, at their core, have similar relationships under different nomenclature. As one example, Keidel (2010) highlights the relationship between

decentralization, centralization and collaboration as common organizational patterns, thus mapping to autonomy, control and cooperation, respectively. If we were to align this pattern to the Higher-Ed IT Org, we would say the organization has a mix of centralized and decentralized tendencies within itself. The autonomy versus control model can be extrapolated beyond the findings Keidel outlined, and also traced back to other patterns noticed across organizations historically. Of particular note is Wallach's (1983) findings of three cultural dimensions of companies, being innovative (autonomy), bureaucratic (control) and supportive (cooperation), noting similar tradeoffs between these dimensions (Wohlers & Hertel, 2016). Wohlers and Hertel (2016) also note how arrangements such as desk sharing are often reflective of more innovative and supportive cultures, and often result in less bureaucracy (or a move towards less), possibly giving a nod towards autonomy.

However, if we were to view the Higher-Ed IT Org's overall organizational pattern(s) and method towards adopting AWAs through this lens, it is worth addressing the one dimension that is seemingly absent, or at least less present, in this triangular thinking model. If HEITO maintains a seemingly fluid balance between autonomy and control, or if one may advance another in certain respects, the absence of cooperation in such adoption of AWAs has been formally described by Keidel (2010) as "underdoing one's bottom priority" (p. 68).

While cooperative and collaborative efforts are not truly absent, they seem to remain an afterthought in relation to the overall strategy of the effort. As noted previously, while a space committee is being implemented as of early 2020, the vast majority of the new considerations for desk sharing space, core AWA policies, etc. have been defined with limited collaborative assistance, and by the thoughts and minds of select leaders within the organization, again leaning on a mix of control and autonomy. Such a gap in cooperation may also be reflective of a lack of institutional collectivism, implying “the degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action” (Stavrou, Parry, & Anderson, 2015, p. 2417). Although one could attribute this collectivism deficit to the organization itself, much like those differences noted between US and Scandinavian countries for D&I, reasons for a lesser emphasis on this often extend well beyond the organization.

Trust also exists as a separate concept that permeates much of the employer and employee relationship that occurs in such organizational AWA arrangements. As touched upon previously through work performance findings, social exchange theory heavily influences AWAs and trust. Organizations that allow AWAs may later benefit from “employee loyalty and appreciation”, particularly in scenarios where only a small set of employees have such benefits, or choose to utilize them (Morganson, et al., 2010). Mostly, it is this trust that Morganson, et al. (2010) believe impacts employees’ perceptions of work, and bears further influence on factors such as job satisfaction. Furthering the point of *perception* of work, Hill, et al. (2003) view the act of allowing employees to engage in AWAs as being symbolic of trust within the organization, and

speak to the desire for autonomy of some employees. Strategic decisions such as a move to a model where desks are shared, open-planned office space increases, and where communication is expected/utilized and personal space is reduced implicitly call to mind the trust the organization has in its people (Wohlers & Hertel, 2016). Furthermore, such an AWA model can be used to establish greater trust across the organization, merely by the nature that AWAs (and sharing space) evokes, and the impact of sitting with colleagues from other teams and having greater interactions with them (Wohlers & Hertel, 2016). Yet who you are, or the “type” of person you are may very well reflect the trust you have in such AWA arrangements, and/or the organization’s ability to benefit from that arrangement.

Specifically, psychology-based personality theory frameworks and assessments such as the Big Five and the Myers-Briggs Type Indicator (MBTI), and dimensions defined within these frameworks, may play an additionally large role in how such efforts are perceived and adapted to within the organization (Wohlers & Hertel, 2016).

Speaking to some of the Big Five’s dimensions in relation to offices utilizing desk sharing arrangements, Wohlers and Hertel (2016) found the following with regard to extraversion and agreeableness:

It has been shown that extraverts (in contrast to introverts) feel more comfortable and pleasant in social situations where other people are present as they feel energized by interacting with other people, while introverts prefer to go inwards and feel less pleasant with too much interaction with others [...]. As [desk sharing arrangements] provide more possibilities for proximity and visibility and thus ease interaction and communication, it seems plausible to expect that extroverts feel more comfortable in the office environment. In contrast, introverts should feel more distracted and less comfortable. Moreover, it is possible that introverts will more often seek for private working locations in order to protect themselves from interaction with others. That way, they will not take advantage of the different working locations and could benefit less from ease of communication opportunities. Together, we expect extroverts to respond more pleasantly towards

the architectural and functional features, resulting in more favourable outcomes, while we expect introverts to react more negatively towards the A-FO features, resulting in lower job and team satisfaction and well-being.

Wohlers and Hertel's (2016) findings map similarly to introversion and extraversion, along with thinking and feeling (orientation towards people) with respect to the MBTI; i.e. extraverted feelers being more at home in such arrangements compared to introverted thinkers. Relatedly, Gainey and Clenney (2006) found that according to Big Five dimensions, openness was positively and significantly related to remote working arrangements, having impact at the individual and organizational level. However, and perhaps as a counter to the point on extraversion and agreeableness for desk sharing noted before, Gainey and Clenney (2006) found extraversion and agreeableness not to have a positive relationship with remote work, likely given the isolation and lessened ability to interact with coworkers, respectively, for each of these dimensions in such an arrangement. AWA assessments should thus likely be paired with the benefits of considering employee profiles, work patterns, and perhaps most importantly, surveying employees to glean personality-based preferences before implementing AWAs to ensure sufficient participation (Gainey & Clenney, 2006). Such findings can also be industry-dependent, and may mean different approaches for AWA measures for different work groups and teams, even within the same company (Gainey & Clenney, 2006).

Other organizationally-based attributes such as culture, and suggestions stemming from this factor, also play a contributing role with AWA success and adaptation. Powell and Mainiero's (1999) research found that when organizations view the overall adoption of AWAs, they should be looking to ensure equity, consistency and a long-term orientation towards decisions made at the management level around AWAs. The

importance of equity and consistency within an organization was also alluded to by Sánchez-Vidal, et al. (2012), in defining that differences in the perception of AWAs and areas such as work-life balance, often stem from policies that have not been offered to all individuals, managers implementing policies but not supporting their use, and knowledge of such practices being dependent upon employees' own motivation. Johnson, Lowe and Reckers (2008) see such concerns as a matter of *organizational justice*, where procedural justice and distributive justice impact the fairness of decision or policy-making processes and decision/process outcomes. For the authors, aspects of AWA implementation like equity and consistency should be measured at both ends (process and outcomes) to ensure that well-intentioned efforts do not result in bad or unintended consequences for the company, or have outcomes that have no backing to consistent process (Johnson, et al., 2008).

Decision Strategies – The Role of The Manager

Just as the role of strategy and adoption of/adaptation to AWAs impacts the organization and its employees at a wide-ranging level, the same can be said for those in a management position within the company. How managers personally choose to interact with AWAs themselves, and the deeper reasoning behind such choices, can influence the organization's receptiveness to such changes, and the ability and opportunity for workers to engage in such policies. For the Higher-Ed IT Org, though both remote work and desk sharing have been opened as company-wide policies that workers can engage in (with some exceptions for very select roles), adoption of those policies amongst workers remains varied.

Adoption of AWAs amongst the Senior Director level stands at approximately 50 percent, with managers at this level engaging in AWAs in different ways. While some simply choose to work remotely on a rare occasion, others work remotely with greater frequency (e.g. once or twice per week), and in two such cases have entered their former desks into desk sharing, and participate in the program themselves. Adoption rates of AWAs for Senior Directors that engage in these programs remains higher across middle managers and workers under them, compared to those under Senior Directors not utilizing AWAs. A partial explanation for this phenomenon might be the fact that select teams/departments given their roles have less opportunities to engage in AWAs than others. However, even within Senior Director-led teams where AWA usage is omnipresent and opportunities to engage in such policies should (theoretically) be available to all managers and workers, pockets of employees still exist within those teams that have not adopted AWAs. What might help to explain some of the differences in these circumstances?

Considering the Higher-Ed IT Org's effort provides discretion for participation on a manager-by-manager and employee-by-employee basis, elements such as Powell and Mainiero's (1999) work disruption theory, where managers' approval for AWAs is primarily based upon the potential of such arrangements to disrupt the conduct of work, may become a driving force for these decisions. Describing this in more detail, Powell and Mainiero (1999) note:

AWAs make managers' jobs more complex and difficult by placing demands on them that are above and beyond the demands traditionally associated with the supervision of subordinates. In addition to making sure that the necessary work is getting done, and done well, managers who wish to accommodate subordinates' requests for AWAs are forced to keep track of, and juggle, work schedules to make sure that there is adequate coverage at all times. However, even in

organizations with formal work/family programmes, managers are rewarded primarily for the results they achieve in their work units rather than for the concern they demonstrate for their employees' family-related needs. Given the additional demands that AWAs place on managers and the lack of incentives for them to approve requests for AWAs, managers may be unwilling to approve specific requests for AWAs unless they believe that granting the request will cause little or no disruption to the conduct of work. (p. 43)

From the authors' perspective, middle managers tend to focus on what will be in the best short-term interest of employees regarding their subordinates' participation in such AWA arrangements (Powell & Mainiero, 1999). Specifically, the authors see the need to make middle managers aware of corporate benefits and provide incentives to implement AWAs, in addition to educating managers on the legitimate factors from which to base AWA approval/decisions on, and how to account for consistency in such decisions (Powell & Mainiero, 1999). Furthermore, Sweet, Pitt-Catsouphes and James (2015) found that managers who believed supporting AWAs would reflect favorably in their own performance reviews were twice as likely to assist and promote the expansion of AWAs within their organizations. This relates to the fact that to influence such AWA changes, managers must believe the changes will benefit their own career interests, noting that

Because managers have many competing responsibilities, and because supervision of workers using FWAs likely complicates managerial responsibilities, we expect that inducements may be especially important to generate support for higher FWA use. As argued in the conservation of resources theory, given the risks present and increased labor involved, there might be an inherent resistance to expanding FWA use unless it is somehow internalized as personally worthwhile [...]. (Sweet, et al., 2015, p. 81)

The Higher-Ed IT Org has crafted organization-wide incentives for AWA adoption, such as the CIO's willingness to offer up his existing office to become a conference room for additional space, once 50% of AWA usage is attained within the

organization. However, this incentive does not possess any personal or direct benefit to most individuals, whether at the management or worker level.

A more recent study by Sweet, Pitt-Catsouphes and James (2017) further echoed how attitudes of managers towards AWAs can be just as important as formal policies to allow such practices to spread across the organization. The authors in this case emphasized that managers still often serve as gatekeepers, even in organizations with formal policies that permit AWA usage (Sweet, et al., 2017). However, they also note that once managers witness the benefits that AWA measures can bring, skepticism of and enthusiasm for such programs will decrease and increase, respectively (Sweet, et al., 2017). Overall, this suggests the influence of a positive spiral where experience with AWAs influences attitudes, and such attitudes can be considered malleable (Sweet, et al., 2017). An additional unique observation by Sweet, et al. (2017) was the use of reflective reporting to show managers their use/support of AWAs compared to others in the organization, ultimately demonstrating how such norms and group effects impact attitudes towards AWAs. However, these authors were not the only ones to observe the impact that such norms and pressures had on managers' view of AWAs.

A study by Peters and Heusinkveld (2009) in assessing AWAs (primarily regarding remote work) across 96 CEOs and 380 HR managers revealed the impact that both normative and mimetic pressures have on the adoption of such practices. In their view, *normative pressures* relate to the professional socialization of and across managers, while *mimetic pressures* relate to the behavior of peer organizations in the same or similar field (Peters & Heusinkveld, 2009). Peters and Heusinkveld (2009) found that normative pressures affect managers' perceptions of improved outcomes (e.g. work,

social), with more positive attitudes seen across both CEOs and HR managers, indicating that managers' educational level (i.e. in management) and their occupational socialization were important contributors to their attitudes towards AWAs. With regard to mimetic pressures, greater adoption amongst peer organizations was shown to positively affect managers' thoughts and expectations regarding benefits of AWAs (Peters & Heusinkveld, 2009). Extrapolating these findings beyond this single study further relates to the idea that opinions are changeable, and how one views the impact of AWAs across peer groups (e.g. at the organizational level for CEOs, or at the team/group level for managers) can be used to influence their spread/adoption in the organization. Simply, it is the attitudes of managers that should serve as a starting point for such changes, rather than being an afterthought. HEITO's adoption bears a closer resemblance to the latter, and to that point, the development/formation of CEO/CIO-led AWA policies or incentives reflect no guarantee of positive attitudes amongst middle managers and/or workers (Peters & Heusinkveld, 2009).

Another element at play within the realm of managers and AWAs is that of a leader-member exchange (LMX), where social and attitudinal resources, among others, are exchanged in a one-on-one relationship between a manager and subordinate to maintain equity (Koivisto & Rice, 2016). Studies such as those done by Koivisto and Rice (2016) found that with regard to LMX, a supervisor's decisions to favor a subordinate will result in increased support for the leader, and this is true of a manager's willingness to support, advocate for and accept their workers' attitude of AWAs. This idea was also found to extend to shared group identities, where in-group prototypical leaders may still be endorsed by subordinates in spite of unfavorable decisions or

behavior, to some extent (Koivisto & Rice, 2016). Thus, the response to a decision by employees, according to LMX, is not necessarily on the merits of the decision itself, but rather on the normative perception of the manager's opinion or decision. Furthermore, Gajendran, et al. (2014) noted similar findings in that social context – specifically around LMX and the normativeness around AWAs within a given workgroup/team – would be the largest factor in the effectiveness of such efforts. Overall, Gajendran, et al. (2014) found that due to the volatile nature such factors can have overall on AWA efforts, the need for formal organizational policies with explicit guidelines for eligibility to participate in AWA arrangements was critical. This formalized policy is something the Higher-Ed IT Org arguably lacks in its present “talk to your manager” mantra, where managers are autonomously able to determine the conditions and policies surrounding dis/approval of each employee's AWA arrangements.

The devotion to one's work, and how this traditionally differs at the management versus worker level, may also partly explain the gaps sometimes found in varying AWA adoption, and certainly further describes the impact that managers have on such initiatives. Sivatte and Guadamillas (2013) reference this by noting a principle known as *work devotion perspective*, where one's devotion to work is impacted by legitimizing an organization's (i.e. high) expectations of work, fear for not acting in accordance with expectations, and the adoption and growth of one's professional identity. Specifically, the authors note that those in management roles attach more importance to this theory (implicitly) and these principles, given career consequences are more likely to impact their advancement than average workers (Sivatte & Guadamillas, 2013). The authors further note that workers tend to rely more on formal practices/policies offered by the

organization, while managers use informal practices more often, suggesting that management uses informal measures to be discreet and to not be perceived as having a lack of/lessened devotion to work (Sivatte & Guadamillas, 2013). A number of measures – whether formal policies, or explicit backing at higher organizational leadership levels – can be used to mitigate such work devotion factors. Yet advice for managers at various levels tackling AWA arrangements within an organization, whether self-directed or imposed upon by others (e.g. senior managers), extends to many more areas as well.

Leslie, et al. (2012) notes the importance of manager training in conjunction with AWA adoption, specifically around work-life balance so as to counteract negative perceptions around work commitment for those workers who request AWAs, even within organizations that possess company-wide policies allowing their use. Training may even be more important for Senior Directors managing middle managers, than for middle managers managing regular workers. Serving as one example, Barham, et al. (1998) found that managers were more willing to grant AWAs to subordinates than that of peer (or other) managers, often citing the political ramifications of how reduced manager workplace visibility would be a threat to career advancement. As a means to combat such visibility concerns, whether at the organizational level or involving inter-team relations, Wohlers and Hertel (2016) stress the importance of managers scheduling regular team meetings – i.e. face-to-face if possible, or by use of videoconferencing – to maintain communication standards and visibility across the organization. However, the desire to place a heightened emphasis on meetings and facetime can be a double-edged sword, as other studies have revealed.

As also mentioned by Lautsch, Kossek and Eaton (2009), managers engaging in more frequent communication with their direct reports can be a positive and active step in ensuring support and success of AWA arrangements. Yet for the same reason, those workers engaged in AWAs may instead find such intensified attention from their managers as intrusive, which itself can have undermining effects and impact on autonomy, trust and work performance (Lautsch, et al., 2009). Unfortunately, such a paradoxical relationship is indicative of the negative impacts that positively-intentioned measures can cause, and/or how the same arrangements focused on one group of workers can have detrimental effects on another, e.g. for workers engaged in AWAs vs. those that are not (Lautsch, et al., 2009). To combat some of these issues, the authors suggest ensuring equity in employee monitoring and providing feedback for both AWA and non-AWA employees, i.e. ensuring that AWA employees are not checked on for time management considerations any more than non-AWA employees (Lautsch, et al., 2009). Furthermore, Lautsch, et al. (2009) note how if monitoring is maintained equitably, frequent contact with AWA-engaged employees can be beneficial to workers, ensuring that the out-of-sight employee is not necessarily out-of-mind to the manager.

Technological and Communication Considerations

To say that technology is a pivotal part of AWA adaptation both within the Higher-Ed IT Org, and for most any company engaging in assorted AWA measures, would be an understatement. While this may ring true today, and especially in the realm of COVID-19 more than ever, this was the case even decades before, such as in 1975 when Xerox PARC director George E. Pake claimed the inventions Xerox was working on would “change the office like the jet plane revolutionized travel and the way that TV

has altered family life” (Meel, 2011). Many of PARC’s innovations at the time, such as the overall concept of the paperless office, to the future digitization of documents and email, would become cornerstones that allowed work to take place away from the common physical workplace. However, technological innovations and their rapid pace of evolution would not be without some initial hurdles.

A study of AT&T’s employees by Atkyns, Blazek and Roitz (2002) revealed that as of the early 2000s, problems such as the lack of high-speed internet and its impact (e.g. on downloading large files), a lack of computer knowledge, and software incompatibilities were registered as major complaints of AWA arrangements. However, while the modern era of technology has not fully eliminated all of the potential issues that once plagued technology with regard to AWAs, it has mitigated many of them. Hunton and Norman (2010) see 2008 as the pivotal year when many of these previous concerns involving technology shifted to a more positive light, and technology became a true enabler of – rather than replacement for – work in AWA situations. For one, the authors saw AWA measures like remote work increasing due to a confluence of rising fuel costs at the time, the increasing emphasis on work-life balance for employees, and specifically the proliferation of high-speed wireless internet access in 2008 (Hunton & Norman, 2010). Furthermore, it was this one key innovation – high-speed internet access – that would become the catalyst for growth in other technologies, with rapid advancement in instant messaging platforms and videoconferencing (Hunton & Norman, 2010).

Indeed, it is true for HEITO that the vast majority of its operations (as an IT organization) are based solely around a mix of digital and online tools that are used in nearly every aspect of the business. Online ticketing systems such as Zendesk are used to

track requests from external constituents (e.g. students, faculty, staff), as well as requests from internal IT users, business-to-business. When it comes to project management, Atlassian's Jira is used to track myriad projects through Agile-focused sprint boards. An internal wiki, built upon Atlassian's Confluence product, serves as the company's online repository of technical documentation, while Atlassian's Bitbucket is used to track any and all changes to code within the organization, ensuring that everything from small scripts, to major applications can be predictably modified and repeatably deployed across the organization's many technical platforms. Of course, multiple options exist for digitally sharing documents – from Dropbox, to Office 365, Google Drive, and network file shares – and various forms of email (Office 365, Google) are ubiquitous throughout the company. Additional platforms such as Salesforce represent a long-term strategy of the organization to track data and the lifecycle of users through various interactions, roles, and functions within the school's business units.

Such tools provide a fairly comprehensive view of the platforms the organization uses to assist in effective decision-making, and to offer cues and clues into what others around the organization are doing. However, while all of these technical tools indeed play a role throughout the Higher-Ed IT Org in facilitating AWAs, they form a secondary role compared to *some* tools. Today, only a couple of select tools bear a significant impact on the communication patterns of the organization's employees with respect to AWAs, and are likely to see an uptick and heavier reliance on by AWA-engaged employees. Specifically, employees engage in instant messaging and real-time chat communication through a tool known as Slack, and virtual meetings (audio and video) are conducted across the organization using a tool known as BlueJeans. Before we

discuss these particular tools and their importance, it remains imperative to evaluate the reasons why these tools play such a large role in the organization's communication patterns and technical strategy towards AWAs. Meel (2011) notes how physical office buildings provide an "important social function", specifically being

...a place where work becomes meaningful through interaction, where friendships and networks are formed, where newcomers are integrated and where acculturation processes take place. (p. 365)

In workplaces where AWAs are prevalent, it is crucial to foster some of the same conversations, connections and relationships, while simultaneously acknowledging the fact that these things will not be the *same*, but different and still useful in their own way. Those like Allen, et al. (2015) note that to optimize the success of remote work, it is communication tools that best simulate face-to-face interactions and inject social context into the organization that are most useful in AWA arrangements. Taking a more in-depth look into this notion by the authors, Allen, et al. (2015) state

According to media richness theory, communication media vary in their ability to enable users to transmit social cues, change understanding, and resolve equivocality [...]. For example, commonly used tools such as e-mail lack social richness in that gestures and emotion are difficult to transmit. Video tools are richer in that they convey some social cues, but the effectiveness of video tools such as Skype are hindered by a lack of eye contact due to the inability to look at the computer screen and the camera at the same time. Because we tend to look at the person on the screen rather than at the camera, it becomes impossible to maintain mutual eye contact, rendering communication unnatural. (p. 55)

To combat issues involving focus, eye contact, etc., Allen, et al. (2015) find telepresence systems – where one feels as though they are physically present in a remote or simulated environment – as tools that result in greater motivation and sustained use of technology. And while such tools may help to facilitate planned interactions, unplanned

tools (e.g. Slack) help to foster the informal interactions and watercooler conversations that are sometimes missed when working remotely (Allen, et al., 2015).

However, those like Wohlers and Hetel (2016) point out that chat communication and videoconferencing solutions still lack social cues/information, making these solutions less likely to facilitate trust amongst AWA-engaged employees. The authors further note how it is difficult for these tools to supplant the benefits of being in physical proximity to team partners, with those in AWA arrangements sharing less information and reporting less trust of coworkers than those working physically in-office (Wohlers & Hertel, 2016). With others noting how “no technical interface can every fully replace face-to-face interaction” (Pyöriä, 2009, p. 368), what can organizations gain by using instant messaging and videoconferencing tools in AWA arrangements?

Through evaluation of the Higher-Ed IT Org, Slack remains a well-integrated and arguably most-active platform for engaging with workers at the organization throughout the workday. Employees use the chat platform for various reasons – engaging in direct one-on-one conversations, team-based discussions relative to one’s work group or reporting structure, and just about everything else in between. In this case, “everything else in between” is accurate, as over 300 public channels with topics/names such as #cats, #food, #games, #music, and the anything-goes #random channel allow any individual that is a member of the organization’s Slack to join or leave these channels, and participate in discussions, at will. Furthermore, such channels can be created by any individual in the organization without any approval, with the platform acting as a form of self-moderation for those utilizing it, much in the same way discussions themselves form and take place. While the platform is primarily known to facilitate text-based discussions, integrations

easily allow photos, videos, documents and other content to be shared and distributed.

Yet, what has occurred within HEITO due to the immersion of Slack and its frequent use, underscores a couple of additional unique elements of organizational impact.

On one level, the use of Slack speaks to the democratic principles electronic communication can provide, as noted by Pyöriä (2009), as prejudices and power differences between those speaking are sometimes not as immediately apparent, and focusing on the work at hand or discussion taking place can be easier when formal status differences are not at the forefront. Thus, within the Higher-Ed IT Org, nothing prevents the newest, least-senior employee from sending a Slack message directly to the CIO, and vice versa, and as opposed to a platform like email, it is common to expect a response in less time than through other formal means. Furthermore, it enables those who might have trouble starting conversations or wrangling different groups of people across organizational lines to more effectively solve problems and brainstorm ideas. This specific concept further relates to many of Henry Lucas' (2001) points defined in his ACM piece, *Information Technology and Physical Space*, where characteristics of technology-enabled organizations are outlined as to how they shape the core of the company. While in truth, though Slack comes far from defining the Higher-Ed IT Org, it does facilitate aspects such as flattening organizational structure (through communication practices), enabling flexible and fast responses by decentralizing decision-making, and assisting with forming strategic alliances with others (Lucas, 2001).

Furthermore, Slack has become a key facilitator of AWAs within the organization, and has manifested itself uniquely within the context of various teams and situations. Given high AWA usage within my team and the possibility for N workers to

work from innumerable locations on a given day, my team utilizes Slack to identify where each employee is working/can be found for the day. e.g. Those working at home may craft a quick “WFH” (working from home) post in the team’s Slack channel to start the day, while those on-site may post a similar “WFB1” (working from building 1) to indicate their whereabouts for the day. Often, many of the team’s informal discussions of tickets, technical problems, and general questions get brought up and ultimately resolved (or at least discussed) through Slack, saving email and other tech-based communication mediums for more formal work and purposes. This is true even for individual discussions on-site, where the use of Slack is preferred to visiting an employee at their desk, with research showing how after 30 meters, physical presence no longer becomes a factor in communication and other mediums are more often utilized (Pyöriä, 2009). Yet it is where chat communication platforms like Slack fall short, that videoconferencing platforms like BlueJeans take on the further challenges of technology-based communication.

Within the Higher-Ed IT Org, what was once considered a luxury – in providing for a remote-based resource for workers to connect to meetings virtually – has now effectively become the standard across the organization. Seldom will you find cross-team or company-wide meetings without a virtual meeting component, allowing for both audio and video participation for folks on-site and remotely attending the meeting. Such practices have further been normalized within select teams where AWA usage remains higher, and has spread further through diversity and inclusion-based efforts such as a Meeting Culture team, designed to formalize processes around accommodating more workers and AWA-like scenarios for meetings. Though such arrangements do not

universally provide for telepresence-style, full immersion experiences like that described by Allen, et al. (2015), select HEITO conference rooms provide a middle ground. Most HEITO conference rooms utilize one or more cameras and in-room microphones to capture the audio and visual responses of all participants, and project remote participants on a large screen to further feel connected to the remote workers participating.

Additional technology-based solutions that are used to accommodate AWA arrangements are also in the works and presently being piloted, such as the application Robin, which allows desk sharing participants to formally book a desk for the day based on a floorplan of available seating. Though only in use by a subset of the population today, and replacing what was once an email and calendar-based booking system, tools like Robin are expected to become the norm once HEITO's new facility finishes construction. It is tools like Robin that are also expected to further assist and facilitate what is described by Wohlers and Hertel (2016) as an office GPS, where finding team partners and coworkers within the environment becomes an easier (and more formalized) feat.

A final interesting dynamic within the realm of technology pertains to the distribution (or lack thereof) of costs when considering AWA arrangements such as remote work. Nilles (2001) and the ITAC found through their studies that approximately 31% of full-time AWA-engaged workers paid all technology costs themselves, 19% had the employer pay for everything, 8.5% had the employer pay for equipment and employee pay for maintenance, and – the largest share – 33.5% did not disclose such information. Within the Higher-Ed IT Org, this remains an unformalized measure. Some teams, such as my own, have had agreements at the Senior Director level that the

employer would provide for select costs (e.g. a home monitor) for employees joining the company's current AWA arrangements. However, no guarantee exists that this arrangement will remain once the new facility is opened, and several other teams within the Higher-Ed IT Org have no such policy, even unwritten. Additionally, a small group of employees have negotiated for the organization to cover the cost of a home desk and/or chair setup, but this arrangement remains outside of the current norm, and possesses even less formalization/guidelines than the previously noted efforts.

A Deeper Dive into Research

By this point, we've defined exactly what we mean when we speak of "alternative work arrangements", "remote work", "desk sharing" and the distinct shift towards these practices within the 21st century. We've taken a deep dive into six different measures of impact across remote work, and three measures of impact for desk sharing, noting a slightly positive (+2 out of +/-12) and neutral (0 out of +/-6) overall impact for remote work and desk sharing, respectively, for employees based on their experiences. We've assessed the various strategic ramifications at the organization and management levels when AWAs are implemented, and further connected such points to technical and communication implications. From triangular organization models centered around autonomy and control, to an understanding of how managers' attitudes impact change, to an exploration of the core tools that make AWAs possible for HEITO (e.g. Slack, BlueJeans); we've navigated the space of AWAs in relation to HEITO from a number of angles. With as comprehensive an assessment as was performed throughout this and the previous chapters, is it safe to say that we've determined how an organization's employees make sense of a shift towards AWAs? In short, not quite.

In order to fully understand how employees are making sense of this drastic shift towards AWAs, we will need to do more than merely cross-examine a number of academic journals that offer amazing insight, but to borrow a previously-noted quote from Robert Keidel, possibly lack the perspective of “where the rubber meets the road” (Keidel, 2010, p.63). Furthermore, we will need to provide more than anecdotal evidence of HEITO’s transition towards AWAs, and the many ways people, tools, and processes/procedures take on new forms during such a journey. To be certain, the only way to achieve such a feat is to hear from the Higher-Ed IT Org’s employees themselves, and examine how they directly have experienced the organization’s shift towards AWAs. By the fortune of an organization proactive enough to measure its people, and open enough to share these results, we will gather this information through a 2019 survey disseminated to HEITO’s employees to best “make sense” of this situation.

CHAPTER 4

RESEARCH METHODOLOGY AND EVALUATION

AWA Research and Methodologies

To explore the study of AWAs, it is crucial to understand the foundation of research laid before you; not just to guide your own efforts, but also to provide a new or possibly contrasting perspective on what has already been studied. While there are many ways of gaining this perspective, such an understanding was ultimately achieved by scouring the tens upon tens of journals and research papers that comprise the literature review and secondary research of this capstone. For the question of whether most AWA research – including what is evaluated within the body of this capstone – falls into the realm of being quantitative or qualitative, it is safe to assume that the majority of works cited here are within the quantitative domain. In most cases, research for AWAs remains strongly rooted in firm measurements, statistics, and can be expressed numerically, and often so at scale. Though an extreme example might be the surveying performed by SHRM in their evaluation/survey of over 275,000 of its members (Allen, et al., 2015), many studies leverage participant numbers well within the thousands or hundreds to achieve mass scale for testing hypotheses and forming conclusive results. This includes the 3,850 participants within the RAND-Princeton Contingent Work Survey in Katz and Krueger's (2018) 20-year assessment of AWAs, Nilles (2001) and the ITAC's 1,877 individuals surveyed for their Telework America Survey 2000, Koivisto and Rice's (2016) 1,572-person evaluation of AWAs within a Finnish telecommunications company, and the list goes on from there.

Yet even more than sheer volume which represents quantity, what ultimately makes such studies fall into the quantitative realm deals primarily with their approach to evaluating subjects and interpreting data. Many of these studies provide concretely-formed evaluations of one or more AWA dimensions and/or areas of impact, with specific percentages, categorizations, distributions and statistical and bivariate correlations. Such figures are helpful, and well within the mark of usefulness, but perhaps are less relevant as a model when evaluating an organization of HEITO's size, and a space as evolving and territory as uncharted as the AWA adaptation journey this organization has taken. Conversely, one might counter such flaws in quantitative measures by evaluating the Higher-Ed IT Org with a qualitative model, like a selection of AWA research has done. However, this too produces its own set of issues in its raw approach.

By and large, qualitatively-rooted studies like Spreitzer, et al. (2017) tend to form aggregate pictures of the AWA field through a multitude of studies, rather than gaining purely qualitative data through experimental research. Given this, such studies end up being robust by standing on the shoulders of their quantitatively-based giants, while having some unique benefits in identifying traits, patterns and characteristics of AWA dimensions, measures of impact, etc. However, they still lack the organic nature of freshly captured, smaller-scale, on-the-ground perspectives of AWAs like those which HEITO could capture. Yes, with AWAs we have both quantitative (largely) and qualitative data, but an imbalance exists between quantitative and qualitative data that presents an opportunity for development. Enter the 2019 HEITO Space Survey.

In full disclosure, the particular research survey used within this capstone was never designed to be used for evaluation within this capstone, nor was it an initial choice to gather data and assess the adaptation of AWAs within the Higher-Ed IT Org. Initially, a selection of ten to fifteen in-person interviews across the organization were intended to be used to gather qualitative data from employees on how they made sense of AWA changes within the organization. This data could then be further interpreted (in small form) to assess some quantitative measures, knowing that such data could not be measured quantitatively in highly granular forms, given the large numbers needed for a relatively strong confidence interval, etc. However, as previously noted, the rapid changes imposed by the COVID-19 pandemic rendered the qualitative interview option somewhere between less suitable, to unsuitable overall. First, HEITO's staff going fully remote as of mid-March 2020 would likely impact perceptions of AWA measures and the degree of change for the organization's overall AWA adoption, skewing data to the extent of making such interviews irrelevant for the purpose of this capstone. And while a "risk" could be taken, and an attempt to explain away variances could be made after the fact, other challenges persisted. Mainly, due to the organization's increased efforts focused around remote teaching and learning, a majority of staff members were now taxed with an abundance of new work, shifted roles, and extended hours placed upon them to meet the challenging demands and deadlines of an unprecedented change. Lest we forget the fact that the concept of an "in-person interview" itself would not be possible during the pandemic, and remote videoconferencing accommodations might add another wrinkle in an attempt to supplant the initially intended strategy. Though, with this challenge comes a silver lining.

Through the transparency of HEITO's CIO and one of its Senior Directors, we were able to obtain access to a survey disseminated to the employees of the Higher-Ed IT Org in relation to its move to the new building. In this case, a survey used to gather feedback on decisions around the design of the space and more. As it turns out, "and more" was likely more critical than initially recognized by the survey's designers; while it may not have been intended, the survey provides a healthy mix of both quantitative assessment, and qualitative feedback through its array of questions. This survey, coupled with a wide pool of participants and nearly 50% organization-wide response rate, created a means of evaluation for this capstone that arguably provides a better balance of both quantitative and qualitative measurements than the original planned interviews would have conveyed. While not all survey questions are necessarily relevant to this capstone, a select number of questions and the responses of HEITO's employees collectively can be used to answer our research question: *How do employees make sense of their organization's shift towards alternative work arrangements?*

The 2019 HEITO Space Survey

The origins of the 2019 HEITO Space Survey unofficially date back to March 14, 2019, when HEITO's Senior Director of Communications and Coordination posted a brief message in the #space_2020 channel within HEITO's Slack instance. Specifically, the post was designed not to just provide transparency along the lines of HEITO developing a survey about space, but additionally to solicit feedback and ideas for questions that could be used for the survey. By this point in the AWA transformation process, employees had been well aware of the new building HEITO would be moving into in 2020, along with the core tenets of its design focused around remote work/desk

sharing-exclusive employees. Additionally, it was around this time that elevations and floor plans for the new space became available to HEITO employees, and were distributed through myriad platforms (e.g. Slack, Confluence). Within a few days, over 20 different chat messages were exchanged in this particular Slack thread that would help build what would become the 2019 HEITO Space Survey.

A few weeks following that date, in the afternoon of Wednesday, April 3, 2019, the same Senior Director who organized and designed the survey formally announced the opening of the survey to all of the Higher-Ed IT Org's staff via email. Both created and designed to be consumed solely through the online Qualtrics survey platform, the 2019 HEITO Space Survey was comprised of over 30 different questions (Appendix A) that highlighted various aspects surrounding the design of HEITO's new building currently under construction. Specifically, the survey used a mix of both qualitative and quantitative methods for its questions to gain insight from employees on their preferences and feelings toward "space" – be it the present, or the ever fast-approaching new environment. Making use of fixed-choice questions (i.e. single choice and multi-selection), open-ended questions and varied ranking/percentage-based measures, the survey employed different techniques as needed for each question. Generally, the survey focused around consistency and categorization of responses when and where possible, and otherwise allowed for exploration from survey participants where responses were far less finite and predictable.

Remaining open and available for employees to participate for two weeks, the survey would close its metaphorical doors on Wednesday, April 17, 2019 for review and evaluation by Senior Directors and the CIO. Surprisingly, as noted previously, the survey

engendered a near 50% response rate from HEITO's employees. The "surprise" here stems mostly from the fact that survey responses were *not* anonymous, as explicitly outlined in the email disseminated to employees, and all responses could be traced back to a given individual in the organization (e.g. by name, email address). Speaking to the specifics of this response rate, of 116 individuals that received the survey – including all of HEITO's full-time employees and a smattering of part-time/contract workers – 68 workers began the survey, and 57 of those 68 workers completed the survey in full. For this survey, we run with the assumption that this response rate ensured a broad mix of employees from assorted operational divisions, sub-teams, and other measures (i.e. overall organizational diversity) being representative of the organization's composite view of how HEITO views its present spaces, and upcoming AWA-centered space. Excluding extreme outliers, e.g. where participants left the survey website open for multiple hours (and completed their response over separate periods of time), on average, each employee spent approximately 23 minutes on the survey, providing insight into their opinions on HEITO's AWA transition.

To further ensure the thoughts and opinions gathered from the survey would be considered beyond the digital confines of a survey tool, on Tuesday, April 30, 2019, a HEITO Quarterly Meeting was used as yet another platform to assess and evaluate employees' journey through the organization's adaptation to AWAs. Both HEITO's Senior Director of Communications and Coordination and the CIO presented many findings of the survey in a summative, half-hour slideshow presentation, including several graphs and visualizations measuring and evaluating the whole of the data. As per standard procedure, these slides were later made available to all employees for further

review, and as per the generosity of HEITO senior leadership, the survey and presentation data has been made available for our use as well. Though HEITO has embarked on a near four-year journey in its adoption and adaptation to AWAs, it is likely the perspectives of employees captured through this survey that best represent how employees have made sense of the organization's transition to AWAs.

“Making Sense” of the Survey Questions

Though the tale of an already-completed survey pertaining to AWAs and space design serendipitously falling into the hands of the individual authoring this capstone may seem too good to be true, in truth, not all is as ideal as it seems on the surface. On one level, this capstone is a significant beneficiary of such work, yet by another measure, we're effectively forced to shoehorn a survey, its many questions, and wide array of responses to fit the mold of a paper and purpose that was far from the survey's original intent. Just as well, teasing out the many questions which are highly relevant, tangentially related, or not related at all in answering our research question is in fact a major effort itself. As one example, take the questions of: what types of items need to be stored in a locker (Appendix A, 6), how many computers employees use at their desk (Appendix A, 11) and users' monitor preferences (Appendix A, 15). While these items may inform the space committee of granular design choices while the planning of the new building progresses, they have little to do with an overall picture of AWA adaptation from the perspective of this capstone, making such questions irrelevant.

However, a middle ground of related questions concerning this shift may come in the form of questions that utilize multiple or *fixed-choice* answers, and bear a larger holistic view of evaluating employees' opinions towards AWAs. While these questions

may lack the specific, qualitative means we hoped to derive from the survey, in aggregate, their answers form a complete picture that tells the story of how HEITO makes sense of a particular area of AWAs. Because such questions will not include detailed, open responses from employees, and will therefore possess a more limited means of deep evaluation, they do not perhaps carry the same weight as other questions, but still are worth evaluating for the purpose of this capstone. We deem such questions falling in this middle area to be “AWA Fixed-Choice Questions”, and will evaluate the results of the following ten questions in the 2019 HEITO Space Survey (Appendix A), being:

3. If you use your workspace for meetings, discussions, or interviews, typically how many people are present, not including you?

14. How do you like to work? Check all that apply.

17. The bulk of our space in New Building will be made up of two work “zones”. The collaborative space is open and will encourage group work. The “Library” will consist of more traditional workstations with a quiet atmosphere encouraged. Based on your current work habits, what percentage of a typical week would be spent in each zone?

18. How important is it to you to be able to display personal items at your workspace?

19. How important is it for you to be located near the rest of your team?

22. Do you typically eat breakfast or lunch at your desk or elsewhere?

23. How often do you eat breakfast/lunch at your desk currently?

24. How often do you have to schedule meetings in rooms other than your workspace for any reason (need more room, special equipment, or more privacy)?

25. To what extent is visual privacy necessary in your meetings?

26. To what extent is acoustical privacy necessary in your meetings?

For questions in the survey we expect to be highly relevant to employees' adaptation to AWAs, we look no further than the open-ended, qualitative survey questions that round out the final five questions of the survey. For these "AWA Open-Ended Questions" – the first two of which (Appendix A, 27 and 28) were submitted by myself during the open call by the survey organizer for questions/feedback – HEITO's employees took the liberty of revealing their inner-most thoughts and opinions on the overall shift towards AWAs occurring in the organization. Sometimes, this aligned with the actual question being asked; other times, it was purely tangential and was unrelated to the question asked. Fortunately, in either case, these answers prove highly relevant in showing the many opinions of employees in the organization, from lengthy paragraphs to terse proclamations seemingly without hesitation from those who submitted them. Not only are answers to such questions unique on their own merit, as we will evaluate some particularly interesting responses to these questions, they too can be categorized to form a pseudo-quantitative picture of employees' opinions around a given element of AWAs. The following, final five questions in the 2019 HEITO Space Survey (Appendix A) will form the basis for this analysis:

27. Name one thing you like about your current workspace.

28. Name one thing you dislike about your current workspace.

29. What are you most excited about in the proposed workspace setup?

30. *What's your biggest concern about the proposed workspace setup?*
31. *What question should have been included on this survey, but wasn't? And what's your answer to said question?*

CHAPTER 5
RESEARCH STUDY

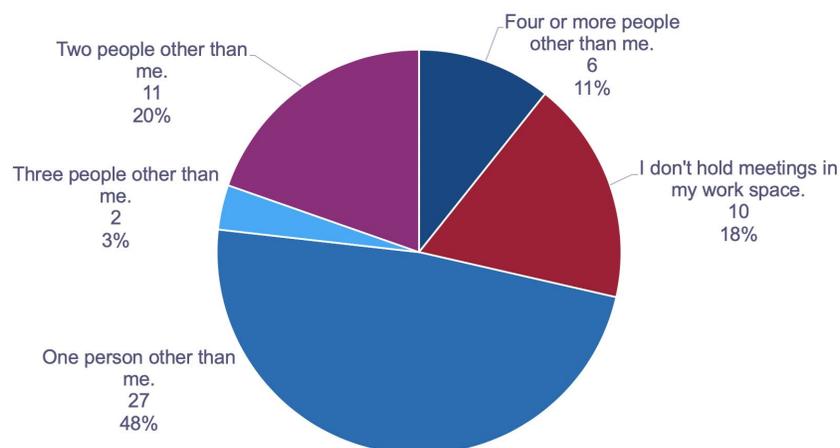
AWA Fixed-Choice Questions

3. *If you use your workspace for meetings, discussions, or interviews, typically how many people are present, not including you?*

For question #3, 56 of the 57 HEITO survey participants provided one of the multiple-choice answers in response to this question; one individual opted out of answering the question. Of the responses available: 10 employees chose the response of “I don’t hold meetings in my workspace.”, 27 employees chose “One person other than me.”, 11 employees chose “Two people other than me.”, 2 employees chose “Three people other than me.”, and 6 employees chose “Four or more people other than me.”. HEITO leadership elected to display this question and data at the April 30, 2019 Quarterly Meeting, and their graphical pie chart representation of this data from that slideshow is depicted below.

Figure 9. HEITO Survey Number of Meeting Participants (HEITO, 2019, p. 31)

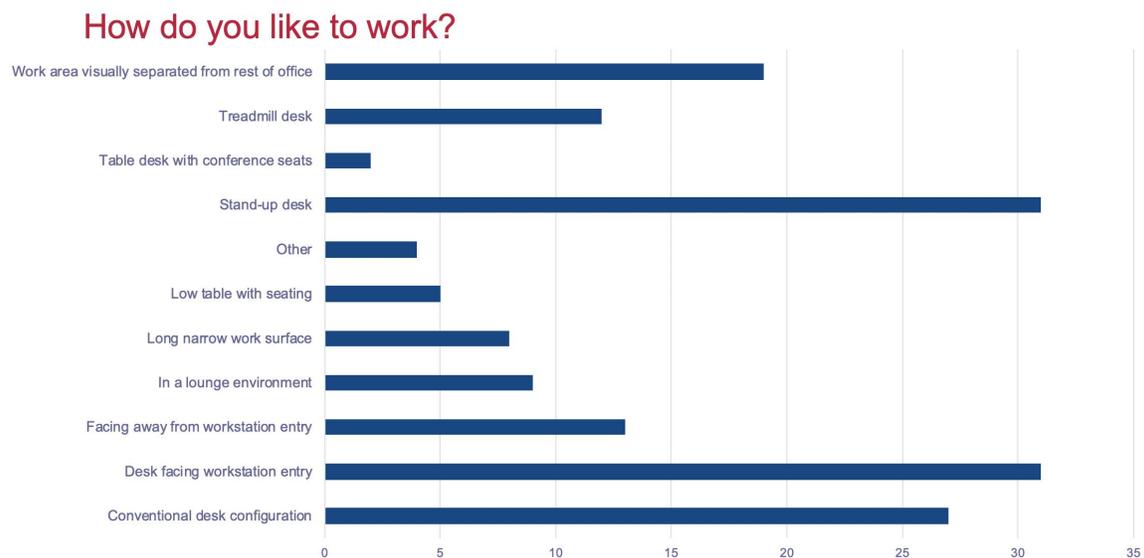
If you use your workspace for meetings, discussions, or interviews, typically how many people are present?



14. How do you like to work? Check all that apply.

For question #14, 55 of the 57 HEITO survey participants provided at least one or more of the possible multi-selection answers to this question. Employees could select multiple options for this question (up to no limit), and two individuals opted out of answering the question. Of the responses available: 20 employees chose to prefer a “Work area visually separated from rest of office”, 2 employees chose “Table desk with conference seats”, 32 employees chose “Stand-up desk”, 5 employees chose “Low table with seating”, 8 employees chose “Long narrow work surface”, 9 employees chose “In a lounge environment”, 13 employees chose “Facing away from workstation entry”, 31 employees chose “Desk facing workstation entry”, 12 employees chose “Treadmill desk”, 27 employees chose “Conventional desk configuration”, and 4 employees chose the “Other” option. “Other” option selections remain uncategorized for the purpose of this question’s evaluation. HEITO leadership elected to display this question and data at the April 30, 2019 Quarterly Meeting, and their bar graph representation of this data from that slideshow is depicted below.

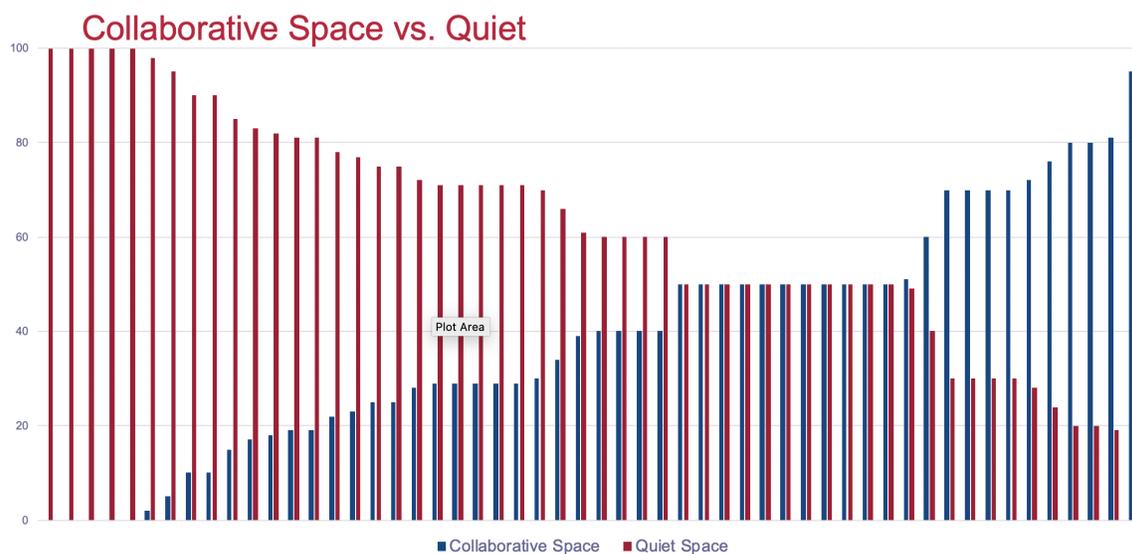
Figure 10. HEITO Survey Preferred Workspace Configurations (HEITO, 2019, p. 39)



17. The bulk of our space in New Building will be made up of two work “zones”. The collaborative space is open and will encourage group work. The “Library” will consist of more traditional workstations with a quiet atmosphere encouraged. Based on your current work habits, what percentage of a typical week would be spent in each zone?

For question #17, 54 of the 57 HEITO survey participants provided a preferred ratio (numeric value/percentage) of two different types of space present in the new building; “Collaborative Space” and “Quiet Space” (Library). Three individuals opted out of answering the question, and for those that answered, values from 0 to 100 between both options (e.g. 60 and 40, 25 and 75) could be selected to indicate the preferred amount of each type of space in the new HEITO work facility. Given 54 employees answered this question, each using a 100 point scale, of 5400 total points, a score of 3329 (approximately 62%) was registered by users overall for the amount of “Quiet Space” to include, and a score of 2071 (approximately 38%) for the amount of “Collaborative Space” to include. Responses widely varied between employees, with a small outlier of extreme cases (e.g. 0 collaborative space, 100 quiet space), and the vast majority falling within a range representative of the average calculated above. HEITO leadership elected to display this question and data at the April 30, 2019 Quarterly Meeting, and their graphical representation of this data from that slideshow is depicted below.

Figure 11. HEITO Survey Preferred Amount of Space by Type (HEITO, 2019, p. 34)



18. How important is it to you to be able to display personal items at your workspace?

For question #18, 54 of the 57 HEITO survey participants provided one of the different multiple-choice answers for this question; three individuals opted out of answering the question. Of the responses available: 3 employees chose the response of “Extremely important”, 9 employees chose “Very important”, 11 employees chose “Moderately important”, 8 employees chose “Slightly important”, and 23 employees chose “Not at all important”. HEITO leadership did not display this question or its data at the April 30, 2019 Quarterly Meeting.

19. How important is it for you to be located near the rest of your team?

For question #19, 54 of the 57 HEITO survey participants provided one of the different multiple-choice answers for this question; three individuals opted out of answering the question. Of the responses available: 17 employees chose the response of “Extremely important”, 13 employees chose “Very important”, 14 employees chose “Moderately important”, 6 employees chose “Slightly important”, and 4 employees chose

“Not at all important”. HEITO leadership did not display this question or its data at the April 30, 2019 Quarterly Meeting.

22. Do you typically eat breakfast or lunch at your desk or elsewhere?

For question #22, 54 of the 57 HEITO survey participants provided one of the two different answer possibilities for this question; three individuals opted out of answering the question. Of the responses available: 45 employees chose the response of “At my desk”, and 9 employees chose “Elsewhere”. HEITO leadership did not display this question or its data at the April 30, 2019 Quarterly Meeting.

23. How often do you eat breakfast/lunch at your desk currently?

For question #23, 45 of the 57 HEITO survey participants provided one of the three different answer possibilities for this question; 12 individuals opted out of answering the question. Of the responses available: 38 employees chose the response of “Regularly (every day/every other day)”, 6 employees chose “Frequently (once/twice a week or so)”, and 1 employee chose “Occasionally (once every couple of weeks)”.

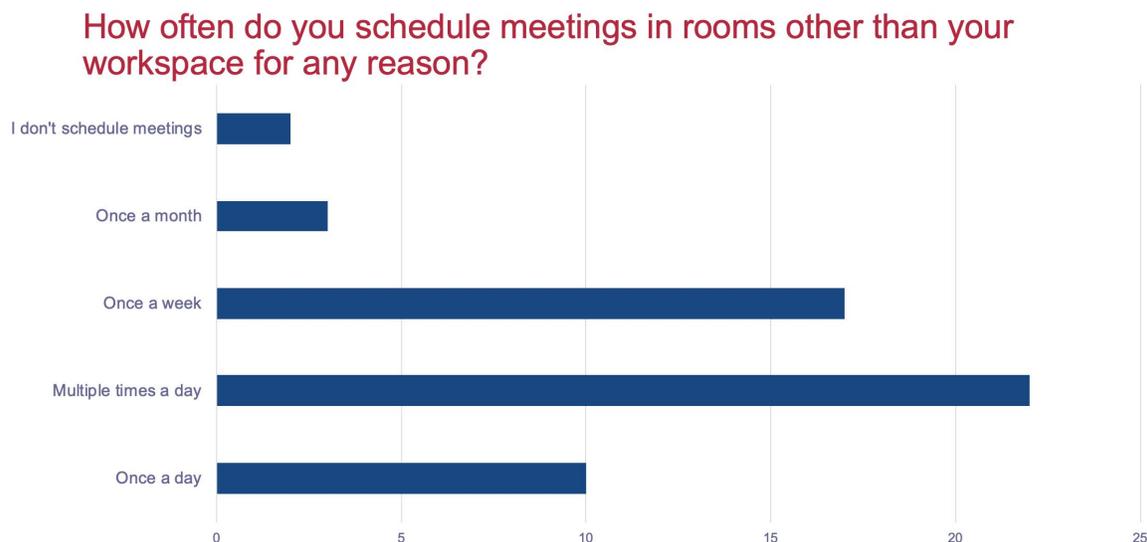
HEITO leadership did not display this question or its data at the April 30, 2019 Quarterly Meeting.

24. How often do you have to schedule meetings in rooms other than your workspace for any reason (need more room, special equipment, or more privacy)?

For question #24, 54 of the 57 HEITO survey participants provided one of the different multiple-choice answers for this question; three individuals opted out of answering the question. Of the responses available: 3 employees chose the response of “Once a month”, 17 employees chose “Once a week”, 10 employees chose “Once a day”, 22 employees chose “Multiple times a day”, and 2 employees chose “I don’t schedule

meetings”. HEITO leadership elected to display this question and data at the April 30, 2019 Quarterly Meeting, and their bar graph representation of this data from that slideshow is depicted below.

Figure 12. HEITO Survey Frequency of Scheduling Meetings (HEITO, 2019, p. 32)



25. To what extent is visual privacy necessary in your meetings?

For question #25, 54 of the 57 HEITO survey participants provided one of the four multiple-choice answer possibilities for this question; three individuals opted out of answering the question. Of the responses available: 1 employee chose the response of “All of my meetings require visual privacy.”, 3 employees chose “Most of my meetings require visual privacy.”, 33 employees chose “Some of my meetings require visual privacy.”, and 17 employees chose “None of my meetings require visual privacy.”.

HEITO leadership did not display this question or its data at the April 30, 2019 Quarterly Meeting.

26. To what extent is acoustical privacy necessary in your meetings?

For question #26, 54 of the 57 HEITO survey participants provided one of the four multiple-choice answer possibilities for this question; three individuals opted out of answering the question. Of the responses available: 9 employees chose the response of “All of my meetings require acoustical privacy.”, 14 employees chose “Most of my meetings require acoustical privacy.”, 24 employees chose “Some of my meetings require acoustical privacy.”, and 7 employees chose “None of my meetings require acoustical privacy.”. HEITO leadership did not display this question or its data at the April 30, 2019 Quarterly Meeting.

AWA Open-Ended Questions

As a preamble to our assessment of the survey’s selected open-ended questions, it is worth outlining how we’ll “make sense” of the varying answers and qualitative nature of the questions. Mainly, we will attempt to organize the many responses per question into N number of categories to provide a sense of structure and direction to the data presented. Within that (i.e. each categorization), we’ll present sample responses that seek to highlight the reasoning for the category structures, and/or are noteworthy for a number of reasons. Open-ended responses from employees containing answers that may span multiple categories will be based on the majority of content in the response, and the category it would most pertain to.

27. Name one thing you like about your current workspace.

For question #27, 49 of the 57 HEITO survey participants provided an open-ended answer for this question; eight individuals opted out of answering the question. HEITO employees provided a variety of answers that ultimately fell into six distinct categories. Adding up to become the largest number of responses, 15 employees chose to

mention some level of “Personalization” as the aspect of their current workspace that they liked most. Some chose to note this tersely; both explicitly, e.g. with one user simply saying “personalization”, or implicitly, e.g. “it’s configured the way I like it”. Others provided a bit more depth for their reasoning in choosing personalization, e.g. “I feel like it’s **my** space and I have a sense of belonging”, or touted benefits (e.g. ergonomic) that stemmed from an ability to personalize, such as this response:

When I sit at my desk, I can be immediately productive when I dock my laptop because everything is set to my ergonomic needs – chair height, monitor height/position, laptop riser position – with all my accessories and chargers accessible and ready.

The category of “Privacy” was also found to be a factor in 5 employees’ responses. Some found this to be a benefit of AWA-specific conditions, e.g. “I work from home. :) I prefer a space where I can physically limit distractions”. Others used this as an opportunity to describe exactly why they valued privacy, and its importance in a workspace:

I like to have the privacy when I need it. It keeps me focused on the many tasks I have to work on every day without distraction, unless someone needs to interrupt me for something. I understand the idea behind collaborative spaces but I think they work better for teams that consistently work with one another on projects and tasks day-to-day. I interact with various people and departments on a daily basis but when I need my own space to hunker down and get a lot done, I look forward to sitting in my somewhat private space.

9 employees made reference to some form of “Social Benefits” as the main benefit utilized in their present workspace. In many cases, this specifically alluded to team-member proximity (e.g. “It is near the rest of my team”, “Collocated with my team”), and in other cases, referenced the outcomes/abilities such social benefits provide. This includes responses such as “People close by I can ask questions to”, and “I like being in close proximity to the rest of my group, it helps us collaborate quickly and easily

when issues arise”. Others used this as opportunity to reference social benefits mixed with the nuances of AWAs, such as:

I like that I sit in the middle of the [infrastructure] team, so they are easily accessible for knowledge, but they are in the desk sharing program so seldom are they all here at once and I don’t feel surrounded.

Arguably the most varied category that 10 users referenced as their primary benefit pertained to “Environmental Benefits” – in this case, being various sensory-related attributes of the existing space. In HEITO’s case, this often was based around windows/natural light (e.g. “It’s next to a big window and gets lots of natural light”, “I can see sunlight and trees through a window throughout the day”). In other cases, this pertained to items such as “The comfy chairs”, “Long tables that provide great working space”, and a “Sit to stand desk”. 7 HEITO employees touted “Storage” as the primary benefit, with some concisely describing the attributes they liked (“locker and drawer”), and others describing what they like to store specifically. This includes items such as “notebooks, pens, cleaning supplies, chargers...”, as well as “books and periodicals”. Some went into further depth and made reference to the necessity of larger items like computers, e.g. “I like to be able to store computers and other equipment without worry about who it is impacting”. Last, 3 HEITO employees referenced “Flexibility” as their primary like, one worker noting this directly with just that word alone, and others with more context, e.g. “I desk share, and only work on campus 2 or so days, so flexibility is good”.

A table of this question’s response categorizations is provided below:

Table 3. HEITO Survey Current Workspace Likes

Current Likes Categories	Number of Responses
Personalization	15
Privacy	5
Social Benefits	9
Environmental Benefits	10
Storage	7
Flexibility	3
	Total Number of Responses: 49

28. *Name one thing you dislike about your current workspace.*

For question #28, 47 of the 57 HEITO survey participants provided an open-ended answer for this question; ten individuals opted out of answering the question. For this question, HEITO employees provided a range of answers that fell into six distinct categories. Overwhelmingly, the vast majority of responses fell either into the categories of “Environmental Disadvantages” or “Distractions/Lack of Privacy” at 18 and 16 employees, respectively. For the former, those HEITO employees in workspaces without windows made sure to voice their opinions – from a simple “Lack of windows” to more personal accounts like “I do not have a window. However, most of the shades are down so I guess looking outside wasn’t too much of an option either way”. Others referenced the distance physical workspaces were located compared to where they mainly worked, being “Far from my team.” or “...too far from the systems I support”. Many employees made note of HVAC-related issues, often pertaining to cold temperatures in assorted buildings: e.g. “temperature”, “HVAC is never right”, “It’s often cold, so I need to wear my [HEITO] jacket or use a space heater”. Others referenced the arguable blandness of the space and other less redeeming attributes, including “It’s simply a floor of cubes with

no frills/luxuries”, being in “...a building my staff loathe”, and “Our office is a little ‘sad’ – very little on the walls, a dark color”.

Yet not far behind this category was the mention of “Distractions/Lack of Privacy”, in many cases either pertaining to issues with the total number of people and/or noise levels. Included in this section were several comments like the following: “It can get loud at times”, “It can be distracting to have lots of people around”, “Crowded shared office”, “Noisy most of the time”, etc. Other responses offered more in the way of describing specific distraction scenarios, or reasons for the distractions. This includes: “I prefer not to be able to see people walk by if at all possible. I am a people watcher and can find it distracting at times.”, “Sometimes difficult for me or others to hold BlueJeans meetings in my cube”, and “Lack of occasional privacy without booking a room”. Concentration, specifically, was something stated to be impacted by these distractions, with responses such as “There isn’t enough privacy when concentration is required in my tasks”, “I find it difficult to concentrate in the open layout...”, and “I am interrupted all the time – I cannot do any work that requires true, deep focus”.

From this point, remaining responses for other categories were fewer and far between, though still notable. This includes 4 employees seeing “Lack of Storage” as a dislike, such as “Equipment stored in my area takes up space”, and “Lack of lockers incline me to book the same desk sharing desk every day – the one where my locked small cabinet is with my stuff”. 5 HEITO employees made note of “Lack of Personalization”, e.g. “My desk configuration is not ideal, I prefer to work with my computer facing the entry way rather than the wall” and “I don’t have a standing desk that is able to accommodate my dual Thunderbolt displays and Apple laptop”. Rounding

out this question, 2 employees stated “Lack of Social Benefits”, including one remote worker noting they “miss the in-person collaboration occasionally”, and 2 employees in some way stating “Nothing” was wrong or was disliked about their current work environment.

A table of this question’s response categorizations is provided below:

Table 4. HEITO Survey Current Workspace Dislikes

Current Dislikes Categories	Number of Responses
Environmental Disadvantages	18
Distractions/Lack of Privacy	16
Lack of Storage	4
Lack of Personalization	5
Lack of Social Benefits	2
Nothing	2
Total Number of Responses: 47	

29. What are you most excited about in the proposed workspace setup?

For question #29, 45 of the 57 HEITO survey participants provided an open-ended answer for this question; 12 individuals opted out of answering the question. For this question, HEITO employees provided a variety of answers that again fell into six distinct categories, many with similar overlaps to the previously noted categories for questions #27 and #28. The largest number of attributes employees were excited about for the new HEITO building primarily pertained to the categories of “Environmental Benefits”, “Social Benefits” and “Flexibility”. With 12 employees citing “Environmental Benefits”, many workers noted the newness of the space itself as a positive attribute (e.g. “Everything will be new :), “Better facilities”, “I’m looking forward to a new, modern space with fully functional bathrooms”), with others touting aspects like the “Potential for windows” and a “Nicer view”, and some seeing the new geographical location (e.g. “Openness and location”) as a positive asset.

As far as “Social Benefits” are concerned, 9 employees were most excited about this aspect, particularly with regard to enhanced opportunities for collaboration. Some of these comments were centered around the concept/variety of seating and desk sharing arrangement, with others mostly pertaining to having a larger majority of the whole of HEITO’s staff again under one building. This includes comments such as: “The ability to collaborate with all of my colleagues occasionally, where some are more segregated today”, “Collaborating with colleagues”, “I’m excited to meet new people and hopefully forge new working partnerships”, and “Getting to know and connect with more [HEITO] colleagues – a bit isolated here”. In a couple of cases, these expected social benefits may seem itself to be at odds with projected AWA arrangements, e.g. “The potential to be sitting with my group”. 11 Employees also touted “Flexibility” as the feature they were most excited about. In some cases, this was expressed explicitly and concisely; “Variety of meeting spaces”, “Flexible spaces”, “Flexible enough to meet both collaborative and heads-down work”. In others, this flexibility was offered through the lens of privacy, i.e. flexibility by having dedicated Library space, e.g. “I like the Library idea. It’ll be nice to have a dedicated quiet space”. Others saw flexibility as the gateway in their ability to potentially adopt AWA practices, with one remark stating “Possibility to work from home some days?”. 2 employees also touted “Storage” by way of lockers/dedicated space as the thing they were most excited about.

However, unique to this question up to this point, compared to others, was a clear indeterminate “Unsure” state for 5 employees, with some simply remarking “Unsure” or “TBD”, and others more directly noting “I’m not sure how excited to be yet until I see it with my own eyes...”. Last, 6 employees used this question as an opportunity to vent

their frustration(s) with the new proposed space design and AWA arrangements. For some, this was direct (“Nothing”, “Nothing really”), where others offered reasons for why they weren’t excited, such as “I am not excited about moving further from campus.” and “Very little, honestly. It’s not geographically convenient, and removes the one thing I value, a space to work whenever I need it”.

A table of this question’s response categorizations is provided below:

Table 5. HEITO Survey Proposed Workspace Most Excited

Most Excited Categories	Number of Responses
Environmental Benefits	12
Social Benefits	9
Flexibility	11
Storage	2
Unsure	5
Nothing	6
	Total Number of Responses: 45

30. What’s your biggest concern about the proposed workspace setup?

For question #30, 48 of the 57 HEITO survey participants provided an open-ended answer for this question; nine individuals opted out of answering the question. For this question, HEITO employees offered answers that could be grouped into five categories, in this particular case. By a significant majority, 18 HEITO employees had the largest concerns around the reduced ability for workspace personalization, and relatedly, the impact this would have on aspects of their work setup, primarily focused around productivity. In some cases, this squarely focused around the ability for an individual worker to personalize their own space, e.g. “Being able to have a dedicated workspace with my custom setup”, “Having a dedicated [computer] setup”, and “Not being able to personize the space” being prime examples of this. In a couple of cases, this focus around personalization was more oriented towards general accessibility

concerns, with one comment noting: “How are we addressing those who have physical limitations...how does the solution to this keep them feeling like part of the team?”

However, a distinct tilt towards many of these personalization concerns was centered around the idea of such a change being at the expense of productivity. A number of comments addressed this in varying forms, including: “Loss of productivity due to finding an appropriate place to work and the amount of time it will take to get my work area set up”, “Productivity hit”, “Not having a dedicated workstation is going to require added time, energy and mental space”, and “Extra cognitive load of planning and reserving where to be...”.

Related to this aspect is the concern for 12 HEITO employees around general “Environmental Disadvantages”, whether pertaining to the building overall (e.g. its location, configuration, amount of space) and/or the various general aspects around AWAs being accommodated in this setup. For the former, this includes responses such as “Being so separated from campus”, “It’s too far from the main campus”, “Air temperature”, “Not enough quiet/library space”, and “Potentially running out of space or being forced to work off of my laptop if there are no desk spaces left”. In one case, germs were noted as an issue, with one worker stating “I also really hate using shared keyboards and desks”. However, this section also served as an opportunity for some to vent their frustrations on the overall adaptation of AWAs, particularly around desk sharing, and concerns around moving to such a setup. Such comments include: “That one or more of my team members will resign over what they believe will be worse conditions than [their current building]”, “I do not feel valued if I am made to work at a shared desk that I cannot settle into”, and:

‘Hotdesking’, or whatever it’s called nowadays, might work for some, but for others it’s going to be terrible. So are ‘open office’ layouts in which staffers are elbow-to-elbow at cafeteria tables. It’s distracting, demeaning and disheartening.

Serving as another issue, questions around “Distractions/Lack of Privacy” were also a large concern for 15 HEITO employees. Perhaps expectedly, and not too misaligned with comments found in question #28 around current dislikes, many comments were short and centered around general noise, visual and other distractions. e.g. “The Library won’t be quiet”, “Environmental sounds when trying to BlueJeans”, “Noise control”, “Too distracting” and the simply noted “Distractions”. In many cases, this also centered around privacy concerns as well, including comments such as: “Lack of privacy”, “Not enough privacy”, “Lack of screen privacy – everyone seeing everyone else’s screens”, etc. 2 HEITO employees found “Lack of Social Benefits” to be an issue, mainly pertaining to inconsistencies that AWA arrangements can cause (e.g. “Not knowing who’s going to be around when I’m in-office”), and 1 employee explicitly noted that “Nothing” was of concern to them.

A table of this question’s response categorizations is provided below:

Table 6. HEITO Survey Proposed Workspace Biggest Concern

Biggest Concern Categories	Number of Responses
Reduced Personalization/Productivity	18
Environmental Disadvantages	12
Distractions/Lack of Privacy	15
Lack of Social Benefits	2
Nothing	1
	Total Number of Responses: 48

31. What question should have been included on this survey, but wasn’t? And what’s your answer to said question?

For the final question of the survey, question #31, only 25 of the 57 HEITO survey participants provided an open-ended answer for this question, with 32 individuals

electing to opt out of answering the question, the largest opt-out for any question by far. Though categorization for this question was indeed more difficult compared to others, due to a lessened number of overall responses and broader array of responses, HEITO employees ultimately provided answers that could be grouped into three distinct categories. More so than the answers provided to these questions (not all workers provided answers with their questions), we'll focus on the noted missing questions raised by employees. Specifically, 14 individuals asked/provided missing questions that in some way pertained to the realm of "Current AWA Patterns/Behaviors". For some, this represented a clear desire to gather more data from existing remote work and/or desk sharing employees, with questions and answers such as: "Are you currently in desk sharing? Yes", "How often do you work from home? 3 days a week", and "How often are you actually at your desk? 25% of any given day". In other cases, these questions were oriented towards current behaviors tangentially, but not directly, related to AWAs, including: "How do you make personal calls in the workplace?", "Do you feel comfortable asking your colleagues to move/be quiet/clean up after themselves?", "How often do you bring food and how much?", and so forth. Others in this category are less likely to fit into buckets of categorization, but still pertain to existing circumstances, e.g. "How do you like the facilities in your current place of work? Currently, I don't"

Yet more so than those missing questions and answers that pertained to the existing landscape of AWAs, 10 HEITO employees had questions around "Future AWA Patterns/Behaviors" that told even stronger opinions on the organization's shift towards AWAs and plans around its new building. Some chose to ask questions about attributes of the new future space, e.g. "If you had to choose a 'fun' item to include in the new

space, what would you choose?”, while others asked questions pointed at the survey authors pertaining to these attributes, such as “How will the new space deal with the varying ergonomic needs of the staff?”, and “Are principles of Japanese space design being considered?”. Others asked questions centered around behavioral changes required, including: “Are you willing to change how you plan your day and how you use features of your workspace?” and “How frequently do you anticipate needing to move between the collaborative and quiet spaces, and why?”. Some chose again to use this opportunity to vent frustrations with the shift towards AWAs; from “How would moving to hot-desking or an open office environment affect your performance and morale? It will tank both”, to this much lengthier response provided by one employee:

Where do you stand on the completely unassigned, ‘first come, first served’ model vs. a traditional, completely assigned, permanent desk model? [...] I share many of our colleague’s concerns regarding the desk share model. I think lockers and no assigned desks ‘commoditizes’ our staff. You grab your stuff, go to your desk for the day, and then put it all away at night. Your life is boiled down to the stuff you have in your locker and the company you work for doesn’t care enough about you to give you the space to make even one desk your own. [...]. I fear that having unassigned desks will do more to drive people to work from home, rather than build a healthy, productive (and fun), collegial culture built on our shared emotional connections with each other that, in my opinion, is critical to a high-performing organization.

Running counter to some of these points, another colleague used this question to voice their view of the situation regarding the organization’s shift and collective opinion towards AWAs:

I think it would be interesting to ask: (concerned) -5 to 5 (excited) what is your feeling about moving to [new building]? I imagine most people are above 0, 3-5, but a vocal minority is closer to the other end.

Lastly, 1 HEITO employee felt that “Nothing” was missing regarding the provided questions and answers. As with the other qualitative questions, a table of this question’s response categorizations is provided below:

Table 7. HEITO Survey Missing Questions/Answers

Missing Questions/Answers Categories	Number of Responses
Current AWA Patterns/Behaviors	14
Future AWA Patterns/Behaviors	10
Nothing	1
	Total Number of Responses: 25

CHAPTER 6

CONCLUSION

Research Interpretation and Evaluation

With all that's been said up to this point, *How do employees make sense of their organization's shift towards alternative work arrangements?* Far more than one interpretation exists, but based on our research, we can make some objective observations from the nearly half of HEITO's employees that provided their input in the 2019 HEITO Space Survey. Nearly 70% of the organization holds personal meetings at their desk with only one to two other individuals, while less than 20% of HEITO does not hold meetings at their desk. Workers on the whole prefer a mix of a fairly conventional desk setups and stand-up desks. HEITO employees on average want a space where 62% is dedicated to a quiet, heads-down environment, and 38% acts as a more active, collaborative area. And so on... We could continue making simple observations from the data gathered, but there's little intrigue in framing HEITO's views on the shift towards AWAs so plainly. We must go further than the raw data immediately presents in order to get a true understanding of how employees have come to terms with the shifting AWA landscape of their organization, and our literature review and secondary research provides several keys to piecing together this puzzle.

For starters, we see several interesting relationships at play both within HEITO employees' stance on AWAs, and these same opinions when contrasted with academic research. While HEITO employees notably ignored *flexibility* – as touted by Gainey and Clenney (2006) – as a current workspace “like” as per question #27, making up only three of the 49 responses, flexibility was an aspect nearly 25% of the organization looked

forward to most in the new building. Considering many of the answers to the fixed-choice questions by the organization foretold deeper opinions found in the open-ended questions, we see how a new facility more oriented to the wants and needs of HEITO engenders overall positive opinions. From the amount of quiet and collaborative space, to the number/configuration of meeting rooms, to more accommodating desk arrangements; employees see various advantages to the new space. This is notable since from a flexibility standpoint, many of the basic attributes of AWAs (remote work, and desk sharing) already exist and are accommodated to some extent in HEITO's current facilities. Considering how little flexibility is seen as an attribute of the present workspace(s) makes this point stand out even further, and shows the appreciation that HEITO's workers have for many of the new building's design details.

Yet several of the relationships that exist between the research survey, the literature review and secondary research perhaps focus more on divisions between employers and employees, rather than just a unique relationship on the surface. While Kim, et al. (2016) tout several of the measures of *efficiency* desk sharing provides at the organizational level, we perhaps see the inverse impact of that with HEITO's employees' opinions on productivity as per question #30. Ultimately, nearly 38% of the organization feels such "efficiency" comes at a greater expense of *personalization* and/or *productivity*, with additional setup/teardown time incurred from such changes, showing the contrast between how different employees and hierarchical levels of the organization view positives and negatives of such a change. i.e. One or more senior leaders' positive attributes of AWAs can be one or more workers' negatives, and the inverse can certainly also be true.

This push and pull between contrasting needs and desires can be seen in other areas as well. As one example, Kotey and Sharma (2015) and others' findings correlating use of AWAs with more skilled, white-collar workers and those with more autonomy and control in work processes have a unique relationship with some of the survey's open-ended questions. Specifically, open-ended responses like those found in questions #30 and #31 regarding dislikes of the new space and missing questions and answers, respectively, show some employees strongly disagree with the assessment of AWAs showcasing workers as being skilled, autonomous beings, and rather instead as being "commoditized" or as "demeaning" on the whole. It is through such responses from HEITO's employees that we get a greater insight into not just their feelings on AWAs, but what specific AWA dimensions employees seem to dis/like more and have stronger opinions on.

While Greco (1999) discussed the inextricable linkage between the AWAs of remote work and desk sharing, for the shift towards AWAs occurring in HEITO over the past four years, we gain a sense that workers in HEITO overall feel more comfortable with remote work, holistically as an organization, than they do desk sharing. This relationship is implicitly presented through many of the responses within the open-ended questions, and to some extent perhaps can be backed up by that discovered through our secondary research. Considering our previous evaluations of measures of impact across remote work and desk sharing yielded positive (+2 out of -12/+12) and neutral (0 out of -6/+6) scores, respectively, one could argue the benefits of remote work outweigh and are more readily apparent than desk sharing. From the perspective of our research survey, one might claim "no news is good news" with remote work; little is mentioned explicitly

regarding both positive and negative aspects, with only a small number of comments alluding to socialization considerations that come from this AWA dimension. That said, support for desk sharing is still high and present across a vast majority of the population, as can be observed from employees' willingness to give up displaying personal items in question #18, to the various social benefits touted in question #29, though it has its detractors. Overall, with answers such as those exhibited through question #29, we see an organization where one could posit that over 75% of its members clearly look forward to a new world and office environment where both remote work and desk sharing AWA dimensions are fully deployed and in-use. Were we to consider those "on the fence" as being supportive of the effort on the whole, this number becomes even larger at 87%. As evidenced through some of the responses in question #31, employees do see a need for those in the organization to gain greater insight into their existing use of remote work and desk sharing arrangements directly.

The Expected vs. The Unexpected

In evaluating the aspects of AWAs that were assessed in our secondary research (e.g. Decision Strategies, Technical and Communication Considerations), this yields many findings that shift between both the expected and unexpected, and provide even further insight into how HEITO employees have made sense of their shift towards AWAs. While we previously noted that organizationally, we notice desk sharing seeing slightly more contention and less support than remote work, which itself lines up with assessed benefits and impact, this perhaps is *expected* due to elements beyond what outwardly appear. Primarily, remote work has had a stronger foothold in the organization than desk sharing, since the project's inception in 2016. Though desk sharing was a goal

of the initial effort, employees initially still possessed “their desks” even when working remotely, and only allowed others’ to use the space when they weren’t physically present. Over time, this would take a turn towards employees’ fully giving up their desks, and desk sharing-only spaces (e.g. in early 2018), followed by the announcement in late 2018 of the new building being a desk sharing-exclusive space. Thus, while the two AWA dimensions may share an inextricable link, they do not share an identical path of ramp up/adoption across the organization. Such differences may mean that while remote work has had more time to permeate the work styles and preferences of HEITO’s employees, and become an organically-normalized aspect of AWA life, desk sharing has taken on a hastened adoption from leadership that has been met with more resistance. And while such a theory may help to explain why resistance has arisen for desk sharing, it is worth focusing on such resistance even further from the perspective of that which is un/expected. Recall a key quote pulled from the responses for question #31:

I think it would be interesting to ask: (concerned) -5 to 5 (excited) what is your feeling about moving to [new building]? I imagine most people are above 0, 3-5, but a vocal minority is closer to the other end.

While according to our survey data, as detractors to AWA efforts such as desk sharing do exist, to what extent is this to be expected, or not, across the general HEITO population? As noted previously, roughly 30% of HEITO’s existing employees (pre-COVID enacted measures) were engaged in AWA efforts on a regular basis within the organization. At least more than 75% of the organization appears to support the move to remote work and desk sharing, if not more (i.e. 87%, considering neutral comments) based on answers found within the survey. Though survey data will remain anonymous for the purpose of this capstone, the strongest detractors of AWA measures as found

through the survey results were those that, at least at the time of the survey, did not partake in AWA efforts often or at all, not being members of the previously-noted 30%. Though nearly half of the organization did not participate in this survey, and one could claim those choosing not to respond may have represented a greater number of detractors than those found in the survey data, we believe the survey results to be representative of the general HEITO population. Further relating to this would be that noted by Kossek, et al. (2006) regarding social exchange theory, in how those granted the freedom to join AWAs may reciprocate with more favorable attitudes and behaviors around such policies and changes. This could both explain the largely positive response around AWAs from those that took the survey (who were already engaged in AWAs), and the lack of support among those who hadn't yet tried or become part of the program. Thus, perhaps our one respondent in question #31 made a prescient call in assessing positive support across most, and such lack of support for AWAs in the organization as a "vocal minority".

Arguably another area that could qualify as an *expected* result of the survey would be the lack of reference to technology playing a pivotal role in this shift towards AWAs, and in communication considerations. To be certain, technology absolutely plays a crucial role, as was outlined in our secondary research. However, as noted in Hill, et al.'s (2003) findings in surveying IBM, the near-seamless use and normalization of tech in a tech-based organization like HEITO, and its ubiquitous nature in many respects help to explain why employees may not consider the importance that technology tools play in this space. But if most of these findings up to this point have been *expected*, just what has been found to be *unexpected* in all of this? Perhaps more than anything else, the most unexpected aspect of HEITO's shift towards AWAs may be found in what senior

leadership and the organization overall have gotten right about the effort, and how they've accomplished this.

As noted previously, many aspects of HEITO's new building design seem to directly correspond to both the findings in our secondary research and, more importantly, align with the thoughts and opinions of HEITO's employees. Where 70% of the organization holds small (e.g. 2-3 person) meetings at their own desks today, an assortment of right-sized conference rooms are present in the new building to accommodate meetings of like size and purpose. Where employees prefer a mix of desk configurations and orientations, and display a preference for quiet space over collaborative, we see a space that reflects multiple different configurations mapped to different activities, a la Wohlers and Hertel's (2016) point regarding activity-based flexible offices. In the new space, we see an additional balance of desks (outside of meeting areas) that roughly map to fit 70% of the total organizational workforce, aligning with Chafi & Rolfö's (2019) targeted numbers. And for areas where AWA-designed offices are lacking compared to the current offices, such as personal space/privacy as per Kim, et al.'s (2016) findings and in results found through questions #28 and #30, we see this balanced out by measures such as designated lockers and storage spaces in the new design. Furthermore, such a balance can be found when combining the overall design with that of the survey data of HEITO employees themselves. On one level, employees show a genuine concern with distractions and having a lack of privacy in the new building (15/48 employees, question #30); yet this is just as great a concern for the present workplace accommodations (16/47 employees, question #28). Thus, we see the

reasons for many of the decisions for the new building, how they came to be, and why the organization may still be concerned about some of these areas moving forward.

More fascinating from a process standpoint in this effort is the fact that the 2019 HEITO Space Survey data was captured long after the organization had already made several key design decisions for the new space. And while HEITO was on a trajectory toward adoption of AWAs, a number of these decisions around AWAs over time may well have been made without a grand plan or strategy in place. Could much of the success in addressing AWAs in the design of HEITO's new building be attributed to the architects who principally designed the space? Or perhaps, similarly be attributed to some mix of luck and common sense? One might attempt to argue these points, and they may play a role to some degree. However, I believe there is a much greater element at play with regard to *how* HEITO has evolved and shaped itself as an organization that is adaptable to AWAs, and this is where decision strategies bear a principal role in this effort.

Strategically, we see the organization's leadership as one that ultimately understands how the organization "works", and how all of these aspects of work life interrelate to its people. To the point of Keidel's (2010) focus on autonomy, control, and cooperation, HEITO has leaned into its strengths by doubling-down on autonomy and control, rather than attempting to lean on elements like cooperation less inherently innate to its workflows. Yes, HEITO did effectively decree desk sharing through its move to the new building, and only chose to survey its employees on the matter after the fact. Yes, the core of the new building design was conceived by a select few higher-ups, rather than the entire organization. Yet by the same measure, HEITO's workers were still

transparently involved in the process through opting into such programs by choice over a span of years, having significant voluntary participation in providing opinions (via the survey) and sharing such opinions on the effort(s) that were largely positive. One might focus on HEITO's use of the "talk to your manager" mantra and absence around formalized policy as a means of avoiding the Sweet, et al. (2017) recommended path of starting with manager attitudes first in such change efforts. While one particular quote ("Possibility to work from home some days?") from our open-ended responses highlight the inconsistency that lacking a manager-first focus can bring about (this employee had the ability to engage in AWAs, but not the standing with their direct manager to make it happen), this remains an exception in the overall adoption of AWAs amongst employees and their managers. While a greater effort could have been made across the entire organization to bring about consistency between managers and workers in AWA adoption, in many cases, employees that could engage in AWAs did, and natural adoption did occur over time. Overall, leader-member exchange prevailed, and managers engaged in AWAs had employees similarly engaged in such efforts, while the inverse was also true of those managers and employees both skeptical and less receptive towards the efforts.

Speaking further to the *how* of this effort, in relation to that evaluated within our literature review, HEITO's success in having an organization adapt over time to accept AWAs can stem from a deeper understanding of its employees by the organization's leadership. It seems clear that a majority of the HEITO workforce possesses *trust* in the decisions being made around AWAs, as noted by Morganson, et al. (2010), regardless of the ultimate motive behind the changes and/or how such changes were executed and

brought about. At some level, by understanding the organization's employees' personality preferences, HEITO was able to adopt policies and design a new space that can accommodate the preferences of its workforce, even before surveying them to specifically find what they desired in such a space. And while we possess little insight into the inner-workings (e.g. within operational divisions, sub-teams) of how AWAs are playing out, one might suspect team relation principles as noted by Wohlers and Hertel (2016) are being kept up. Such efforts can keep employees presently utilizing AWAs connected to the existing workforce, and ultimately engaged enough to reduce any major downsides as noted through each AWA dimension's measure of impact. Though to say or allude to strategy being absent from this effort would be false since, intentionally or not, HEITO has done much correctly in their AWA journey, even if not always following a cohesive, formalized plan.

More specifically on the strategic front, HEITO leadership has engaged overall in several principles that align with many of those outlined in Eisenstat and Beer's (2004) findings of engaging in organizationally-optimal conversations around business strategy. In this case, HEITO has allowed its organization's employees to have several "collective and public" conversations regarding AWAs – from numerous Slack conversations that are open for engagement by anyone, to town hall-style Q&As at Quarterly Meetings; allowing employees to express their thoughts and "be honest without risking their jobs" (Eisenstat & Beer, 2004, p. 3). Truthfully, this is perhaps no more evident than through the 2019 HEITO Space Survey, where employees made an explicit choice to provide non-anonymous feedback. Furthermore, through efforts such as the upcoming Space Committee and the survey and its data presented here, HEITO has taken the step, even if

debatably late in the process, to “collect data and engage the organization in a conversation” by forming and utilizing such a task force (Eisenstat & Beer, 2004, p. 5). Yet these positive strategically-aligned tactics go even further, as some of Davenport and Pearlson’s (1998) “Lessons Learned” in adapting organizations to virtual office workers aligns with HEITO’s adoption strategy as well. This principally includes the idea to “Start with a pilot, but eventually move to a critical mass for benefit realization,” which itself perfectly summarizes HEITO’s long-term efforts in utilizing AWAs (Davenport & Pearlson, 1998, p. 64). Additionally, HEITO’s strategy has certainly considered being able to “manage the office space left behind in the traditional office”, by establishing a comprehensive plan for a new facility directly designed around AWA use cases and principles, while also providing some informal measures of “training of personal work strategies in a virtual office environment” (Davenport & Pearlson, 1998, p. 64).

With that said, as many positives and aligned measures that I could point to between Eisenstat and Beer’s (2004) and Davenport and Pearlson’s (1998) pieces, I could find just as many that weren’t utilized and/or adhered to within HEITO’s efforts. Yet when the organization understands both itself and its people well enough, while a thoroughly comprehensive strategy for implementation certainly couldn’t hurt, a more organic and agile strategy can also be effective if carefully considered and implemented.

Suggestions for Future Research

Though I personally think our literature review and secondary research, in combination with our survey data, provides a sufficient amount of information to allow us to answer our research question, a field as widely-scoped and multivariate as the landscape of AWAs warrants additional research through broader studies. To start, and

as noted throughout this capstone, the potential to examine different companies – of varied sizes, industries, and additional variables – in a similar situation to HEITO, presents multiple opportunities for paving new ground in the AWA space. Though the ability to do this with one key difference – the evaluation of AWAs through the lens of employees in a world either during, or after COVID-19 and its many effects (quarantine, mandated remote work policies, etc.) are in-place or have ended – would be an even greater exploration than just assessing companies of a different size, industry, employee makeup, and so forth. Taking a study similar to this capstone, and completing a survey or research conducted prior to COVID-19, and using such data to contrast that with a survey taken after COVID-19 lockdown restrictions have been lifted to see the impact of such circumstances on organizations and their employees presents another possible path. Thus, for anyone willing and able to explore the topic of AWAs with relation to COVID-19, I expect these studies and data to be among the most prevalent in the AWA space in the coming years.

Another interesting angle would involve taking some of the many topics explored within the secondary research areas (e.g. Decision Strategies, Technology) and examining the net effect on such topics before/during/after implementation of AWAs. e.g. What does the political or strategic landscape look like in an organization prior to AWA adoption, and if/how does this change during and after AWAs are implemented? Similarly, while technology plays a pivotal (yet largely unnoticed, from the perspective of employees) role in HEITO's adoption, how might the landscape of technology look in an industry adapting to AWAs that's less privy to, or not experienced at all, with technology? Though this capstone is primarily intended to provide a snapshot of these

sub-topics during the AWA transition phase, the ability to measure these aspects on a granular level provides another unique lens through which to observe additional AWA research.

To again allude to the point-in-time adaptation snapshot utilized throughout this capstone, it would be interesting to see a staged approach to assess adoption and adaptation that focused (research-wise) not just on a specific point in time, as was done with the 2019 HEITO Space Survey, and not in a before/after context, but through multiple points of assessment in a company's AWA journey. e.g. This could resemble a survey distributed to random samples of the organization's population at given intervals through a company's path of adopting AWAs, and in assessing data on thoughts and opinions throughout the process could reveal new findings not witnessed through existing research methods. Such research methods could also be used to further elaborate on points alluded to through some employees' survey feedback, such as the noted "vocal minority" by one employee. e.g. Are there better ways to gather opinions from disaffected employees in such efforts, or that can be used to confirm or refute numbers suggesting over-inflation of positive/negative feelings towards AWAs? Or, can we ensure such opinions can be gathered and assessed more accurately, such as by using a formal interview protocol to address survey non-respondents?

From the perspective of the design of the research study itself, multiple opportunities exist for using additional methods to assess companies similar to, or drastically different than, HEITO. As one example, what might a custom survey look like with the number of questions and question types (e.g. fixed-choice, open-ended) specifically oriented around AWAs and remote work and desk sharing, rather than a

tangential focus and principal outcome meant to serve as a reference for the new building design? Would a solely quantitative, fixed-choice survey, at varying numbers of participants (e.g. hundreds, thousands) yield better, or at least *different* results compared to a purely qualitative, open-ended questionnaire as was originally conceived, but not used, for this capstone? In either case, how would a different research design compare and contrast to the one used within this capstone from an outcome perspective, where a mix of both quantitative and qualitative questions were used to gather varied responses and opinions? As noted in the secondary research, while comprehensive research exists for remote work, desk sharing could also certainly benefit from further study, and additional measures of impact (note the three impacts identified with desk sharing, compared to the six used for remote work).

Finally, if any unanswered question remains in all of the research performed, it may be in assessing the *why* of such a shift towards AWAs, and viewing the many opinions on such a shift across various levels and personalities throughout the organization. Much as was discussed previously regarding inconsistencies found between the literature review/secondary research and survey data, could such inconsistencies be used as the foundation for exploring the many differing opinions on AWAs, and in performing a deeper dive into how and why such opinions come to be? The world of AWAs presents many more opportunities to explore unique angles on most, if not all, of the topics and perspectives touched upon throughout this capstone, making the space of AWAs ripe with opportunity for years to come.

Takeaways

What could we learn from HEITO's employees' experience of adapting to AWAs? Maybe you're an employee at an organization about to, or in the midst of, embarking on its own journey through AWAs. Or, perhaps you're a senior leader at another organization looking at broader strategic elements that should be considered if/when rolling out AWA changes within your own company. Or, maybe you're a curious onlooker simply hoping to learn a thing or two about AWA adoption and adaptation by living vicariously for a moment through the perspectives of HEITO employees. Regardless of where and how you relate to AWAs in your particular journey, there are a number of key takeaways that should be considered.

At one level, understanding the relationship many aspects of AWAs have with each other is paramount to understanding the success of such efforts. In this case, HEITO paired remote work and desk sharing together early on, and while their journeys have not been fully identical to one another, their efforts have combined to form a more cohesive picture of what adaptation can and should look like. This is not just true of the AWA dimensions being explored or implemented by the organization, but additionally with regard to the measures of impact with each AWA dimension. As one example, according to Morganson, et al. (2010), the partly-positive relationship between job satisfaction and remote work we examined could itself be the result of positive structures put in place for other impact areas, such as work-life balance and inclusion practices. Similarly, from a decision strategy perspective, Morganson, et al. (2010) note that it is ultimately managers' actions in AWA adoption that will have an impact on both their own employees, and the organizational effort as a whole. Therefore, viewing a shift

towards AWAs through a single dimension, or area of impact, or hierarchical level isn't enough. For such a significant shift, understanding the whole and how interrelated each element is to others is crucial to gaining insight into the implementation regarding the sum of its parts.

Another takeaway could be, as stated by Tan-Solano and Kleiner (2003), to simply “look at the benefits” of moving to AWAs, and understand why other companies, and ultimately your own, may be considering, about to choose, or would want to consider such alternative arrangements to a standard fixed-desk, fully in-person physical office environment (p. 20). In many cases, the goals of such programs are ultimately aligned with goals that management in organizations strive to see year in and out, e.g. “streamline operations, [...], reduce overhead and travel expenses, meet [...] higher expectations for quality and service”, and such AWA programs can be significant contributors to achieving such goals (Tan-Solano & Kleiner, 2003, p. 20). Yet conversely, you'll also want to assess the drawbacks of such programs, and have at least a basic understanding of what these drawbacks mean for your organization. In the words of Tan-Solano and Kleiner (2003), in assessing the pros and cons of AWAs and weighing them against each other, and as shown by our findings through the literature review and secondary research, “you'll probably find your fears unwarranted” with regard to being a true blocker to implementation, as pros and cons exist for the standard, status quo of working conditions as well (p. 21).

In keeping with the advice from Tan-Solano and Kleiner (2003), many of their further points (e.g. “understand workers' concerns”, “be flexible in your arrangements”, “pick the right jobs”, “choose the right people”) ultimately stem back to one overarching

point they additionally note: “plan carefully” (p. 22). “Plan carefully” should be as vague and undefined as it sounds, frankly, as the concept of how and how much to “plan” and to define what exhibits “care(ful)” planning in this space will be up to each organization and its leadership. For HEITO, this was arguably a mix of explicit degrees of planning mixed with experimental autonomy. Thus, HEITO leaders mostly used their educated instinct to form a multi-year, slow rollout of core AWA attributes amongst a portion of its population on an opt-in basis, coupled with a stronger push to an all-AWA environment mixed with the design of a new space to facilitate such a change. For another organization, this effort may look entirely different. Regardless, understanding that you must understand your organization, how it works, your organization’s employees, and beyond will be essential in this planning. Expect to involve your organization in some way/shape/form in this effort. Ask them what they wish and expect to see in an AWA-oriented space. Gain feedback on their work habits and current preferences, and gain insight into their concerns overall. Have active conversations and points of data collection (e.g. through surveys) to consistently and accurately assess the temperature of your organization’s efforts, rather than through anecdotal assumption, wishful thinking, or leadership mandates.

Furthermore, and as noted by (yet again) Tan-Solano and Kleiner (2003), understand that arguably more than any other factor in AWA adoption and adaptation, it is the role of technology that has and will make such paths viable for your organization, as it has done for so many others. With an organization like HEITO, technology is omnipresent and many of the tools and solutions for enabling AWAs (e.g. Slack, BlueJeans) were already in use. If such immersion with technology, and platforms akin

to those described previously aren't implemented in your organization, consider how you can couple your AWA adoption efforts with that of a similar technical effort to ensure the necessary tools, processes and training around such technology is available. Similarly, understand that while technology will help with the adaptation of AWAs through an organization, and identifying new ways of potentially doing "old" things, this is not a replacement for codifying some rules and policies around such changes, as noted by Chafi and Rolfö (2019) among others. In a world where anyone in your organization could be working "anywhere" – whether at home, or in-office at one of many potential bookable spaces – you'll need some means of ensuring all employees are on the same page. To cover the expectations of living and working within a new desk-sharing environment, this will include items such as volume levels, cleanliness policies, how long a space can be reserved, and so on.

With that said, let's take one final look at our research question for this capstone: *How do employees make sense of their organization's shift towards alternative work arrangements?* In many ways, the answer to this question for your organization will depend on your organization's ability to execute the factors discussed within this concluding section, and those discussed throughout the rest of this capstone. After getting a glimpse at how HEITO employees are making sense of such a shift, and how HEITO as an organization has gone about its adoption of and adaptation to AWAs, I wish you the best on your own AWA journey within your organization.

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APPENDIX A

2019 HEITO Space Survey

First Name: _____

Last Name: _____

Email Address: _____

1. Which best describes your primary role in Higher-Ed IT Org?
 - a. Developer
 - b. Sys Admin
 - c. Manager
 - d. AV/Tech Support
 - e. Other
 - i. You selected “other”. Describe your primary role:

2. Describe the kinds of work activities and processes that go on in your workspace in a typical month by estimating the percentage of time you spend on each of the following in that space:
 - a. Writing (documents, email, what have you)
 - b. Programming
 - c. Configuring hardware/software
 - d. Reading
 - e. Meeting with others
 - f. Talking on the phone
 - g. Participating in videoconferences
 - h. Working with others
 - i. Other (you’ll have a chance to describe these)
 - i. Please describe the activities included in your “other” percentage.

3. If you use your workspace for meetings, discussions, or interviews, typically how many people are present, not including you?
 - a. One person other than me.
 - b. Two people other than me.
 - c. Three people other than me.
 - d. Four or more people other than me.
 - e. I don’t hold meetings in my workspace.

4. Do you work with physical files?
 - a. Do you share physical files with another person and need file space which can be easily moved from one space to another?

 - b. How long do the files usually remain in your work area?

 - c. Do these files contain sensitive information (PII, like SSNs and the like)?

- d. Where do you currently store uncompleted work?
5. Below, you will find a list of materials. Please group the items by how often you work with them. (Frequently work with, sometimes work with, never work with)
 - a. Binders
 - b. Books
 - c. Physical media
 - d. Removable hard disks
 - e. File folders
 - f. Manuals/catalogs
 - g. Paper/forms
 - h. Flip chart paper/markers
 - i. Drawings 20 in. x 30 in. or larger
 - j. Oversized books or ledgers
6. In general, what sorts of things do you need to store in a locker?
7. Does any of your work require lockable storage?
 - a. What kinds of things do you need to lock up?
8. Do you use a flipchart or whiteboard in your immediate workstation for writing or planning?
9. How many business-related telephone conversations do you participate in during an average day, while in your own office/workspace?
 - a. 1-5
 - b. 6-10
 - c. 11-20
 - d. 21-30
 - e. None
10. What portion of the above telephone conversations require privacy from your fellow staff members?
11. How many computers do you use at your workstation? (Include your laptop if you carry it back and forth to work/home)
 - a. Mainly one; occasionally others
 - b. One exclusively
 - c. Two
 - d. Three or more
12. Do you use any specialized equipment day to day (i.e. a desktop computer with special hardware)?
 - a. Please list the specialized equipment that you use, and why.
13. Do you currently have a desk phone?

- a. Why do you have a desk phone?
14. How do you like to work? Check all that apply.
 - a. Work area visually separated from rest of office
 - b. Table desk with conference seats
 - c. Stand-up desk
 - d. Low table with seating
 - e. Long narrow work surface
 - f. In a lounge environment
 - g. Facing away from workstation entry
 - h. Desk facing workstation entry
 - i. Treadmill desk
 - j. Conventional desk configuration
 - k. Other
 - i. What other settings do you enjoy working in?
15. What is your monitor preference?
 - a. One large monitor (like the large curved monitors in use across our office)
 - b. Two smaller monitors
 - c. Other
16. Do you have some sort of customization at your current workspace (i.e. a certain keyboard, chair, and so on) that is required for you to get your work done that you don't believe will be part of the standard setup in the new space? Please describe the customization.
17. The bulk of our space in New Building will be made up of two work "zones". The collaborative space is open and will encourage group work. The "Library" will consist of more traditional workstations with a quiet atmosphere encouraged. Based on your current work habits, what percentage of a typical week would be spent in each zone?
 - a. Collaborative space
 - b. Quiet space
18. How important is it to you to be able to display personal items at your workspace?
 - a. Extremely important
 - b. Very important
 - c. Moderately important
 - d. Slightly important
 - e. Not at all important
19. How important is it for you to be located near the rest of your team?
 - a. Extremely important
 - b. Very important
 - c. Moderately important
 - d. Slightly important

- e. Not at all important
20. List the three people you must communicate most with personally during a typical workday.
- a. Person 1
 - b. Person 2
 - c. Person 3
21. Use the sliders below to indicate the percentage of your meeting/collaboration time that is spent with HEITO folks vs. other people on campus during a typical week.
- a. HEITO staff
 - b. Other on campus people
22. Do you typically eat breakfast or lunch at your desk or elsewhere?
- a. At my desk
 - b. Elsewhere
23. How often do you eat breakfast/lunch at your desk currently?
- a. Regularly (every day/every other day)
 - b. Frequently (once/twice a week or so)
 - c. Occasionally (once every couple of weeks)
24. How often do you have to schedule meetings in rooms other than your workspace for any reason (need more room, special equipment, or more privacy)?
- a. Once a month
 - b. Once a week
 - c. Once a day
 - d. Multiple times a day
 - e. I don't schedule meetings
25. To what extent is visual privacy necessary in your meetings?
- a. All of my meetings require visual privacy.
 - b. Most of my meetings require visual privacy.
 - c. Some of my meetings require visual privacy.
 - d. None of my meetings require visual privacy.
26. To what extent is acoustical privacy necessary in your meetings?
- a. All of my meetings require acoustical privacy.
 - b. Most of my meetings require acoustical privacy.
 - c. Some of my meetings require acoustical privacy.
 - d. None of my meetings require acoustical privacy.
27. Name one thing you like about your current workspace.
28. Name one thing you dislike about your current workspace.

29. What are you most excited about in the proposed workspace setup?
30. What's your biggest concern about the proposed workspace setup?
31. What question should have been included on this survey, but wasn't? And what's your answer to said question?