

**FLEXIBLE WORK ARRANGEMENTS:  
TECHNOLOGY ENABLING EMERGING POPULATIONS OF MILLENNIALS  
AND BABY BOOMERS**

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## ABSTRACT

The official standard of a 40-hour work week has not changed for decades in the United States. A flexible work arrangement (a.k.a. telework, flexible schedule or telecommuting) is an alternative to the traditional 9am to 5pm, 40+hours work week in office. In truth, the working environment has changed as employees are expected to work more than 40 hours per week and must be accessible around the clock on weekends and after the end of the workday.

Millennials and Baby Boomers (called the emerging populations) are pushing the agenda on flexible work arrangements and getting more flexible schedules. Technology makes this all possible. Millennials are described as the always-connected-to-the-internet generation (Choney, 2012), while any new technological process requires significant instruction and training, and presents a challenge for older workers (Charness, 2006).

This grounded theory research (Glaser and Strauss, 1999) informs and updates academics, practitioners, companies, and employees on how technology is enabling flexible working arrangements (referred to as FWA) for the emerging populations. The paper draws on both unstructured interviews and a survey with key informants across age ranges who are business owners, corporate workers, and employees. It explores the tools that are critical to connecting to the office, the advantages and disadvantages of working outside the office, and gives guidelines for employers and workers to utilize when creating a best-in-class flexible environment.

**Keywords:** flexible work arrangement, flexible schedule, millennials, baby boomers, telecommuting, work-life conflict, technology, best practices, emerging populations

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# CHAPTER 1

## INTRODUCTION

Having worked in flexible work environments for the past thirty years, I am familiar with the different types of flexible schedules that are being offered in the workplace, whether in the corporate world or small businesses and even across industries. The working-from-home (i.e., virtual) model has become synonymous with being flexible as well as being a white-collar benefit. Technology enables flexibility. Work can be done from anywhere if there are accessibility and connectivity to the necessary equipment and software.

In 2018, being flexible is now an expectation in the workforce – employees expect flexible schedules and employers are expected to provide it. Flexibility has become a tool that allows employers to geographically expand their businesses, not just a benefit for employees who wish to work from home. Flexjobs, a recruiter site that only posts flexible work opportunities, released their fifth annual list of the "100 Top Companies for Remote Jobs" (Reynolds, 2018). In it, they asked the top recruiters and leaders of the companies who post to their site to explain the reasons why they hire remote workers. The most frequent responses of the winners were: (1) flexible employees were more loyal and engaged employees, (2) businesses were expanding outside brick and mortar, (3) employers needed to find specialized talent beyond geographic boundaries, (4) companies were getting into new markets, (5) organizations were building a mostly remote business, (6) employers were diversifying the workforce with hard to reach hires, (7) human resources departments were increasing productivity along work-life balance, and (8) better

serving clients' needs.

Flexibility is now a business imperative, and most companies cannot meet their goals without the technology that enables the management of geographically-disparate workforces. Flexibility can accomplish these goals.

Boosting productivity and attracting the best employees are essential in establishing a company's competitive advantage. As computing and telecommunications continue to advance, the ability to work from anywhere at any time while maintaining scheduled communications with managers has created opportunities for organizations to use telecommuting solutions to produce superior results (Pearce, 2009).

Despite this imperative, companies still struggle with understanding the tools and guidelines they need to give their employees for maximum productivity in the workplace, particularly millennials entering the workforce for the first time and baby boomers who are re-entering after retirement.

This grounded theory research (Glaser and Strauss, 1999) aims to update existing literature and add to both the human resources and technology disciplines in two essays. The first essay discusses the tools that both emerging populations feel can help them deliver their best performance. An inductive approach was used to garner nuggets of information that helped to tailor the interview questions. Brief interviews were then conducted to get a more in-depth dive into what differentiates millennials and baby boomers in their need to work outside the traditional office environment. The second essay develops the guidelines for companies to help employers and employees work more productively.

## CHAPTER 2

### RESEARCH MOTIVATION

My interest in Flexible Work Arrangements and technology spans approximately thirty years. As a secretary in the retail industry, my tool was a typewriter; however, as technology progressed, the Wang word processor became my primary tool (Figure 1). I went to evening classes to continue my undergraduate degree because the word processor necessitated my being onsite during the days. Figure 1 shows the timeline of my career with flexible work arrangements and technology.

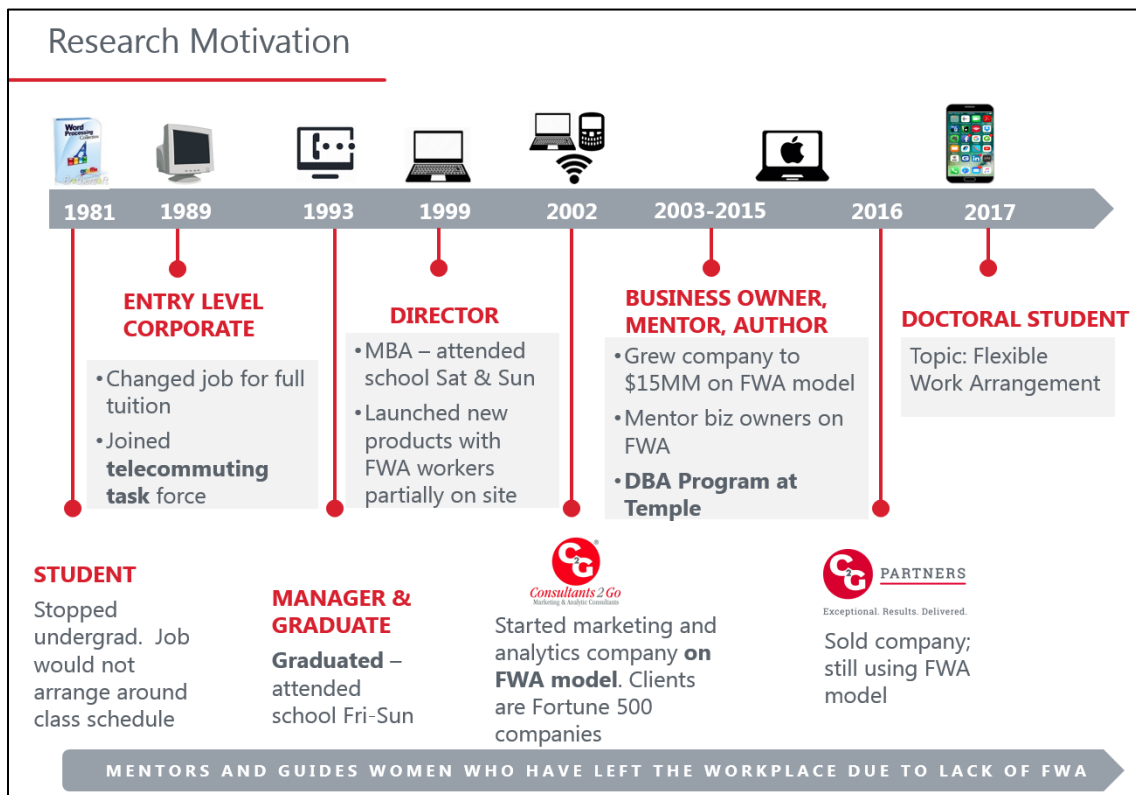


Figure 1. Research Motivation

I switched to an entry-level position in a financial services company because they paid 100% tuition for any classes related to my marketing and management position. Evening classes were challenging due to my tight work schedule, and I was now working with a cathode ray tube (CRT) and still needed to be on site. When I requested Fridays off, my manager told me that my job would then be considered part-time; however, if I found other employees who wanted such a schedule, I could do a job share - an arrangement that was popular in the early 90's.

I formed a task force of ten people who met weekly and researched the types of flexible work arrangements that would benefit us. There were several reasons why we were interested in this arrangement, notably childcare, eldercare, school, health issues, less travel time and taking more extended weekends to be with their families. Unfortunately, the term "work/life balance" had not yet been coined. The research resulted in a job share option for me but also included that employees without a job share could work four days per week for ten to twelve hours per day to fulfill his/her 40-hour work schedule.

A six-month pilot resulted in happier and more productive employees who did not use any personal or sick days during that time. Employees who could show a valid reason for wanting this flexible schedule were offered this flexible work arrangement and must get the approval of their manager and the task force. Afterward, the ten to twelve-hour day, four-day per week model, launched to all employees in the company between Memorial Day and Labor Day. This program still exists today in that company.

I completed the final two years of my undergraduate studies with a desktop computer and dial-up internet access. When I went on to business school, I continued

utilizing the flexible work arrangement concept and used a laptop with broadband access. In other words, technology-enabled my upward progression as an executive in Corporate America. The Blackberry was responsible for my ability to be flexible while managing teams from across the country. At the same time, I noticed that my female peers were leaving the workforce after having their second child because they could no longer tolerate the 90-hour work week that their executive positions required. When they requested a flexible schedule, their managers denied the request with reasons like "we require everyone to be in the office" even if they managed virtual teams and that person was the only one in the office.

As an executive, I took advantage of this new pool of talent who left the corporate world and were available as freelancers or contractors to work on an on-demand basis. They wanted different kinds of flexible schedules—from part-time to full time for 3-6 months, onsite or virtual. The company saved critical cash as individual freelancers were not as expensive as the top tier consulting companies but retained previously utilized company knowledge and personal internal resources to move along stalled projects.

In recent decades, the standard 9am-5pm model of work has come under attack from workers who are seeking—and often demanding—new work arrangements that support their non-work lives (Blake-Beard et al., 2010; Osterman, 1995). Working mothers, working adults who are caring for aging parents, baby boomers who are scaling back, seniors who have retired but working as consultants, men with working spouses who have taken on more home responsibilities (particularly in the Lesbian, Gay, Bisexual, and Transgender populations), and millennials represent the newest

groups of workers seeking more flexibility regarding where they work, when they work, and how their work is scheduled.

After leaving the corporate world in 2001, I co-founded a company, Consultants 2 Go, that was entirely built on a flexible work arrangement model for all employees – domestically from New Jersey to Florida, and internationally in Panama and Brazil. Smartphones allowed instant access to emails and messages, while wi-fi made connectivity a non-issue.

After attending work-life conferences in 2016, I became interested in two areas of flexible work arrangement – technology, and the emerging populations of millennials and baby boomers:

1. Technology is critical in the advancement of flexible methods to give employees the ability to work from home with ease. In the age of fiberoptic networks that allow rapid transportation of data, other tools, such as file storage systems and automatic data backups, enable virtual employees to access the same information as in-office peers.
2. Millennials have adopted a preference for working from home, full-time or part-time, and baby boomers who are close to retiring do not need to go into an office to lend their expertise. Boomers are now technologically savvy enough and can work virtually, like millennials.

While working with teams and helping companies to start flexible work arrangement modules, they used a cookie cutter template of what is needed for an employee to work outside the office. There is no consideration that the needs of millennials and boomers might differ. What if they both need computers, but the



software must be different? Or does someone who works from home need more ergonomic equipment? What are the best and most effective practices based on the type of job?

Belanger et al.,'s (2001) quantitative research investigated three technology variables believed to impact outcomes in telecommuting: the availability of information system technology, the availability of communication technologies, and the communication patterns of telecommuters within their workgroups. The results indicated that technology variables positively impact productivity, performance, and satisfaction of telecommuters, while the interaction between the technology variables is significant in predicting perceived productivity. Workgroup communication, as measured by the centrality of individuals, was found to negatively affect perceived productivity and performance (Belanger et al., 2001). However, there were no best practices given regarding the communication technology required for high performance when working outside the office.

Pearce's 2009 paper on technology considerations for late adopters, new managers and companies deciding to undertake a telecommuting initiative, developed three technology topics: (1) connectivity, (2) information sharing, and (3) communication. Those considerations hold true today. However, the technology in 2017 is much more advanced than in 2009 and tools that are available today were not in existence eight years ago. For example, broadband connectivity was considered risky in Pearce's research; today, broadband is commonplace while wireless connectivity rules. Essay 2 will suggest best practices of available technology, as well as any ideas for future technology, our participants feel can help to make flexible work arrangements easier.

This paper updates existing literature and aggregates different viewpoints on the advantages, disadvantages and best practices for academics and practitioners. It includes both primary and secondary research data.

## CHAPTER 3

### DEFINITIONS

There are numerous definitions for flexible work arrangements and each discipline's definition colors the research; however, the definition that captures the essence of the existing literature is from the Bureau of Labor Statistics (2016). It states that "A flexible work arrangement (a.k.a. telework, flexible schedule or telecommuting) is an alternative to the traditional 9 am to 5 pm, 40+hours work week." This definition that gets to the root of what most Americans believe to be a standard workday at the employer's work location is also the challenge to change. From an economics, employer-related standpoint, most businesses think in terms of the number of hours in a day that they can get from, and compensate, a worker. Shifting to a productivity model might be better suited to working with flexible schedules and arrangements.

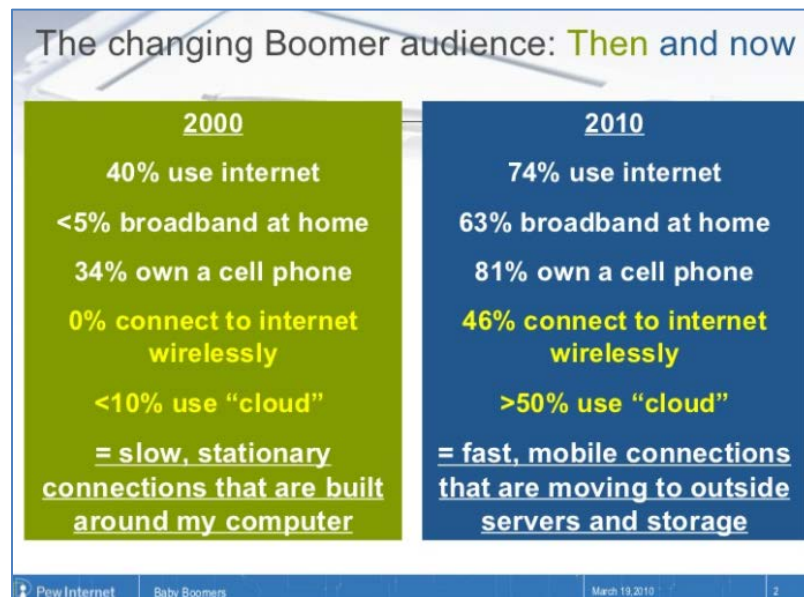
Telecommuting is among the most common types of flexible work arrangements. I agree with the Charness (2006) definition that telecommuting may be viewed as the use of communication devices such as fax machines, phones, and networked computers to do paid work, and that these devices are used to execute tasks by people who are not present in the main work office or a satellite office location.

The term technology is a concept that is widely used, but for which very few people know the definition. It is unclear because 'technology' is a difficult and elusive term to define because its meaning, together with scope, is continuously evolving (Gibert, 2004). Nevertheless, the Business Dictionary defines technology as the purposeful use of information and electronic hardware to design and produce goods as

well as services and to organize human activities. The information system definition of technology is "integrated services digital network (ISDN), asynchronous transfer mode (ATM), wireless communication and local area network (LAN)" (Tung & Turban, 1996). For this paper, the definition of technology is a blend of the dictionary and Tung & Turban – the purposeful use of information, via hardware, software, or app, including SDN, ATM, and LAN—to design and produce goods as well as services and to organize human activities. Most flexible workers utilize hardware and software to be useful and productive.

The other variables in this research are the boomers and millennials. I've named them the "emerging populations" as they are the two groups at the forefront of driving the use of flexible schedules. Millennials comprise young people born between the year 1980 and the year 2000 (Cahn & Cahn, 2016; Rainer & Rainer, 2011), which makes them between the ages of 18-38, and who form the largest population in the U.S. (Fry, 2016; McGuire, 2016; United States Census, 2014).

Based on feedback from preliminary pilot research, segmentation was done to include, and focus on, the baby boomer population that comprises the 51-64 age groups (United States Census, 2014). Figure 2 shows that this generation has increased its use of technology from 2000 to 2010.



*Figure 2. The Changing Boomer Audience*

The pilot research included seniors (older workers) who are adults 65 years and over (United States Census, 2014), as well as xennials in the age ranges between 39 and 50 years old. However, the senior and xennial populations were only used as a basis for comparison and were not a part of the research focus.

These definitions of information sharing, connectivity and communication came from Pearce's (2009) paper. Information sharing is the sharing of documents through a centralized and online document sharing system that allows checking in and checking out of records and maintains a history of past changes. It is a centralized space that enables users to create team workspaces, coordinate calendars, organize documents, and have access to a variety of communication features. Connectivity is the ability to connect to the internet, usually hi-speed, via an array of devices that are wireless. Communication is the ability to simulate face-to-face conversations or an employee's presence via technology.

## CHAPTER 4

### LITERATURE REVIEW

For older workers, technology has both advantages and drawbacks. Automation processes can minimize the need for demanding physical labor and tiresome traveling as strength wanes with age. Similarly, sensor systems may also eliminate the need for workers to rely on their own visual, aural, and other capacities, which also diminish over time. Of course, any new technological process requires significant instruction and training, which also presents a learning challenge for older workers (Charness, 2006). The technology for employing these systems have changed radically. Keyboard, mouse and spreadsheet program (or database) replaced paper, quill, and inkwell. The process of exchanging information has changed from the use of a physical courier to electronic transmission (Charness, 2006). The tools that older workers took for granted have become useless and demand new skill sets, and online training is replacing the in-person training for those skills. Even though this puts the older worker at a disadvantage, telecommuting is a way for employers to give the flexibility that boomers desire. An advantage is that the older worker avoids traffic and the stresses of commuting during rush hours (Heathfield, 2017). Better training can help these workers.

This research lends itself to the Human Resources, Organizational Behavior, and Psychology disciplines as the goal is to remove the focus from the employer, time, and space. It should concentrate more on the employee's ability to work freely from a results-based and deliverables-based perspective and understand having the tools that enable them to do so.

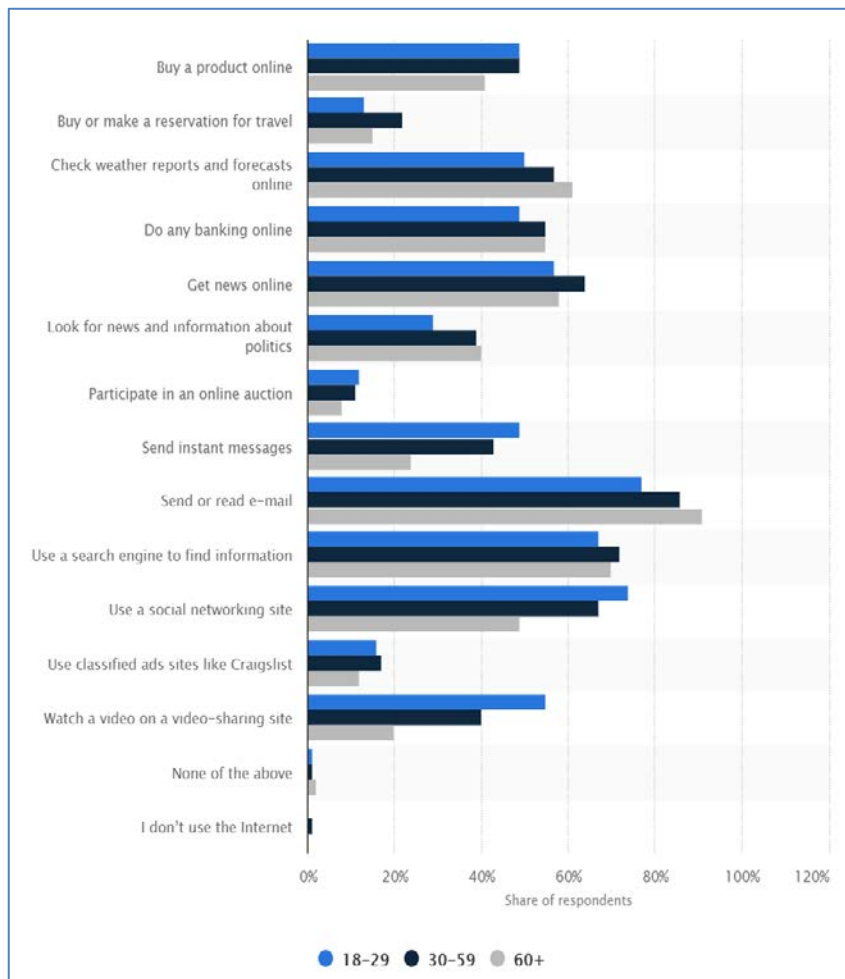
Past studies predicted that the ranks of over 9 million employees with alternate work arrangements would grow by 10 percent or more annually (Knight and Westbrook, 1999). These predictions are proving accurate. In 2015, results from Gallup's annual Work and Education poll showed that, over the past decade, there had been an increase of about 30 percent, with 9 percent of professionals occasionally telecommuting in 1995 and 37 percent doing so in 2015. For occasional telecommuters, the average number of days worked from home each month in 2015 was two days (Jones, 2015). Traditional work models are changing rapidly, giving employees many ways to work (Kelchtermans & De, 2013; Leong & Barak, 2005; Tausig & Fenwick, 2012). Having more ways to work is critical for parents, not only to balance caregiving to children by millennials, but also the often more demanding and unpredictable caregiving of up to four aging parents by the boomer sandwich generation. Using technology to work from home can potentially decrease work-life conflict but can create ensuing problems such as reduced levels of awareness, isolation, and uninhibited behaviors (Hodgkinson & Ford, 2007; Land, Micalos & Sirgy, 2012; Lingard & Francis, 2009; Powell, 2011).

### Internet Usage

Technology, particularly the internet, and millennial expectations, are driving the future of work. Because of the professional implications of the emerging freelance “gig” economy (Smith, 2016), employers are embracing telecommuting and many other flexible options that give employees the opportunity to nurture multi-generational families and career. The truth in these assertions is in the 75% of households with

internet that shows that approximately 80% of millennials and 54% of boomers are using the internet, based on the United States Census (2012).

More recent 2017 data from Statista.com shows that the overall use of technology, particularly internet use, has significantly increased. Daily online activities have become the norm, with Figure 3 showing that over 90% of the 60+ year-old workers are sending and reading emails.



*Figure 3. Most Popular Daily Online Activities of Adult Internet Users in the United States as of February 2017, by Age Group, Source: <https://www.statista.com/topics/2576/us-millennials-internet-usage-and-online-shopping/>*



## Technology Used by Millennials and Boomers

Interdisciplinary literature from IT investigates how the use of technology, like a Smartphone, is helping millennials and the boomer sectors to utilize flexible work arrangements and schedules. Table 1 shows that 68% of the Black population has a Smartphone versus 66% Whites, with Hispanics a close 64%, equalizing the opportunities to get a better job that demands a fast and timely response.

Millennials are described as the always-connected-to-the-internet generation (Choney, 2012). They engage in demanding jobs, and the internet allows them the flexibility to work from anywhere. Millennials use their mobile phones, tablets, and laptops for internet access (Guffey & Lowey, 2015). Also, they still clearly surpass their elders when it comes to using social networking sites, instant messaging, and online classifieds, listening to music, playing online games, reading blogs, and participating in virtual worlds. Table 1 shows that over 80% of the age group of 18 to 49 own a Smartphone.

For older workers, technology has both advantages and drawbacks. In Table 1, almost 60% of baby boomers have a Smartphone, and if you add in the 30% of seniors, that roughly equals the millennials in Smartphone ownership. For these older workers, on the one hand, automated processes can minimize the need for demanding physical labor as strength wanes with age. Similarly, sensor systems may also eliminate the need for workers to rely on their own visual, aural, and other capacities, which also diminish over time.

Table 1.  
*Smartphone Owners More Likely to be Younger,  
 More Affluent and Highly Educated*

<b>Smartphone Owners More Likely to be Younger, More Affluent and Highly Educated</b>	
<i>% of U.S. adults who own a smartphone, e.g. iPhone, Android, Blackberry or Windows phone</i>	
<b>U.S. adults</b>	68
<b>Sex</b>	
Men	70
Women	66
<b>Race/ethnicity</b>	
White	66
Black	68
Hispanic	64
<b>Age group</b>	
18-29	86
30-49	83
50-64	58
65+	30
<b>Household income</b>	
<\$30K	52
\$30K-\$49,999	69
\$50K-\$74,999	76
\$75K+	87
<b>Educational attainment</b>	
Less than high school	41
High school	56
Some college	75
College+	81
<b>Community type</b>	
Urban	72
Suburban	70
Rural	52

Source: Pew Research Center survey conducted June 10-July 12, 2015.  
 Whites and blacks include only non-Hispanics. N=2,001

Any new technological process requires significant instruction and training, which also presents a learning challenge for older workers (Charness, 2006). The adaptation of the older worker to current and future technology is a central concern of the Center for Research and Education on Aging and Technology Enhancements. Successful use of a technological system depends on the extent to which the user's capabilities can meet the system demands. Given normative changes with age in sensory, perceptual, psychomotor, and cognitive capabilities, older workers can be at a disadvantage relative to their younger counterparts (Charness, 2006). Even though this puts the older worker at a disadvantage, telecommuting is a way for employers to give the flexibility that boomers desire. The design of, and better training to use, devices that are better understood by the older worker can help both worker and employer. For example, using a light pen vs. a mouse can minimize age differences in performance.

### Changing Work Week

The work week has been changing around the world due to the rapid improvement in technology like a Smartphone. Surveys conducted in the United Kingdom, in 1999, found that more than three out of four employees regularly worked more than their contracted hours each week (Cooper, 1999). Over 54 percent of managers reported working often or always every evening and over 34 percent always or often working over the weekends (Cooper, 1999). Autonomy frees employees from rigid schedules or tight control systems and is thought to be related to enhanced innovation with IT. Many organizations encourage employee autonomy by offering

options such as flexible work hours, hoteling, and telecommuting. Technology allows fluidity in work hours but also is a disadvantage as workers continue to work long past their scheduled hours (Cooper, 1999).

### Work-Life Conflict and the Unintended Consequences of Technology

Grice et al., (2008) wrote on how the interaction and conflict between work and family impacts each other shows that at the organizational level, work-life conflict (called work-family conflict by Grice) has been associated with increased absenteeism, increased employee turnover, decreased career involvement and decreased job satisfaction. At the individual level, work-life conflict has been associated with depression, substance abuse, hypertension, and overall poor physical health. Flexible work practices are often considered to be an essential component of 'family-friendly policies' and are widely seen as an ideal means to achieving a more balanced work and home life (Grice et al., 2008). Having the technology to work from home can potentially decrease work-life conflict because the worker is present in the house but can also increase work-life strife because the worker is always working.

Business intelligence tools that enable flexible work arrangements can be both an advantage and a disadvantage to the work-from-home, always-connected employee. After reading the Mudambi, Schuff & Zifla article (2016) on technology appropriation, and the Wattal et al. (2008) paper, "Does the Internet Matter," featuring blogs and page views, I decided to look at the unintended consequences of technology on flexible work arrangement and found them to be mostly negative on both millennials and boomers.

## *Technology Addiction*

Social media and user-generated content allow millennials and boomers to increase their technological skills. Video sharing sites, social networks, online games, and blogs all rely heavily on user-generated content and have been growing significantly in the last decade (Zhang & Sarvary, 2015). Posting pictures, reading blogs, and listening to music help boomers to become technologically well-informed. Social media tools also keep them online trying to garner likes. Zhang and Sarvary (2015) studied competition among user-generated content firms and found that segregation of users allows greater competition. Segregation happens while flexible workers are working from outside an office environment, and one of the adverse outcomes of segregation is technology addiction (Yang et al., 2016). Being forced to be on different sites increases technology addiction – flexible workers are already online more frequently than others so are prone to become addicts. Trying to garner likes keeps them online, feeding their addiction. The unsupervised flexible work arrangement work can get into a significant amount of debt on these websites, and employers are paying them for the time spent on consumer sites.

## *Other Negative Outcomes*

Other adverse outcomes of being connected to the internet away from a physically, populated workspace can open employees up to the negative side of technology appropriation (Yang et al., 2016). Types of adverse outcomes are electronic

aggression, gambling, social isolation, and cyberbullying.

Electronic aggression is where bullying happens through email, chat rooms, instant message, a website, text message or social media. Gambling occurs when unsupervised workers spend more time on gambling sites than on work. Social isolation is sitting alone in front of a computer or on their phones. Cyberbullying usually impacts socially isolated people like the ones who work from home by engaging them thru social media before making them a public media spectacle (Virkar, 2014).

When flexible workers spend a lot of time on nonwork-related websites, it results in productivity losses for the employer. The seamless integration of mobile technology into people's online and offline social lives facilitated the frequency of communication and amount of time spent among their social members, which in turn helped to develop a psychological dependence on the mobile technology (Zhang & Sarvary, 2015).

## Privacy

Online privacy concerns are high for the boomer population as they are vulnerable to internet fraud that requires them to give out information. Boomers are gaining more knowledge now than in previous years regarding privacy, but they are more apt to visit sites that have low social privacy controls (Park, Campbell & Kwak, 2012).

## Technology Categories

Most flexible work arrangements literature only focused on the work-life conflicts in the flexible work arrangement construct. However, Pearce's 2009 paper on what a corporation should consider when moving to a flexible work arrangement workplace captured the essence of the predominant literature on flexible work arrangement technology from 2001 through 2017. Pearce's 2009 high-level definitions of technology categories are still used today and is the focus of Essay 2.

### *Info Sharing*

There are two ways you can share information – through sharing content and sharing files.

Content sharing has a centralized space that allows users to create team workspaces, coordinate calendars, organize documents, and have access to a variety of communication features. Documents are shared through a centralized and online document sharing system that allows checking in and checking out records and maintains a history of past changes.

Peer-to-peer file sharing services, some of which use a central server, send documents between the users while decentralized file sharing is becoming accepted.

## *Connectivity*

High bandwidth range is necessary for fast connectivity. The two main types of high-speed broadband connections are cable and DSL/telephone lines. A 2009 technology, called Docsis 3.0, allowed speeds up to 50 megabits per second.

Virtual Private Networks are internal corporate networks (VPN) that allow users to access corporate resources such as network shares, printers, intranet portals, and internal applications. These internal networks are usually secured from the outside world by DMZ (de-militarized) zones, firewalls, and anti-virus and anti-hacking software. The main advantage to secure internal systems is that they allow users to work with sensitive data on their work computers without worry about compromising data.

Similarly, thin client technology facilitates secure connectivity. As such, thin client technology is beneficial to telecommuters because it allows corporations to retain a high level of control over where processing takes place. A thin client is a device that displays applications that are stored on a dedicated server rather than on a computer. Thin client technology is a combination of hardware and software. The thin client acts like a window in the laptop that allows the user to see into the corporate network. When the user is done and logs out, the window closes, and all data and applications remain within the corporate network.



## *Communication*

The introduction of instant messaging in 1997 brought the exchange of near real-time messages through a stand-alone application or embedded software. Unlike chat rooms with many users engaging in multiple and overlapping conversations, IM sessions usually take place between two users in a private, back-and-forth style of communication. AOL was a top IM company in the early 2000's.

For audio conferencing, Voice over Internet Protocol (VoIP), or IP Telephony, is a protocol optimized for the transmission of voice through the Internet or other packet switched networks. When clients or internal personnel call an employee's extension, it will ring at his or her computer, regardless of location, providing a seamless form of communication for all parties. Skype and Vonage were leading the marketplace.

Online or video conferencing can be as simple and inexpensive as providing telecommuting employees with low-cost web cameras and headsets and connecting them using cheap software or modern instant messaging programs.

## *Diffusion of Innovation*

Diffusion of Innovation (DOI) is a theory developed by E.M. Rogers in 1962, and updated in 1983, and is one of the oldest social science theories. It originated in communication to explain how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system. The result of this

diffusion is that people, as part of a social system, adopt a new idea, behavior, or product. Adoption of a new idea, behavior, or product (i.e., "innovation") does not happen simultaneously in a social system; instead, it is a process whereby some people are more apt to adopt the innovation than others. Researchers have found that people who embrace an innovation early have different characteristics than people who later adopt an innovation. When promoting an innovation to a target population, it is essential to understand the characteristics of the target population that will help or hinder adoption of the innovation (LaMorte, 2016). This technology concept fits perfectly in the flexible work arrangement paradigm.

### Best Practices

A practitioner paper for implementing best practices was done by NorthCoast 99 (2013). They based recommendations on providing a practical, flexible work program to organizations. These tips were a result of their survey but didn't have depth in technology requirements to make this a superior program. Their recommendations for implementing flexible work programs were to:

1. Create a workplace culture that is accommodating and supportive of employees' lives outside of work.
2. Select flexible work options that fit your organization's operations, jobs, and culture.
3. Create a flexible work policy.
4. Pilot or test a flexible work program.

5. Set eligibility requirements (such as job role, performance standing, etc.) for flexible work options.
6. Devise a process by which employees can request a flexible work option and the criteria by which their request will be considered.
7. Encourage dialogue about flexibility needs and work/life concerns between employees and supervisors.
8. Communicate performance expectations and that employees must continue to meet standards and deliver results while using flexible options.
9. Enforce and manage performance.
10. Train supervisors and managers on flexible work and work/life balance topics.
11. Give supervisors and managers discretion in negotiating and setting reasonable, flexible work schedules and accommodations.
12. Evaluate your flexible work program in terms of who is using it, how it is being used, and the challenges participants and managers are experiencing.

### Findings/Gaps

Millennials have been studied separately for technology use and flexible work arrangements for some time. Not much research has been done on the boomer population using technology in flexible work arrangements. This research offers an opportunity to increase the current body of work.

Findings have implications for both employer and employee. There is work to be done towards getting companies to embrace flexible work arrangements fully but

giving employees access to technology makes it easier for them to do their jobs productively. Millennials might be the ones who will make the difference as they are coming of age in a virtual world with fewer borders around where and when they work.

Findings have implications for both employer and employee. There is work to be done towards getting companies to fully embrace flexible work arrangements but giving employees access to technology makes it easier for them to do their jobs in a productive manner. Millennials might be the ones who will make the difference as they are coming of age in a virtual world with less borders around where and when they work.

First, internet usage has escalated with each passing year. Per Figure 2, Statista.com's study showed that the most popular daily online activity for most adults, whether millennial or boomer, was to send or read email. It did not cover whether those emails were business-related or personal ones. This study will update the research to understand the demographics of Smartphone users and to identify the tools that are prevalent in a flexible work arrangement.

Secondly, regarding unintended consequences of technology, like internet technology addiction and isolation, neither Zhang's (2015) nor Yang et al.'s (2016) studies were geared towards flexible workers in a remote location or workers who are in the social media field who are mandated to be online. They also did not discuss what constituted addiction – how many times did someone have to be online to be considered an addict. This study will only touch on unintended consequence, like isolation, as an outcome of flexible work arrangements.

We will investigate, in order to refute or collaborate, Grice et al.'s (2008) discussion of work-life conflict to see if work-life conflict is one of the reasons for requesting a flexible work arrangement, if having the technology to work outside the office still associates FWA with depression due to the isolationist nature of the job, and if workers with high role conflict are taking jobs because it offers a flex schedule. Additionally, millennials and boomers are always connected, so we will answer the question if having the ability to connect is creating work-life conflict in relationships. The research also did not cover whether telecommuting was more attractive because upgraded electronics and technology enabled more people to choose that option and we hope to answer that.

Retention of workers of all generations will be vital to the success of organizations in the future. Human Resource Developers (HRD) need to pay increasing attention to helping organizations manage this shift (Eversole, 2012). Because HRD touches every part of the business, small or large, human resources can use their position to make an impact on the company. We will deliver tips or guidelines on how technology can help organizations to best to retain their workforce.

Drastic technology updates occurred since most of the research happened. I agree that Pearce's 2009 three categories of connectivity, info-sharing, and communication are still significant, but the technology itself within those categories have changed, as well as a more directive approach that incorporates the millennial and baby boomer views is needed.

The gap in the NorthCoast 99 paper didn't address the types of technology that should be used to make this a useful program. For example, in their Recommendation 9, they recommended enforcing and managing performance but gave no further advice as to how to achieve performance, or what tools to use in a virtual environment to adequately monitor performance.

Additionally, mainly CEO's and high-level executives were interviewed to participate in the NorthCoast survey. It did not include managerial level participants, and they are a significant number of the millennial and boomer populations.

## CHAPTER 5

### RESEARCH QUESTIONS

Categories such as technology and emerging populations cut across all industries and disciplines. The key areas of contribution for my research were to 1) identify how technology can aid in the cross-functional and cross-generational aspects of flexible work arrangements as it pertains to both the positive and negative sides, and 2) give some guidelines for employers and employees as to how to set up a flexible work arrangement.

Because of the concerning themes identified in the literature review and gaps section, the original two research questions expanded to four questions:

*Research Question 1. How does technology promote/support flexible work arrangement for millennials and boomers?* Millennials – Per American Staffing Association (2016), by 2025, millennials will make up 75% of the workforce—that is a lot of workers. On the job, they get much of their satisfaction from being involved in work with a purpose. Outside of work, they attune to socially responsible brands, per Figure 4. The \$20-30,000 cost to replace a millennial makes sense to find the right way to attract and retain them. They are proponents of Corporate Social Responsibility (CSR) which includes working from home to reduce traffic and pollution (American Staffing Association, 2016).



*Figure 4. Millennials and Purpose*

Source: American Staffing Association, June 16, 2016.

Baby boomers are working until they are older and will have longer careers. In 2016, I attended an online seminar on “The Changing Needs of Families,” given by the ThirdPath Institute. It discussed how older adults in their 20+ career years are more productive as they have more in-depth knowledge of the job and can produce quality work faster than millennials and they help to train younger workers. That is the age where the sandwich generation begins with both child and elder care, and adults become excellent multi-taskers.

Per ThirdPath, older workers will need more flexible work arrangements for maximum productivity as their physical conditions will most likely allow for part-time or work-from-home even in peak moments.



*Research Question 2. Do millennials and boomers use technology differently?*

Anecdotally, from running a company that provides both the hardware and software for all employees, the responses will help to ensure the purchase and delivery of the right technology products. Do millennials and baby boomers utilize Smartphones, computers, WebEx, and wi-fi to give them the ability to work from anywhere? What file sharing tools do they use and how do they use it differently?

*Research Question 3. What are the benefits of flexible work arrangement?* There must be benefits since both emerging populations are increasing the amount of time working outside the office. What is the appeal of working from home for both emerging population groups? What are the key variables on which they will not compromise? What appeals to millennials and boomers more than other populations?

*Research Question 4. What are some problems of technology use among millennials and boomers?* There are disadvantages of using technology. Working outside the office, are millennials and boomers prone to technology appropriation more than others? Are there times when productivity decreases?

In today's workplace, these topics should seamlessly intertwine to tell a story of why flexible work arrangements are becoming more in demand by employees and are still a puzzle for the employer as to what tools to give a worker for productivity.

## CHAPTER 6

### THEORETICAL FRAMEWORK

Numerous theories are applicable in understanding the significance of flexible work arrangement to employers as well as their employees. The *signalling theory* postulates that prospective job applicants interpret observable information conveyed by an organization as signs or signals of less observable characteristics (Spence, 1973). The attractiveness of FWAs to employees is also explained using the *conservation of resources theory* in conjunction with the resources and demands model, which suggest that people are motivated to conserve resources (Hobfoll, 1989; 2001) since it is these resources that help them to meet environmental demands (Voydanoff, 2005).

It would be grossly erroneous to overlook the relevance of the *work-family conflict model* when seeking to understand the usefulness of FWAs to employees. According to Allen et al. (2013), the work-conflict model is a prevalent theory that directly addresses the conflict that exists between family life and work life. The fundamental tenet of this model is that work interferes with family obligations, and this reinforces the importance of flexible arrangements that help to reduce the conflict and enable workers to fulfill their family obligations.

While acknowledging that all the theoretical models identified and described above are relevant in understanding the value of FWAs to employees, the boundary theory (Kossek, 2015) and the border theory (Voydanoff, 2014) are the primary theoretical frameworks for this research. The diffusion of innovation theory (Rogers, 1983) is a secondary, underpinning theory.

In brief, the boundary theory postulates that since flexible work schedules increase the malleability of the sequential boundaries that exist between family roles and work roles, they will make it easier for employees to navigate across both spheres (Smith, 2013). In other words, the theory suggests that boundaries exist between a person's private life and his/her work life, and that flexible schedules should be adopted to enable people to modify these boundaries when it becomes necessary (Buckley, Halbesleben & Wheeler, 2016).

Closely related to the boundary theory is the border model, also known as the work-family border model. According to Voydanoff (2014), this model posits that the relationship between family life and work life is a continuum with segmentation and integration at the extreme ends. From a segmentation viewpoint, the relationship between the two domains is mutually exclusive, meaning that they do not overlap. In contrast, the integration perspective treats both areas as indistinguishable, particularly regarding the thoughts, people, and tasks involved. Based on this continuum, the theory argues that the degree to which work-life integrates into family life depends on the level of flexibility in the two boundaries (Voydanoff, 2014).

The technological theory, the diffusion of innovation theory, supports flexible work arrangements as, over time, the business culture slowly adopted flexible work schedules. There were some innovators and early adopters to flexible schedules, but there are some laggards who have not yet adopted, and might not ever adopt, a flexible plan. Flexible work arrangement employers also follow the five established adopter categories. When promoting an innovation, there are different strategies used to appeal to the different adopter categories (LaMorte, 2016): innovators, early adopters, early majority,

late majority, and laggards. Innovators are people who want to be the first to try the innovation. Early Adopters are people who represent opinion leaders. They enjoy leadership roles and embrace change opportunities. Early Majority people are rarely leaders, but they do adopt new ideas before the average person. Late Majority people are skeptical of change and will only adopt an innovation after the majority has tried it. Finally, Laggards are traditional and very conservative. They are very suspicious of change and are the hardest group to bring on board.

Most flexible work arrangement papers have lent themselves to multiple frameworks and methodologies. The positivist/functionalist standpoint was prevalent in the economics and psychology papers and took a very deductive, quantitative-first approach to testing qualitative information, while the social/environmental documents were more interpretive. Blake-Beard's 2010 essay, "Social sustainability, flexible work arrangements, and diverse women" reflected a sociological, interpretivism view. Ultimately, the results posit that flexible work arrangements are tools for promoting and increasing economic sustainability, productivity, and profitability – the triple bottom lines.

### Qualitative Research Overview

This research was suited for a qualitative study because the goal was to understand how people feel about flexible work arrangements and their ideas on how to make it better. The study was designed using the Glaser and Strauss (1983) method of interviewing, coding, and analysis. Qualitative research can be both inductive and

deductive, and this research lends itself to an inductive approach as the outcome created new processes or updated methods. Both qualitative and quantitative analyses were used to extract concepts from participants.

This study began with two research questions in a pilot study: (1) “How is technology enabling flexible work arrangements for the emerging populations of millennials and boomers?” and (2) “What are the key technology drivers that affect the success of flexible work arrangement from the employee's perspective?” The pilot study's interpreted results guided the final interviews and survey. As an outcome, the research questions for Essays 1 and 2 increased to four questions for the analyses. The target participants also changed from the generations of millennials, baby boomers, seniors and a control group of xennials to only focus on millennials and baby boomers. Also, the instrument for Essay 2 would be a survey, and the analysis would be quantitative.

NVivo qualitative analytic software was used to capture themes, called nodes. Conclusions and recommendations were then developed for each essay.

## CHAPTER 7

### RESEARCH SIGNIFICANCE

Flexible work designs are one of the most effective techniques of motivating workers (Griffin & Moorhead, 2012; Griffin, Phillips & Gully, 2016). Every employee needs some level of elasticity in the work that they do (DeNisi & Griffin, 2014; Fleet, Fleet & Seperich, 2013; Griffin, 2012) and flexible work arrangements have proved invaluable for specific categories of workers like women. Working women have been identified as significant beneficiaries of flexible work arrangements because, in most cases, they are compelled to balance between their career life and family responsibilities (Lowe & Graves, 2016; Workman-Stark, 2017). Unless employers provide flexibility in their work structures, female employees find themselves in an awkward position in which they must deliver according to company expectations while at the same time fulfilling their responsibilities as wives and mothers (The World Bank, 2011). Technology allows them to do both.

Technological developments have given rise to innovative and effective ways of performing tasks (Schmithusen et al., 2015). In the modern business organization, concepts such as virtual teams and telecommuting have become popular. With such developments, flexible work arrangements are viewed as being beneficial to companies in boosting the efficiency of operations. Other than working women, flexible work arrangements are being embraced by millennials, the boomer population, and married men whose spouses are jobholders, which makes it necessary for men to assist in domestic responsibilities. If all employees can work from home, it reduces

consumption of employee commuting time and fuel costs, stress, and employee burnout due to overload (Heathfield, 2017).

All employers should capitalize on the benefits that technology brings to a flexible workforce. For C2G Partners, it allowed us to gain access to talent that we would never otherwise have gotten, allowed us to expand our company within the United States as well as internationally, and retain our expert employees because they can choose a project based to their availability. According to the recent Flexjobs 2018 article, some large corporations and midsize companies agree on the benefits to their companies. Of the eight reasons given, the following are reflections on the top three:

On reason number one (more loyal and engaged employees), Dell's Jennifer Newbill, Director Global Employment Brand said,

There are several reasons for providing connected and flexible work options to our employees. From an attraction standpoint, we find that candidates are specifically seeking flexibility as a part of their search, while it also helps widen the talent pools for our recruiters and hiring leaders. We also find that our employees who indicate that they have flexibility in their current roles have a higher Employee Net Promoter Score (eNPS). In summary, what is good for employees can also be good for business.

On reason number two (expanding outside the brick and mortar), Convergys' Jillene Jensen, Senior Director Talent Acquisition said,

Offering remote work options is so important to Convergys. We strive to extend fulfilling employment opportunities to communities outside of our brick-and-mortar footprint. We realize that extraordinary talent exists in all corners of our country, so it is important that we extend our reach and open doors in communities across the country.

On reason number three (finding specialized talent beyond geographic boundaries), Sykes' Jim Farnsworth, Executive Vice President and General Manager said,

We make geography our ally and can go anywhere to find specialized talent in tech, finance and healthcare, or whatever expertise is required, according to the needs of any particular client.

Technology allows a workforce to be industry-agnostic, always ready to serve the client, and phenomenally productive. The above companies have all infused their businesses with technology that impacts their employees' lives. Dell is a technology company whose employees are now even more engaged. Convergys was a traditional customer service company that has moved a large part of their business online. Williams-Sonoma can hire around the world. Older companies like Kelly Services, created in 1946, now help people in different countries to supplement their income.

Both small and large companies alike understand the cost to set up an employee with a virtual arrangement outside of the office. In 2018, technology connectivity can be relatively inexpensive. There are different levels of flexible work arrangements, and they don't all need the same bells and whistles to make working from home more comfortable. Additionally, there are companies such as Regus that provide fully connected furnished office spaces, individual desks, and meeting places to enable employees to work anywhere for an hour, day, week, month, or years, ([www.regus.com](http://www.regus.com), 2017). They provide networking events with the social means to keep workers connected if needed.

Many home businesses start with just a computer. With the advent of software-as-a-service, connectivity, information sharing, and communication are almost a moot point. For companies and consultants that already have a flexible work arrangement practice, they will be able to utilize the best methods to enhance their current programs.



## CHAPTER 8

### RESEARCH DESIGN AND DATA COLLECTION

The gaps and questions in flexible work arrangements lend themselves to multi-year, multiple waves of research utilizing both qualitative and quantitative analyses. This research was done in several phases. Essay 1’s qualitative study consisted of 1) observations, 2) a sample test composed of six unstructured interviews with open-ended questions, 3) coding, recoding and reviewing output, 4) refining of the research questions 5) phone calls and in-person random questions to all age groups, 6) and interviewed a broader population in different industries, job levels and age groups.

Both research studies utilized the same lists (Table 2), and there was a small overlap of participants in both the qualitative and quantitative studies.

Table 2.

Data	Mixed Methods	Description
C2G Partners	Observations	Company employees
Conferences	Observations	<ul style="list-style-type: none"> <li>• 9 Lives for Women; 5/12/16; Stamford, CT</li> <li>• WorkHuman Conference; 5/30-6/1/17; Phoenix, AZ</li> <li>• White House Summit on Women; 6/14-15/16; Washington, DC</li> <li>• Work &amp; Family Research Network; 6/23-24/16; Washington, DC</li> <li>• EMS Doctoral Consortium; 9/16/17; Tampa, FL</li> <li>• Women Presidents’ Organization National Conference; 10/11-13/17; Austin, TX</li> </ul>
Target Audience	<ul style="list-style-type: none"> <li>• Essay 1: Semi-structured interviews with open-ended questions</li> <li>• Essay 2: Survey questionnaire with open-ended questions</li> </ul>	<ul style="list-style-type: none"> <li>• C2G Partners staff (30 employees)</li> <li>• Women Presidents’ Organization-NYC Chapter (75 members)</li> <li>• National Association of Women Business Owners-NYC (75 members)</li> <li>• Inc. Business Council (10 members)</li> </ul>

*Data Sources*

Essay 2 was a quantitative study where its survey questionnaire piggy-backed on the final interview answers from Essay 1. This survey included both multiple choices and open-ended questions specific to determining the research questions.

*Statistical Analysis.* The lists identified in Essay 1 received surveys via SurveyMonkey. Slow response time (44 responders after three weeks) warranted utilizing a platform that could guarantee users across the globe. The bulk of the surveys were distributed and segmented via Qualtrics to secure international participation. In addition to US participants, the survey requirement included a guarantee of at least fourteen participants from Canada, Sweden, Norway, and the UK. Qualtrics charged an average of \$4.75 per responder.

No identifying information was kept on the survey participants. Both SurveyMonkey and Qualtrics provided identifying numbers, and the survey choices were used as prompts and examples for the interviews.

NVivo software was used to code based on commonalities in answers to questions. Coding was specific to the survey to make them more accessible for measurement.

CHAPTER 8  
PILOT STUDY

Pilot Study Observations and Interviews

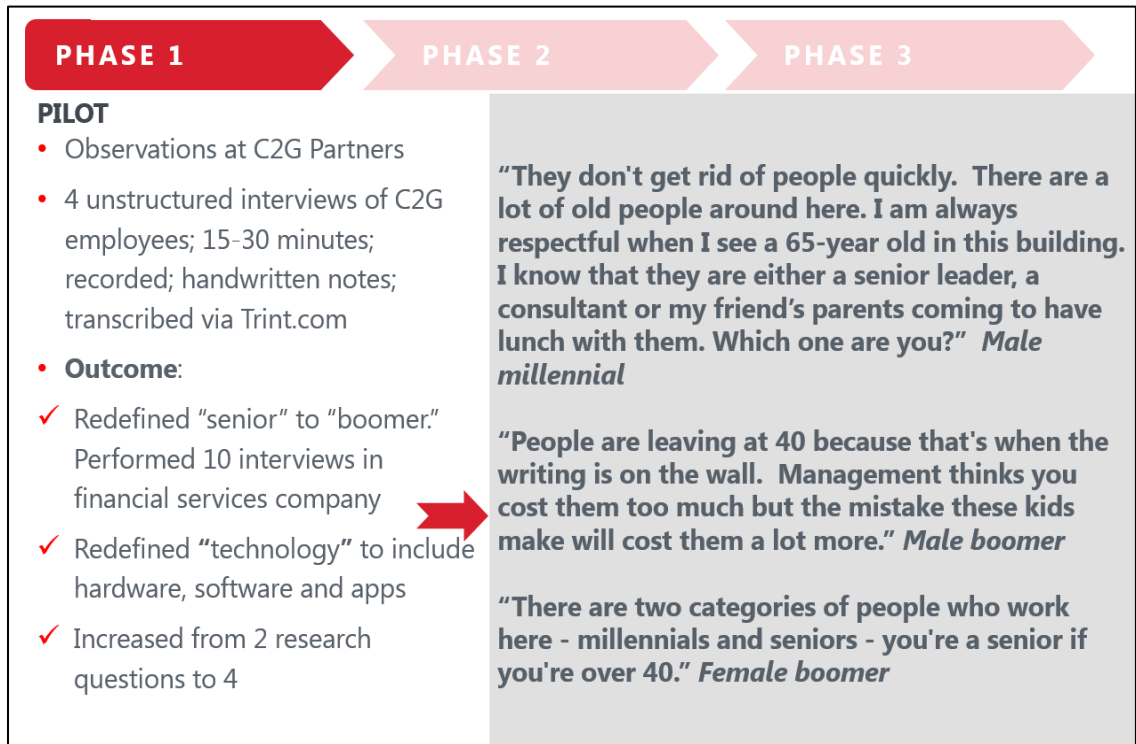


Figure 5. Pilot Study

Figure 5 is an overview of the first phase of the pilot. Observations took place at C2G Partners, a Newark, NJ marketing and analytics mid-size company of approximately 120 employees that utilizes a flexible work arrangement model. These observations took place on a quarterly basis after quarterly meetings and were a field study exercise for a Temple University qualitative research class.

For the interviews, a cover letter (Appendix A), in the form of an email, and a consent form (Appendix B), were sent to potential participants and for the ones who accepted, interviews progressed after the signed consent form was received. At the beginning of every interview, an oral explanation was given of what constituted a flexible work arrangement, as well as defined the age groups of millennials, boomers, seniors and a control group.

An interview guide was developed to be used in tandem with the opened-ended questions (Appendix D). Because of the unstructured nature of the interview, the questions were not always asked in the same order. Further, if the answer to questions were already given as the part of a previous question, then the question was not repeated, and the response was attributed to the correct question. Notes were taken from the transcriptions and a spreadsheet with commonalities was created.

C2G employees were exceptionally candid and honest regarding the advantages and disadvantages of a flexible work schedule. One commonality was each participant was adamant that the population initially identified as the "senior" population was not aligned with how the corporate world views employees who are at the end of their careers – they recognized people 40+ years old as the target audience.

To determine if that age group assessment was correct for the final study, ten random corporate workers, at different levels and age groups in a financial services company, were asked three questions. They had the option of making comments.

- (1) Are you a millennial, baby boomer or senior?
- (2) At what age do you see people making a change in, or exiting, their careers?
- (3) In which category would you place them? Millennials, Baby Boomers or Seniors?

After they responded, they received the description of millennial, boomer, and senior, but were not allowed to change their grouping. Table 3, Corporate Worker Random Survey, in Appendix D, shows the results of the survey as well as identifies the groups, what the responders considered the age they saw employees leaving the corporate world, the category they believed that person falls into, and their comments.

### *Pilot Study Findings*

The consensus was that participants saw employees leaving that corporation between the ages of 40-50 years old. The mini interviews verified employees themselves felt people younger than 65 would need flexible work arrangements. The segmentation continued to focus on millennials but changed to focus on baby boomers instead of seniors. The analysis only found one mention of the word “technology.” The word technology was redefined to include all hardware, software, and apps. The new definition will be tested before finalization of the research questions.

After the first round of interviews, two research questions were added. The outcomes from the pilot informed the decision to a) supplement the number of participants in the pilot so that the coding could be tested to ensure accuracy of the data and to clean the data, b) test if the new definition of technology would garner additional information, and c) to test the updated research questions.

## Pilot Study Supplement

Based on the pilot decision to supplement the interviews, a second set of 60-minute semi-structured telephone interviews were done in April 2017 with four employees of C2G Partners. See Appendix E for the updated interview questionnaire. One interviewee from the original group of participants was included in this round to clarify their responses. Background and demographic information were requested from the interviewees and questions specific to business owners, boomers and millennials were added. Questions were geared towards how technology enabled their flexible schedules.

One recording was unclear for transcription due to background noises and was excluded. The repeat interviewer was not double counted. Therefore, we netted two additional interviews, plus the four participants from the original pilot, for a total of 6 interviewees. The same anonymization process was followed.

Once the phrases in coding (keywords) were updated, the themes (called nodes in NVivo) regarding technology were prevalent. NVivo software was used to code based on commonalities in answers to the questions. The data from interview transcripts were analyzed thoroughly, line-by-line, using open coding followed by axial coding in NVivo 11 Pro. Through open coding, the data were dissected into many ideas expressed in the interview responses.

Keywords developed during open coding were cleaned and those irrelevant to the research questions were discarded. The remaining validated codes were reorganized into categories comprising codes that express closely related concepts and those categories were designated as axial codes or themes. See Figure 6 for the grouping of themes.

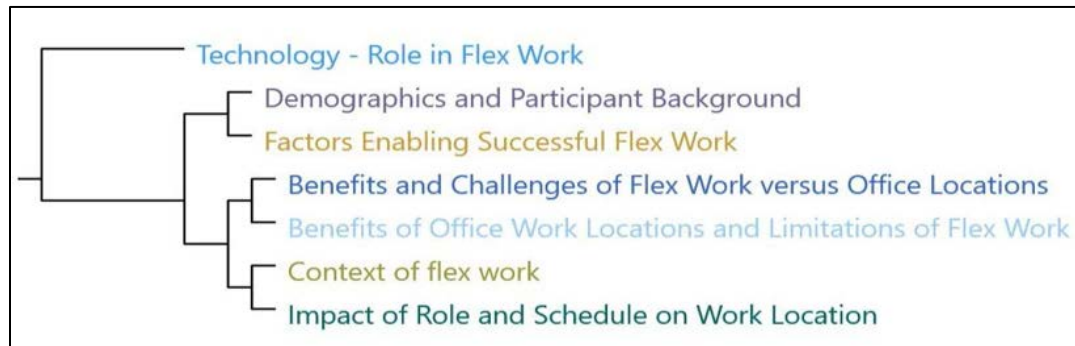


Figure 6. Themes Clustered by Coding Similarity

*Pilot Study Supplement Findings*

Research questions were updated (Figure 7) to understand how millennials and baby boomers are using the technology differently, and to gain additional knowledge on 2018 advantages and disadvantages in a flexible environment.

<u>Updated Research Questions</u>	
	<b>Emerging Populations</b> Millennials. Boomers.
Research Question 1.	<b>How does technology promote/support flexible work arrangement for millennials and boomers?</b>
Research Question 2.	<b>Do millennials and boomers use technology differently?</b>
Research Question 3.	<b>What are the benefits (advantages) of a flexible work arrangement?</b>
Research Question 4.	<b>What are some problems (disadvantages) of technology use among millennials and boomers?</b>

Figure 7. Updated Research Questions

Figure 8 summarizes the qualitative analysis of the pilot study’s supplemented process. Keywords were generated and coalesced into themes that mimicked the research questions, to show, directionally, if results aligned with the questionnaire.

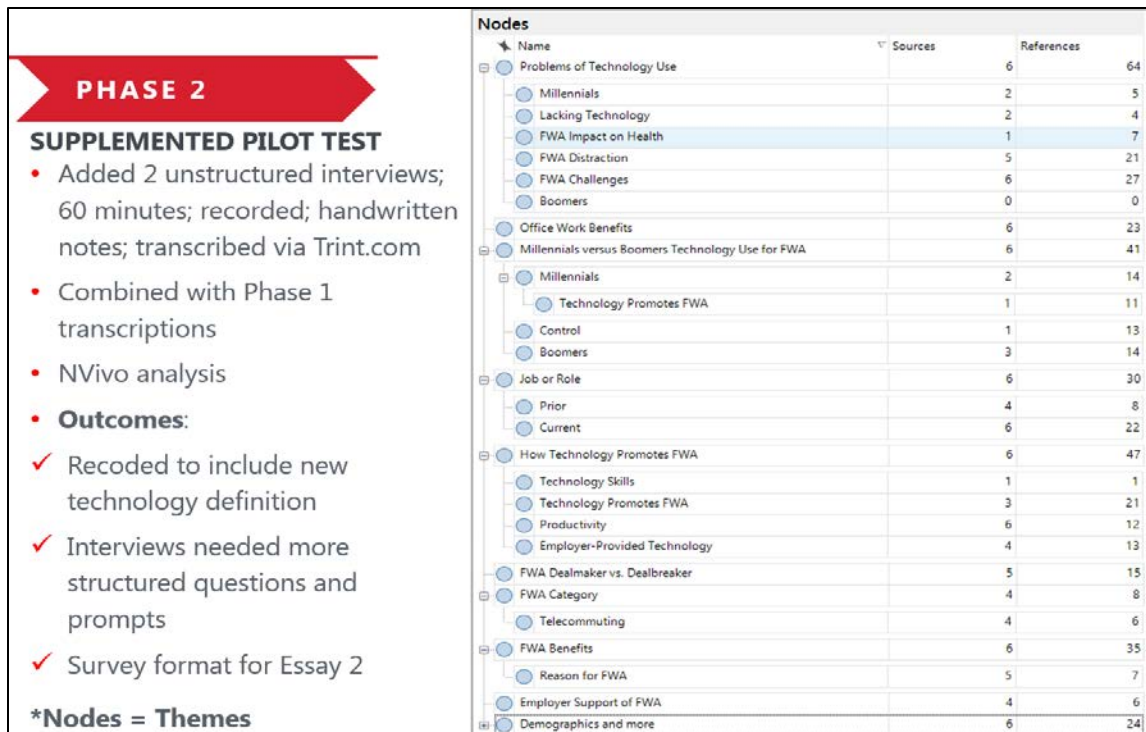


Figure 8. Pilot Study Supplement

*Research Question 1. How does technology promote/support flexible work arrangement for millennials and boomers?* Technology allowed both boomers and millennials to work from home, whether part or full time. Because of this, self-starting students were able to get non-traditional jobs. One boomer was able to continue in a leadership position, and another boomer who continued to work non-stop throughout medical treatment said,

“At the time when I started, it worked for me because I was going through a medical situation and it afforded me the opportunity to work



while I was going through all the stuff because my medical situation entailed treatments that lasted for a whole year. And it was a great opportunity to be able to work and get some form of income while I was going through that.”

Participants had varied reasons for needing flexible work arrangement including full-time study, childcare, health conditions, as a stop-gap while deciding next steps and enabling them to be self-employed part-time.

*Research Question 2. Do millennials and boomers use technology differently?* In general, millennials were more likely to mention the word ‘laptop’ first in their discussion about technology and flexible work arrangement (Table 4), while boomers were more likely to mention the word ‘phone’ first in their discussion about technology and flexible work arrangement (Table 5).

Table 4.

*Word Query of ‘laptop’ in theme*

*‘How technology promotes/supports flexible work arrangement’*

<b>Type</b>	<b>Name</b>	<b>References</b>	<b>Coverage</b>
Document	Female Boomer 1	12	0.19%
Document	Female Millennial	23	0.36%

Table 5.

*Word Query of ‘phone’ in theme*

*‘How technology promotes/supports flexible work arrangement’*

<b>Type</b>	<b>Name</b>	<b>References</b>	<b>Coverage</b>
Document	Female Boomer 1	9	0.12%
Document	Female Boomer 2	11	0.32%
Document	Female Millennial	8	0.10%
Document	Male Millennial	9	0.16%

*Research Question 3. What are the benefits (advantages) of a flexible work arrangement?*

There were numerous benefits cited by participants. Boomers highlighted the ability to work from anywhere. Millennials cited the ability to combine work and school as a major benefit of flexible work arrangement. Other benefits mentioned included the flexibility to pursue additional sources of income since no time is wasted commuting to work, the relaxed environment of the home decreases work stress, and increased productivity with no distractions from co-workers in an office setting. At least one participant in each age category would consider lack of flexible work arrangement a dealbreaker when seeking employment.

*Research Question 4. What are some problems (disadvantages) of technology use among millennials and boomers?* Neither millennials nor boomers identified significant issues with technology that they must use in their flexible work arrangement. Boomers highlighted one challenge of flexible work arrangement is that they work longer more extended and may be exercising less. However, millennials felt that there tends to be a lag in response to inquiries when on a flexible work arrangement compared to working in the office where you could walk over to another person's desk. Millennials also identified the issue of expression through emails – sometimes you read emails with a tone, good or bad.

## Summary

The supplemental pilot was a success. The new research questions were being answered, participants recognized the new definition of technology and, even from this small sample, cited many devices and techniques that made flexible work arrangement a reality. There were directional data on how millennials and boomers are using similar indispensable technology to be successful in working from home but in a different way - from connectivity, information and file sharing platforms, to how they communicate.

This data allowed the progression to the full rollout and launch of the final interviewing process to additional participants in Essay 1.

# CHAPTER 9

## ESSAY 1

### Final Interview Analysis

Based on the responses of the first two phases of interviews, the final interviews were executed, following the same process that was used in Phase 2, with the four new research questions, redefined technology term, and focused on the millennial and baby boomer generations. Figure 9 gives a high-level summary of the process and the final themes. Categories and themes are not mutually exclusive.

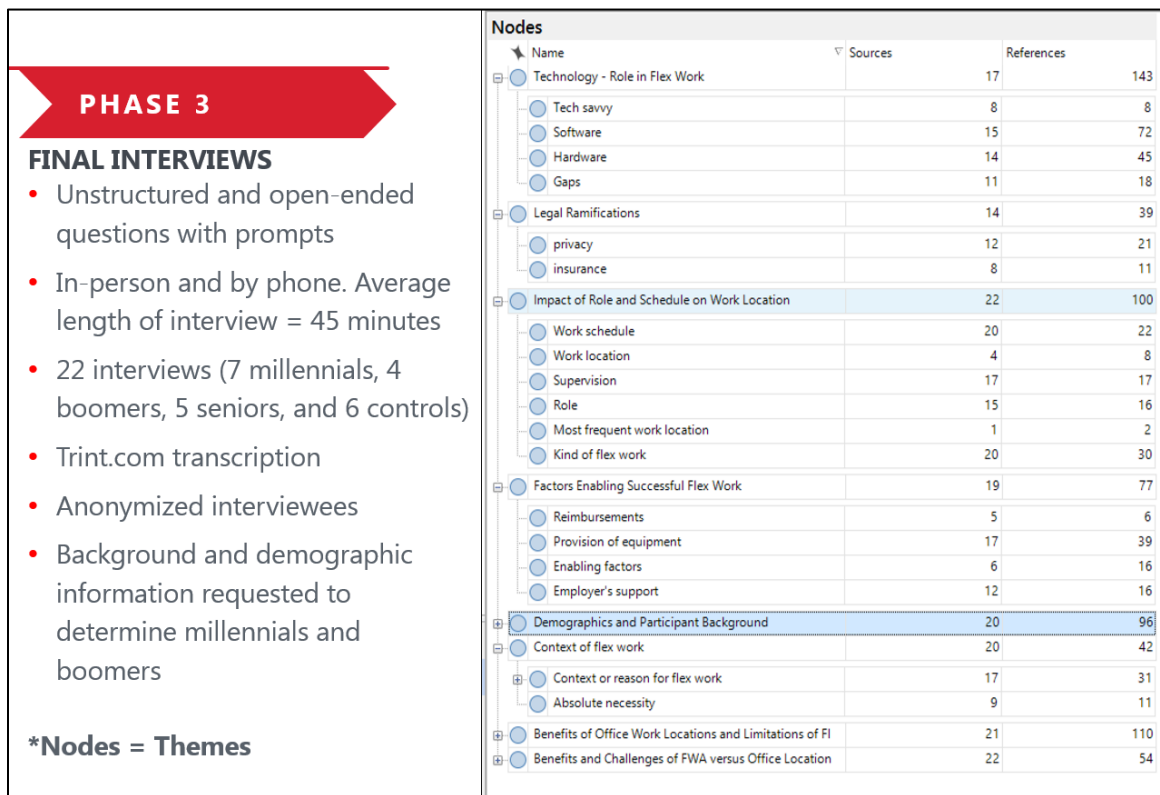


Figure 9. Final Interviews Themes

The interviewing of 22 men and women in several organizations and industries was rolled out using the updated questionnaire guide of open-ended questions (Appendix E). Sixteen new participants were added to the six interviews from Phase 2.

Most of the boomers had roles that involved supervision of other people while most millennials did not have supervisory roles. Most participants reported having flexible hours but still had to occasionally visit the office location (Figure 9).

Additional clusters were created as the questionnaire was updated to include questions such as the legal ramifications of a flexible work arrangement (Figure 10) and just by the number of broader responses from a larger population.

The qualitative analysis is segmented by research questions with the corresponding theme that best answered that questions.

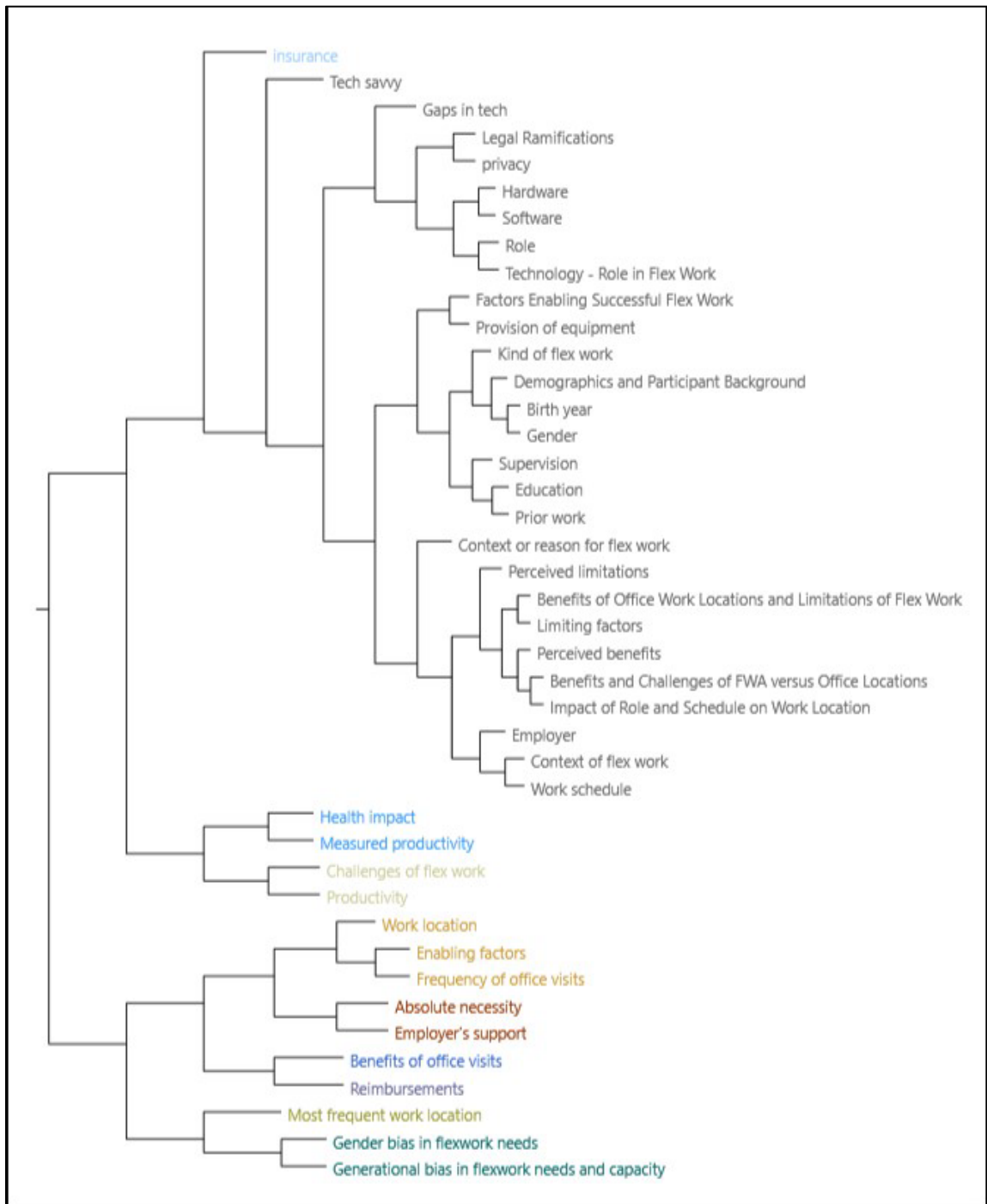
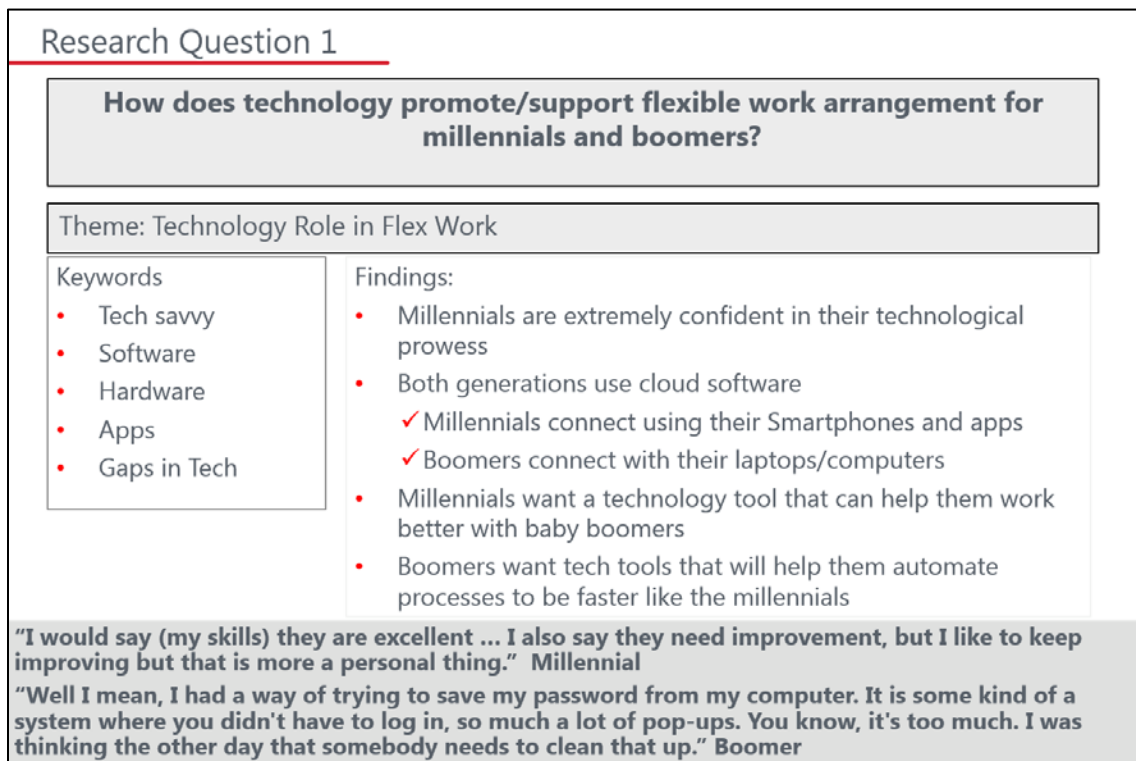


Figure 10. Themes Clustered by Coding Similarity

## Summary Conclusions and Findings

In summary, the theme that best answered Research Question 1 was “Technology Role in Flex Work” (Figure 11). Even the millennial who felt she could improve in some areas of technology usage was more confident in her technological strength than the most tech-savvy of baby boomers. Both generations are very cognizant of the other’s skill or deficiency. Millennials don’t mind creating the tools and the boomers are waiting for “someone” to create it.



*Figure 11. Research Question 1*

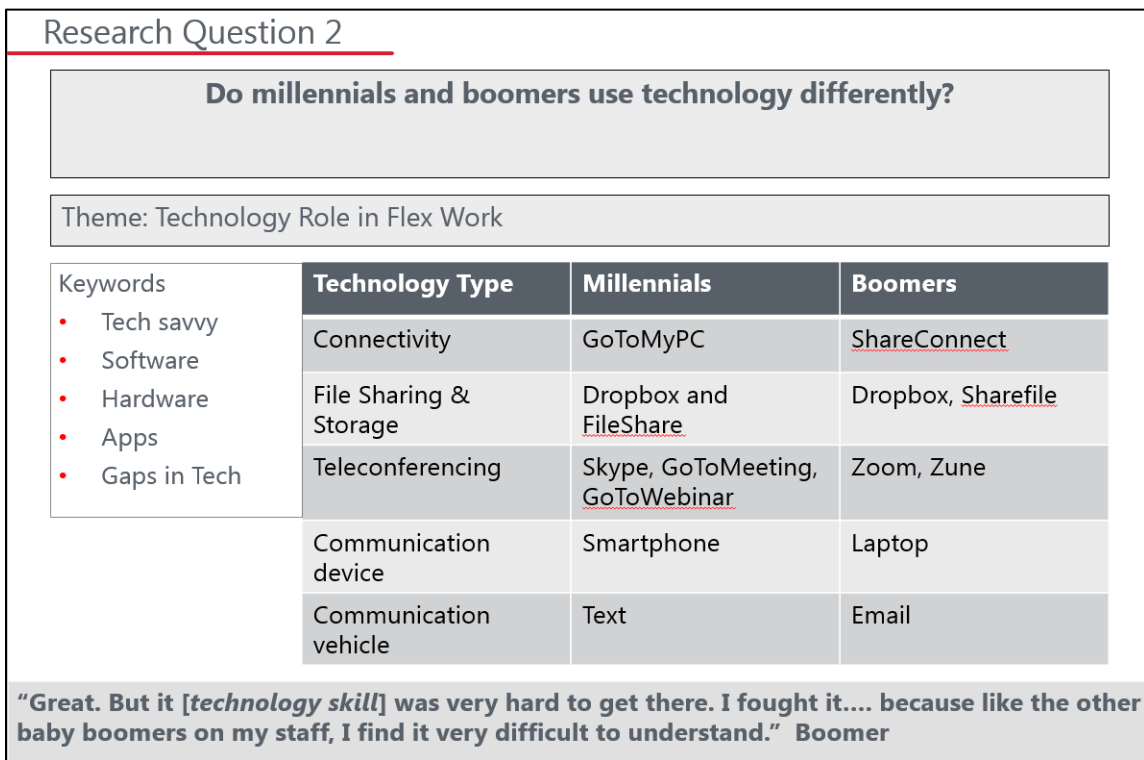
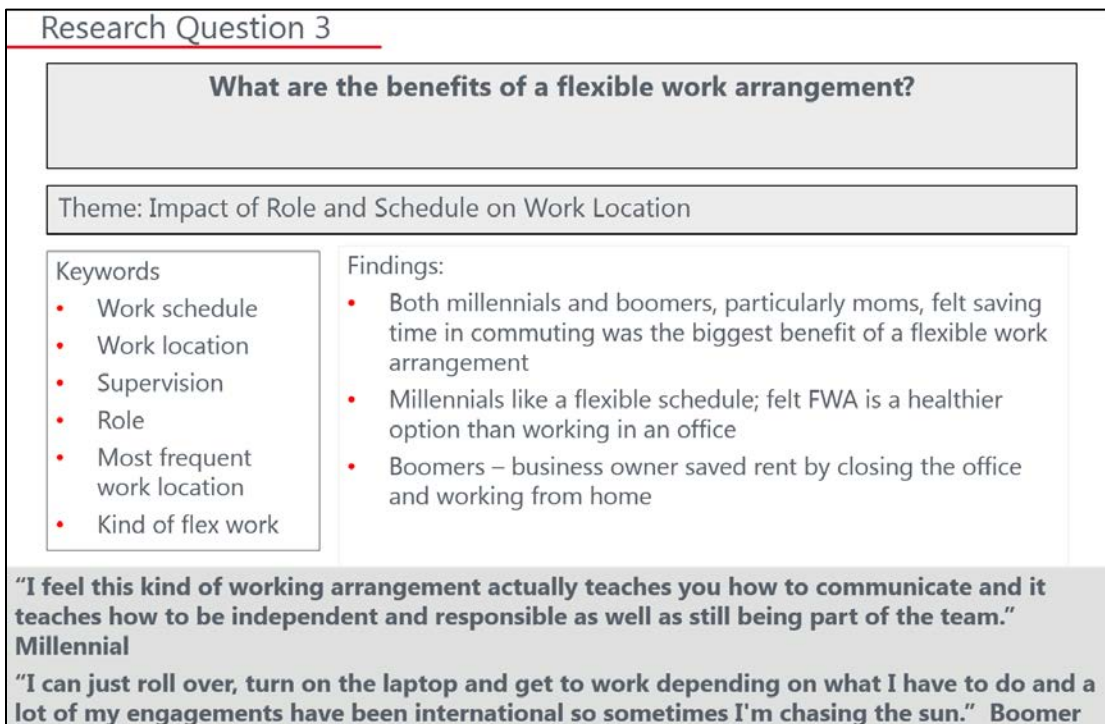


Figure 12. Research Question 2

For Research Question 2 (Figure 12), participants were asked to mention what technological tools they used in their flexible work arrangements. The same theme was used, with the key differentiator between Research Questions 1 and 2 being the level of competence in the use of technology possibly influences, in part emphasizing how millennials and boomers use technology.

Both generations use the same technology types; however, the hardware, software or app that is used is very different. Millennials tend to look for technology built around speed and connect easily, while baby boomers look for ease of use or familiarity.





*Figure 13. Research Question 3*

Various benefits of flexible work arrangements were cited by participants (Figure 13). Millennials emphasized that flexible work arrangements enable them to be independent and to be in control of their daily routine. The opportunity to save time that would have been spent commuting or dealing with office distractions was considered a significant benefit of flexible work arrangements. They were confident that they have the self-discipline required for successful flexible work arrangements and report being more productive with flexible work arrangements than working in a physical office location. Additionally, one millennial suggested that flexible work arrangements could be a healthier option to working in an office location.

Boomers cited the flexibility of flexible work arrangements as a major benefit, especially for parents, in addition to the time saved from not having to commute to work. One business owner was able to “cut her (business office) rent in half” due to an FWA, and

another emphasized the importance of building flexibility into the business structure by having many employees that can take shifts left by employees that call out of work to meet personal or family needs.

In summary, both millennials and boomers, particularly boomer moms, felt saving time (in commuting) was the biggest benefit to flexible work arrangements.

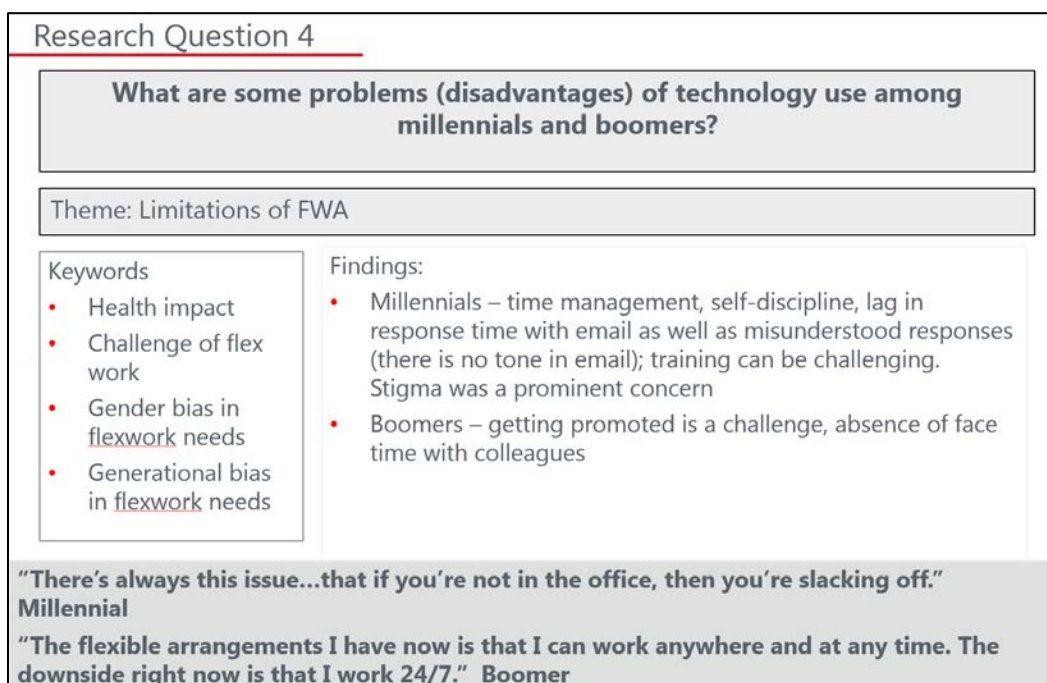


Figure 14. Research Question 4

Participants were asked to discuss the limitations of flexible work arrangements (Figure 14). Millennials reiterated the importance of time management and self-discipline when in an FWA. They considered the lag in responses and sometimes misunderstood responses through, e.g. email, to be a potential limitation since there is no tone in email. One millennial suggested that the decreased stress from not having to deal with colleagues in the office can be health-enhancing. The need for discipline was cited as a potential limitation

and one millennial suggested not using the work laptop or time to do anything personal.

Millennials highlighted being remote can be challenging during training when it would be helpful to ask quick questions in person from a more experienced team member. Stigma from colleagues working in the physical office location was another prominent concern discussed directly or indirectly by millennials. They described the “guilt” that results from knowing you have been offered a benefit that others do not enjoy and so working extra hard to justify that benefit.

Boomers cited the potential threat to security of data, distractions from the family and friends who may not understand that they are working even though at home, and “working without boundaries.” This is a situation where, when the employee works from home, the work day starts early and ends much later in the day after in-office counterparts would have left the office. A boomer business owner considered that FWA is beneficial to employees but sometimes leaves the employer stranded when most employees have a flexible work arrangement and there are not enough in-office staff to address clients’ needs. Other challenges and limitations were associated with being promoted or “climbing the corporate ladder” with a flexible schedule, the organization of getting broken work machines repaired, the difficulty in attaining productivity if the employee is not disciplined, and the health implications of limited physical activity.

Both populations felt that “working without boundaries” was now a norm, not giving them the personal time that made them want the flexible arrangement in the first place. Millennials are very unforgiving about technology glitches and consider it a waste of their time. Training and the need for “face time” were also challenges for them. Boomers felt FWA limited promotability, called for discipline, impacted health and can disregard the

staffing needs of the employer.

*Legal Ramifications of FWA.* A subtopic from Research Question 4 was “The Legal Ramifications of FWA.” Participants discussed data concerns, the importance of privacy and insurance issues. One participant reported having disability insurance and another reported having workers’ compensation. Most respondents reported not having, or not knowing whether they had, access to FWA-relevant insurance. One business owner said, “My business is super small right now but once it grows to a size where there's, you know, real revenue, then I will buy business liability insurance as I feel like it's something a business should have.”

Regarding privacy issues, participants reported the use of a service that picks up and shreds paperwork, enhanced security protocols, and dual authentication log-ins. One participant reported accessing confidential data only on a secure server. Business owners were concerned about the prospect of a privacy breach via data transfer over WiFi, theft of a laptop, or employees being careless with work equipment while at home. One business owner stated, “Well, yeah, I mean in my industry we deal with a tremendous amount of secure data and there are actually criminal penalties that can be assessed against our firm or...us as individuals for data breaches. You know, we're dealing with Social Security numbers and financial data and I've got bank account credentials in my systems, etcetera. So, yeah, we're always thinking about security. We're always thinking about one of the ways in which we have vulnerabilities given that we do have multiple locations (and people working from home.)”

## Recommendations

Reynolds' Flexjobs 2018 research found that companies that were voted the top companies in providing flexible schedules or arrangements agreed that flexibility maintained or increased productivity, retained employees as well as increased loyalty and morale.

Based on this research findings, increased productivity is a huge incentive for employers to provide millennial and boomer employees, with the following technology/tools in order create a mutually beneficial relationship between employer and worker. Speed is a necessity and is critical for productivity. Most workers use Wi-Fi the most to connect; however, for workers travelling to different locations, they will also need an Ethernet in case Wi-Fi is not available or have poor connection. Workers, mostly baby boomers, who are completely remote say they need a desktop computer or large screen monitor for health purposes or if they have a disability.

- Smartphone
- Router
- Laptop
- Desktop computer
- Wi-Fi
- Ethernet
- Broadband
- Large screen monitor

If employees use their own devices, the employer can offer a fixed reimbursement rate, or have the employee submit their monthly telecom bill with their expenses.

Along with connectivity, being able to share files across distances is equally important. Having an easy sharing tool is important to employees, regardless of

type/brand. Dropbox is the most important but the most frequently used tools for sharing are Google Drive, which is free, and a Flash Drive, which is portable and low cost.

Younger age groups (millennials 18-29) ascribed significantly greater importance to the use of Google Drive.

The following file sharing devices for employees are recommended. Results show that most people, millennial or boomer, utilize multiple file sharing devices at a time.

- Dropbox
- Google Drive
- Flash Drive

For communication, email is still the main means of communication for business and personal use. Boomers lean more towards email, while millennials use email for business but text for personal use. Employers should use a business email name (i.e. jane.doe@abccompany.com) instead of a generic account provided by your internet service provider (i.e. jane@gmail.com). Email is now a part of many technology packages like Microsoft and Google.

The most frequently used communication technology is Outlook, which is an information management tool and is a part of the Microsoft Office suite of products. It is a one-stop shop suite of products that include an email application, a calendar, task manager, contact manager, note taking, journal, and web browsing. It is also agnostic to Android and IOS platforms for cell phone usage. Employers can save on training costs as Microsoft has a phenomenal online training in the form of videos and chat. Outlook is

simultaneously accessible from multiple devices like a laptop and Smartphone.

Millennials in the 18-29 age group ascribed greater importance to all social media platforms and preferred Google Calendar. Companies should set up a social media account for employees so that millennials can have a preferred way of communication, while at the same time promotes your company.

Every employer should have, or get:

- Microsoft Outlook – includes shared calendaring that synchronizes to all employees
- Email
- Text message
- At least one social media account that suits them best

For data backup technology, a backup drive allows the user to make an exact copy of the computer's hard drive and store it in a separate location. For businesses, having employees' computers backed up is critical for business continuity in the case of the loss or equipment destruction, or when an employee leaves the company. However, an external drive is the most frequently used as not all companies provide backup. I recommend:

- Private company cloud storage backup drive – business accounts cover all employees
- External of flash drive – individuals

Younger age groups (millennials 18-29) ascribed significantly greater importance to cloud storage, while boomers ascribed greater importance to external drives for data backup. If employers do not provide the backup drive, they should reimburse employees for safeguarding their data.

In a flexible work arrangement, teleconferencing is important for meetings involving more than two people, particularly virtual teams across states or countries.

Based on the results, the recommendations are:

- Skype for Business
- WebEx
- FaceTime or other face-to-face communication device. FaceTime is free in an employee's telecom package. Younger age groups (millennials 18-29) ascribed significantly greater importance to the use of FaceTime, Google Hangout, and UberConference.

Skype was the most frequently used teleconferencing tool among participants. Skype has a free software for personal use which is limited to one-to-one communication. Skype for Business and WebEx are paid packages that come with the ability to record a meeting, instant messaging, telephone number and video for conferencing, and can accommodate meetings up to 250 people.



## CHAPTER 10

### ESSAY 2

Multiple generations now share the same workplace, but millennials and boomers are the two populations who are making strides in flexible work arrangements. Millennials grew up with the flexibility that technology affords them, while boomers can delay retirement because they can work outside of the office. In Essay 1, the research focused on the types of technology that help millennials and boomers to work from home. Essay 2 informs both practitioners and academics on guidelines for a flexible work arrangement.

Per Pew Research Center (2017), internet usage increased among adults. As a group, compared with more-veteran internet users, the first-time users in the sample skewed older, more female and had lower household incomes and educational attainment. In this sample, females outnumbered males by about two-to-one, in contrast with the overall internet population, which is half female. In addition, very few of the newcomers were younger than 50 years old. Similarly, a 2011 WorldatWork study of organizations across the U.S. shows that many employers offered workplace flexibility. Over three-quarters of organizations offered part-time schedules, flex-time, and telework on an ad hoc basis. Also, more than half of organizations offered compressed workweeks and telework on a regular weekly or monthly basis. Less than one-third of organizations, however, offered job sharing (NorthCoast 99, 2013). That was 2011.

We will understand the tools that they prefer and give guidelines to employers and individuals as to what is needed to have a productive flexible work environment.

## Data Collection Techniques

*Study Population and Eligibility Criteria.* Overall, 264 eligible individuals responded to the surveys – 44 from SurveyMonkey and 220 from Qualtrics. Participants were eligible if >18 years old and have a flexible working arrangement. One respondent did not complete the survey and was excluded from the study. Therefore, 263 respondents were included in the analysis. The data were combined to perform the analysis.

*Quantitative Data Analysis Approach and Handling of Missing Data.* Pair-wise deletion was selected as the most appropriate approach. When the questionnaire was created, particularly within the tables, a few surveys were sent as a test and there were abandonments of the survey because most of the categories were required and surpassed the amount of time it would take to complete the survey. Additionally, some categories did not pertain to the participant and they were forced to select. The survey was changed to allow flexibility and accuracy in choice. Specifically, for each analysis, all observations with non-missing values for all variables relevant to that analysis were included. List-wise deletion of all observations with any missing variables would lead to significant attrition of the original sample size. Such attrition invariably increases the risk of selection bias except those rare situations where it can be proven to have occurred completely at random (Peugh, et al., 2004).

*Recoding of Likert Items and Variable Management.* To enable quantitative analysis of the data, Likert items in the importance and frequency of technology use sections of the survey were scored. The scores ranged from 5 for “Extremely Important” or “Very Frequent” to 1 for “Not at All Important” or “Never.” Participant characteristics including age (range), gender, job role and kind of flexible working arrangement were analyzed as categorical variables.

*Descriptive Statistics and Comparisons.* Frequencies and percentages associated with participant characteristics and responses to each survey item were calculated and reported. In the Importance and Frequency of Technology Use section, technologies were considered important if more than 50% of respondents considered them to be very important or extremely important. Mean scores on the items were compared among multiple groups using analysis of variance (ANOVA).

*Assumptions and Tools.* Hypothesis testing was considered statistically significant at  $p < 0.05$ . All statistical analysis was performed in Stata SE version 15 (StataCorp, College Station, TX). Tables and Charts were designed in Microsoft Excel.

## Summary Conclusions and Findings

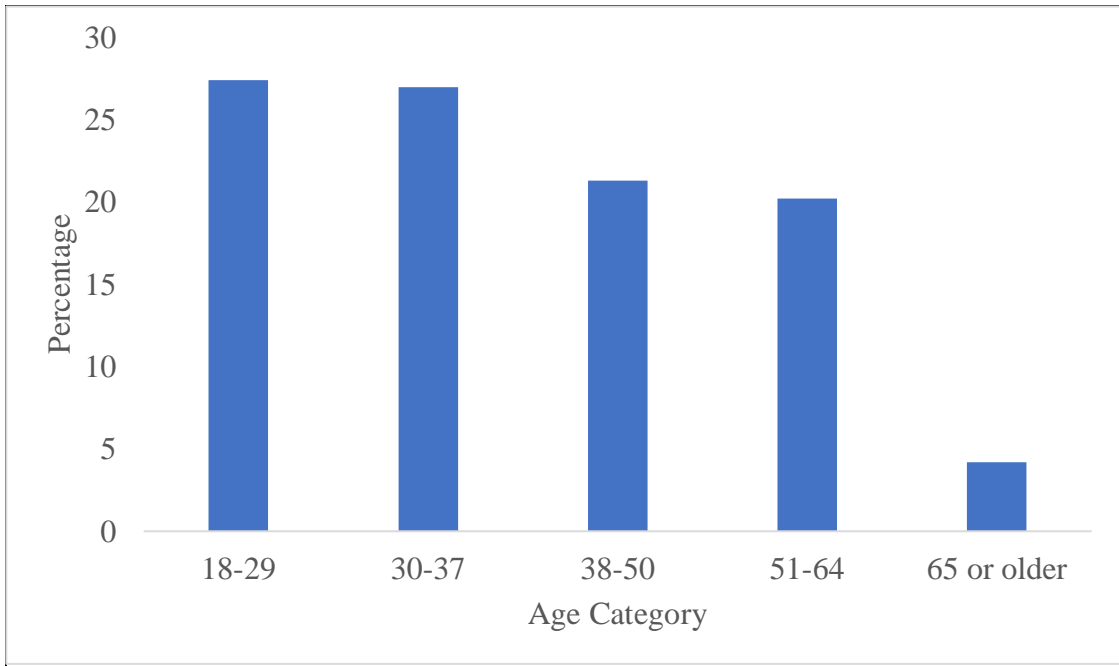
Overall, 263 respondents met the eligibility criteria and completed the survey. Most respondents were millennials in the 18-29 years (72, 27.4%) and 30-37 years (71, 27.0%) age categories (Table 6). About a fifth of respondents were in 51-64 years (53, 20.2%) age categories. Similar to Essay 1, other age categories were deleted from tables to focus on the millennial and boomer populations.

Of the 263 participants, 147 (55.9%) were female and 115 (43.7%) were male (Table 6). The majority of participants (207, 78.7%) were in the United States while 14 (5.3%) each were in the United Kingdom, Norway, Sweden, and Canada. Regarding their job role, most participants reported that they were Individual Contributors (44, 16.7%), Managers (41, 15.6%), Administrators (24, 9.1%), Management/C-Level (31, 11.8%) or Team Leads (22, 8.4%). See Figure 16.

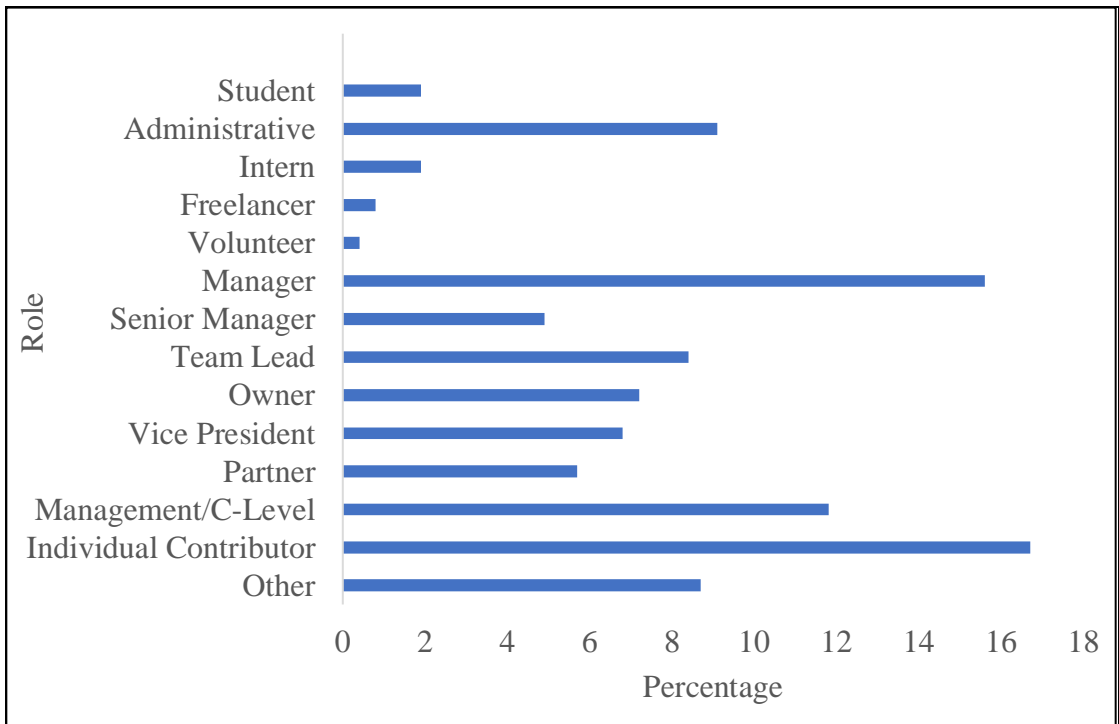
In Figure 17, the most frequent form of flexible working arrangement among respondents was working from the office more than once a week (132, 50.2%) followed by complete remote work from home in the United States (75, 28.5%). Twenty-seven respondents (10.3%) reported working from the office more than once a month, 18 (6.8%) work completely remotely outside the United States and 11 (4.2%) work from a satellite office.

Table 6.  
*Characteristics of Study Participants*

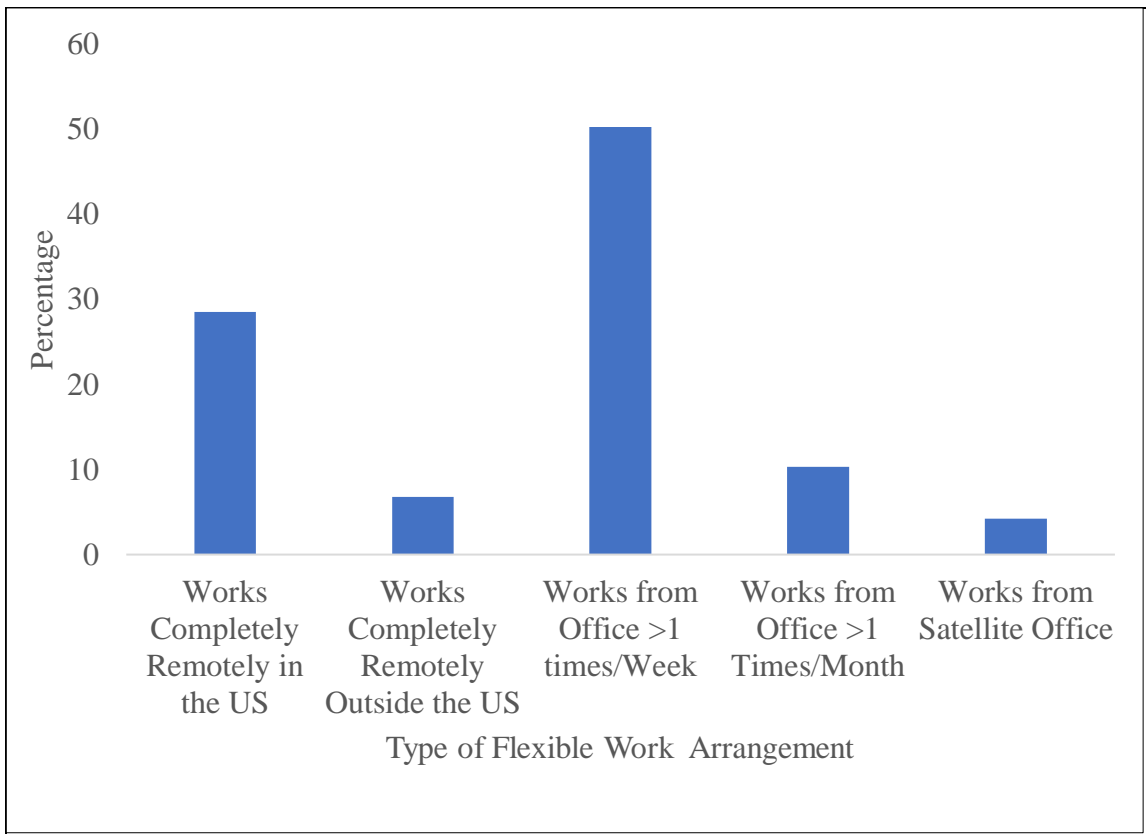
<b>Characteristic</b>	<b>n (%) N = 263</b>
<b>Age</b>	
18-29	72 (27.4%)
30-37	71 (27.0%)
38-50	56 (21.3%)
51-64	53 (20.2%)
65 or older	11 (4.2%)
<b>Gender</b>	
Female	147 (55.9%)
Male	115 (43.7%)
Other	1 (0.4%)
<b>Country</b>	
United States	207 (78.7%)
United Kingdom	14 (5.3%)
Norway	14 (5.3%)
Sweden	14 (5.3%)
Canada	14 (5.3%)
<b>Role</b>	
Individual Contributor	44 (16.7%)
Management/C-Level	31 (11.8%)
Partner	15 (5.7%)
Vice President	18 (6.8%)
Owner	19 (7.2%)
Team Lead	22 (8.4%)
Senior Manager	13 (4.9%)
Manager	41 (15.6%)
Volunteer	1 (0.4%)
Freelancer	2 (0.8%)
Intern	5 (1.9%)
Administrative	24 (9.1%)
Student	5 (1.9%)
Other	23 (8.7%)
<b>Flexible Work Arrangement Type</b>	
Works Completely Remotely in the US	75 (28.5%)
Works Completely Remotely Outside the US	18 (6.8%)
Works from Office >1 times/Week	132 (50.2%)
Works from Office >1 Times/Month	27 (10.3%)
Works from Satellite Office	11 (4.2%)



*Figure 15. Age Distribution of Study Participants*



*Figure 16. Distribution of Participants' Roles*



*Figure 17. Distribution of Participants' Type of Flexible Work Arrangement*

*Research Questions.* All 263 Respondents were asked to rate a list of technologies that are available for connectivity, sharing, communication, teleconferencing and project management, according to the degree of importance and frequency of using technology to connect. A free-text field was also provided so that respondents could volunteer additional information that they considered important (Figure 18).

**Research Question 1. How does technology promote/support flexible work arrangement for millennials and boomers?**

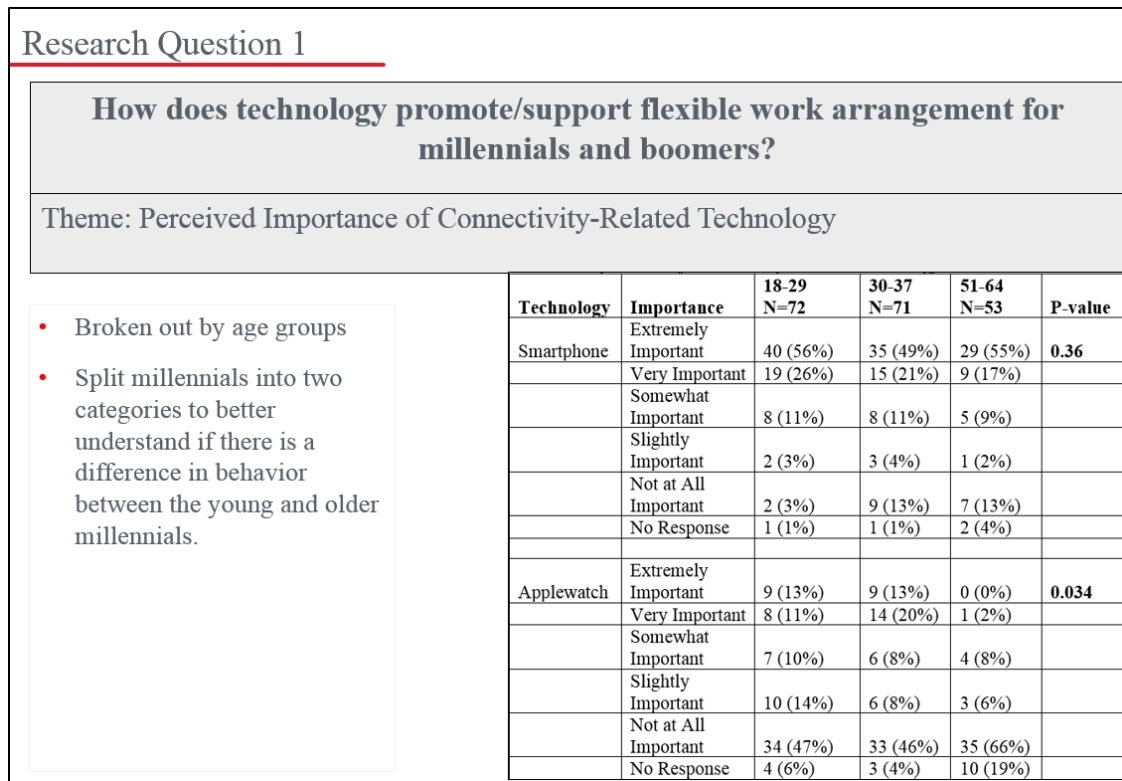


Figure 18. Perceived Importance of Connectivity-Related Technology



### *Importance Tables*

In the connectivity category, most participants considered the Smartphone (202, 78.3%), laptop (197, 76.8%), WiFi (217, 83.8%), router (189, 74.7%) and Broadband (144, 57.4%), to be extremely important or very important, combined (Table 7).

Table 7.  
*Importance of Technology for Connectivity*

Technology n (%)	Extremely Important	Very Important	Somewhat Important	Slightly Important	Not at All Important
Smartphone	137 (53.1%)	65 (25.2%)	23 (8.9%)	7 (2.7%)	26 (10.1%)
Apple Watch	23 (9.5%)	28 (11.6%)	20 (8.3%)	24 (9.9%)	147 (60.7%)
Desktop	82 (33.2%)	39 (15.8%)	38 (15.4%)	29 (11.7%)	59 (23.9%)
Laptop	145 (56.2%)	52 (20.2%)	27 (10.5%)	10 (3.9%)	24 (9.3%)
Broadband	114 (45.4%)	30 (12.0%)	34 (13.5%)	24 (9.6%)	49 (19.5%)
WiFi	180 (69.5%)	37 (14.3%)	18 (6.9%)	8 (3.1%)	16 (6.2%)
Ethernet	78 (31.5%)	31 (12.5%)	47 (19.0%)	20 (8.1%)	72 (29.0%)
Router	132 (52.2%)	57 (22.5%)	29 (11.5%)	10 (4.0%)	25 (9.9%)
Large Screen Monitor	59 (23.5%)	52 (20.7%)	63 (25.1%)	27 (10.8%)	50 (19.9%)
Amazon Echo	22 (9.1%)	19 (7.8%)	40 (16.5%)	25 (10.3%)	137 (56.4%)
Surveillance (Cameras)	37 (15.2%)	27 (11.1%)	38 (15.6%)	20 (8.2%)	121 (49.8%)
Headset	44 (17.7%)	37 (14.9%)	49 (19.8%)	36 (14.5%)	82 (33.1%)
Other	38 (16.9%)	18 (8.0%)	10 (4.4%)	14 (6.2%)	145 (64.4%)

In the sharing category, there were no technologies considered to be very important or extremely important by most respondents (Table 8).

Even though there was not one standout in this category, note that responders considered tools in the combined categories of extremely or very important, combined: Dropbox 41.6%, Google Drive 45.9%, and 41.1% for Flash Drive.

Table 8.  
*Importance of Technology for Sharing*

Technology	Extremely Important	Very Important	Somewhat Important	Slightly Important	Not at All Important
Dropbox	52 (21.2%)	50 (20.4%)	42 (17.1%)	15 (6.1%)	86 (35.1%)
Sharepoint	41 (16.7%)	46 (18.7%)	27 (11.0%)	17 (6.9%)	115 (46.7%)
iCloud	45 (18.8%)	51 (21.3%)	35 (14.6%)	23 (9.6%)	85 (35.6%)
One Drive	47 (19.1%)	47 (19.1%)	36 (14.6%)	22 (8.9%)	94 (38.2%)
Google Drive	69 (28.5%)	42 (17.4%)	44 (18.2%)	17 (7.0%)	70 (28.9%)
Box	22 (9.2%)	27 (11.3%)	35 (14.6%)	20 (8.3%)	136 (56.7%)
SkyDrive	20 (8.4%)	27 (11.3%)	27 (11.3%)	22 (9.2%)	142 (59.7%)
MediaFire	26 (10.9%)	20 (8.4%)	23 (9.7%)	22 (9.2%)	147 (61.8%)
Zippyshare	18 (7.6%)	21 (8.8%)	30 (12.6%)	21 (8.8%)	148 (62.2%)
Flash Drive	53 (21.8%)	47 (19.3%)	52 (21.4%)	19 (7.8%)	72 (29.6%)
Other	28 (12.7%)	16 (7.3%)	16 (7.3%)	13 (5.9%)	147 (66.8%)

In the communication category, most respondents considered Microsoft Outlook (176, 68.8%), Email (215, 84.6%), and text messages (160, 64.3%) to be very important or extremely important, combined (Table 9).

Table 9.  
*Importance of Technology for Communication*

Technology n (%)	Extremely Important	Very Important	Somewhat Important	Slightly Important	Not at All Important
Outlook	139 (54.3%)	37 (14.5%)	29 (11.3%)	9 (3.5%)	42 (16.4%)
Slack	27 (11.4%)	25 (10.6%)	24 (10.2%)	19 (8.1%)	141 (59.7%)
Email	171 (67.3%)	44 (17.3%)	21 (8.3%)	6 (2.4%)	12 (4.7%)
Text	100 (40.2%)	60 (24.1%)	42 (16.9%)	23 (9.2%)	24 (9.6%)
Facebook	45 (18.5%)	44 (18.1%)	46 (18.9%)	23 (9.5%)	85 (35.0%)
Social Media	50 (22.7%)	37 (16.8%)	37 (16.8%)	21 (9.5%)	75 (34.1%)
Twitter	31 (12.9%)	31 (12.9%)	50 (20.8%)	22 (9.2%)	106 (44.2%)
LinkedIn	44 (18.1%)	33 (13.6%)	42 (17.3%)	29 (11.9%)	95 (39.1%)
Instagram	34 (14.4%)	30 (12.7%)	30 (12.7%)	25 (10.6%)	117 (49.6%)
Periscope	19 (8.1%)	22 (9.4%)	22 (9.4%)	24 (10.2%)	148 (63.0%)
YouTube	52 (21.6%)	39 (16.2%)	40 (16.6%)	21 (8.7%)	89 (36.9%)
WhatsApp	40 (16.7%)	29 (12.1%)	27 (11.3%)	18 (7.5%)	125 (52.3%)
Noodle	19 (8.1%)	15 (6.4%)	22 (9.4%)	21 (8.9%)	158 (67.2%)
Google Calendar	53 (22.1%)	42 (17.5%)	30 (12.5%)	27 (11.3%)	88 (36.7%)
Other	26 (11.7%)	23 (10.4%)	18 (8.1%)	5 (2.3%)	150 (67.6%)

In the backup category, 123 (51.7%) respondents considered the external drive to be very important or extremely important, combined (Table 10).

Table 10.  
*Importance of Technology for Data Backup*

Technology n (%)	Extremely Important	Very Important	Somewhat Important	Slightly Important	Not at All Important
Carbonite	47 (19.8%)	19 (8.0%)	19 (8.0%)	11 (4.6%)	141 (59.5%)
Acronis	22 (9.4%)	27 (11.6%)	18 (7.7%)	19 (8.2%)	147 (63.1%)
Genie	23 (9.9%)	26 (11.2%)	32 (13.8%)	11 (4.7%)	140 (60.3%)
Storagecraft	19 (8.2%)	27 (11.6%)	25 (10.7%)	15 (6.4%)	147 (63.1%)
Private Company Backup	47 (19.3%)	25 (10.3%)	30 (12.3%)	20 (8.2%)	121 (49.8%)
External Drive	80 (33.6%)	43 (18.1%)	23 (9.7%)	17 (7.1%)	75 (31.5%)
Other	30 (13.3%)	22 (9.7%)	8 (3.5%)	12 (5.3%)	154 (68.1%)

In the teleconferencing category, 131 (52.0%) respondents considered Skype to be very important or extremely important, combined (Table 11).

Table 11.  
*Importance of Technology for Teleconferencing*

Technology n (%)	Extremely Important	Very Important	Somewhat Important	Slightly Important	Not at All Important
Skype	88 (34.9%)	43 (17.1%)	29 (11.5%)	24 (9.5%)	68 (27.0%)
FaceTime	37 (15.4%)	38 (15.8%)	42 (17.5%)	20 (8.3%)	103 (42.9%)
Google Hangout	33 (14.1%)	33 (14.1%)	30 (12.8%)	22 (9.4%)	116 (49.6%)
GoToMeeting	42 (17.4%)	42 (17.4%)	43 (17.8%)	16 (6.6%)	99 (40.9%)
Free Conference	30 (12.6%)	29 (12.1%)	32 (13.4%)	18 (7.5%)	130 (54.4%)
Speek	23 (9.9%)	19 (8.2%)	24 (10.3%)	22 (9.4%)	145 (62.2%)
Join.me	19 (8.1%)	25 (10.6%)	32 (13.6%)	19 (8.1%)	141 (59.7%)
WebEx	45 (17.9%)	39 (15.5%)	31 (12.3%)	21 (8.3%)	116 (46.0%)
UberConference	25 (10.7%)	19 (8.2%)	20 (8.6%)	20 (8.6%)	149 (63.9%)
Open Voice	20 (8.6%)	25 (10.7%)	25 (10.7%)	21 (9.0%)	142 (60.9%)
Other	26 (11.5)	15 (6.6)	23 (10.1)	11 (4.8)	152 (67.0)

In the project management category, there were no technologies considered to be very important or important by the majority of respondents (Table 12).

Table 12.

*Importance of Technology for Project Management*

Technology n (%)	Extremely Important	Very Important	Somewhat Important	Slightly Important	Not at All Important
Smartsheet	36 (15.4%)	28 (12.0%)	25 (10.7%)	13 (5.6%)	132 (56.4%)
BaseCamp	23 (9.8%)	28 (12.0%)	22 (9.4%)	22 (9.4%)	139 (59.4%)
Mavenlink	24 (10.3%)	24 (10.3%)	24 (10.3%)	15 (6.5%)	145 (62.5%)
Microsoft Project	48 (20.2%)	32 (13.4%)	29 (12.2%)	22 (9.2%)	107 (45.0%)
Hive	20 (8.6%)	24 (10.3%)	23 (9.9%)	18 (7.8%)	147 (63.4%)
Trello	26 (11.1%)	20 (8.5%)	21 (9.0%)	21 (9.0%)	146 (62.4%)
Zoho Office	18 (7.7%)	21 (9.0%)	26 (11.2%)	16 (6.9%)	152 (65.2%)
Jira	17 (7.3%)	29 (12.5%)	24 (10.3%)	12 (5.2%)	150 (64.7%)
Slack	25 (10.7%)	19 (8.1%)	25 (10.7%)	16 (6.8%)	149 (63.7%)
Freedcamp	20 (8.6%)	18 (7.8%)	26 (11.2%)	16 (6.9%)	152 (65.5%)
ProWorkFlow	20 (8.6%)	21 (9.1%)	26 (11.2%)	17 (7.3%)	148 (63.8%)
Other	24 (10.2%)	15 (6.4%)	18 (7.7%)	13 (5.5%)	165 (70.2%)

*Frequency Tables*

To determine how frequently the participants used the listed technologies, they were asked to rate their frequency of use.

In the connectivity category, most respondents in the total population reported using the Smartphone (221, 85.7%), desktop computer (143, 57.8%), laptop (209, 81.4%), Broadband (165, 66%), WiFi (223, 87.1%), Ethernet (134, 54.4%), router (189, 75%), and large screen monitor (145, 58%) occasionally or very frequently (Table 13).

Table 13.

*Frequency of Using Technology for Connectivity, Total*

Technology n (%)	Very Frequent	Occasionally	Rarely	Very Rarely	Never
Smartphone	179 (69.4%)	42 (16.3%)	11 (4.3%)	9 (3.5%)	17 (6.6%)
Apple Watch	29 (12.1%)	30 (12.5%)	23 (9.6%)	13 (5.4%)	145 (60.4%)
Desktop	92 (37.2%)	51 (20.6%)	32 (13.0%)	9 (3.6%)	63 (25.5%)
Laptop	159 (61.9%)	50 (19.5%)	22 (8.6%)	6 (2.3%)	20 (7.8%)
Broadband	126 (50.4%)	39 (15.6%)	22 (8.8%)	16 (6.4%)	47 (18.8%)
WiFi	188 (73.4%)	35 (13.7%)	10 (3.9%)	9 (3.5%)	14 (5.5%)
Ethernet	84 (34.1%)	50 (20.3%)	30 (12.2%)	18 (7.3%)	64 (26.0%)
Router	145 (57.5%)	44 (17.5%)	26 (10.3%)	12 (4.8%)	25 (9.9%)
Large Screen Monitor	81 (32.4%)	64 (25.6%)	35 (14.0%)	23 (9.2%)	47 (18.8%)
Amazon Echo	33 (13.7%)	42 (17.4%)	20 (8.3%)	14 (5.8%)	132 (54.8%)
Surveillance (Cameras)	44 (18.3%)	40 (16.6%)	26 (10.8%)	16 (6.6%)	115 (47.7%)
Headset	57 (23.2%)	59 (24.0%)	33 (13.4%)	20 (8.1%)	77 (31.3%)
Other	37 (16.4%)	17 (7.6%)	17 (7.6%)	9 (4.0%)	145 (64.4%)

When Frequency of Using Connectivity-Related Technology is broken out by age groups (Table 14), millennials have significantly more frequent and occasional use of technology particularly Smartphone, surveillance cameras, Apple Watch and headsets. Millennials also consider Amazon as technology for quick delivery of goods.

Table 14.

*Frequency of Using Connectivity-Related Technology by Age Group*

Technology	Frequency of Use	Younger Millennial 18-29 N=72	Older Millennial 30-37 N=71	Baby Boomer 51-64 N=53	P-value
Smartphone	Very Frequent	49 (68%)	51 (72%)	33 (62%)	0.38
	Occasionally	15 (21%)	6 (8%)	11 (21%)	
Apple Watch	Very Frequent	8 (11%)	12 (17%)	1 (2%)	0.001
	Occasionally	11 (15%)	15 (21%)	4 (8%)	
Desktop	Very Frequent	29 (40%)	24 (34%)	17 (32%)	0.047
	Occasionally	18 (25%)	14 (20%)	6 (11%)	
Laptop	Very Frequent	37 (51%)	41 (58%)	33 (62%)	0.040
	Occasionally	17 (24%)	17 (24%)	4 (8%)	
Broadband	Very Frequent	29 (40%)	33 (46%)	23 (43%)	0.088
	Occasionally	10 (14%)	18 (25%)	7 (13%)	
WiFi	Very Frequent	49 (68%)	50 (70%)	36 (68%)	0.049
	Occasionally	11 (15%)	12 (17%)	5 (9%)	
Ethernet	Very Frequent	20 (28%)	25 (35%)	13 (25%)	0.20
	Occasionally	20 (28%)	15 (21%)	9 (17%)	
Router	Very Frequent	33 (46%)	40 (56%)	30 (57%)	0.49
	Occasionally	14 (19%)	15 (21%)	6 (11%)	
Monitor	Very Frequent	22 (31%)	22 (31%)	13 (25%)	0.27
	Occasionally	16 (22%)	22 (31%)	10 (19%)	
Amazon	Very Frequent	13 (18%)	13 (18%)	2 (4%)	0.092
	Occasionally	13 (18%)	13 (18%)	6 (11%)	
Surveillance Camera	Very Frequent	17 (24%)	17 (24%)	2 (4%)	<0.001
	Occasionally	15 (21%)	13 (18%)	7 (13%)	
Headset	Very Frequent	17 (24%)	21 (30%)	6 (11%)	0.015
	Occasionally	16 (22%)	18 (25%)	9 (17%)	

In the sharing category, most respondents reported using Google Drive (127, 52.5%) and flash drive (123, 51%) occasionally or very frequently (Table 15).

Table 15.  
*Frequency of Using Technology for Sharing, Total*

Technology n (%)	Very Frequent	Occasionally	Rarely	Very Rarely	Never
Dropbox	67 (27.3%)	53 (21.6%)	26 (10.6%)	16 (6.5%)	83 (33.9%)
Sharepoint	48 (19.6%)	48 (19.6%)	25 (10.2%)	18 (7.3%)	106 (43.3%)
iCloud	50 (21.0%)	64 (26.9%)	27 (11.3%)	17 (7.1%)	80 (33.6%)
One Drive	59 (24.1%)	49 (20.0%)	29 (11.8%)	16 (6.5%)	92 (37.6%)
Google Drive	76 (31.4%)	51 (21.1%)	30 (12.4%)	17 (7.0%)	68 (28.1%)
Box	24 (10.1%)	36 (15.1%)	29 (12.2%)	27 (11.3%)	122 (51.3%)
SkyDrive	27 (11.4%)	36 (15.3%)	23 (9.7%)	15 (6.4%)	135 (57.2%)
MediaFire	25 (10.6%)	34 (14.4%)	20 (8.5%)	10 (4.2%)	147 (62.3%)
Zippyshare	26 (11.0%)	32 (13.6%)	22 (9.3%)	10 (4.2%)	146 (61.9%)
Flash Drive	55 (22.8%)	68 (28.2%)	32 (13.3%)	17 (7.1%)	69 (28.6%)
Other	34 (14.7%)	25 (10.8%)	11 (4.7%)	16 (6.9%)	146 (62.9%)

When the sharing category is broken out by age groups (Table 16), millennials have significantly more frequent and occasional use of online sharing tools such as Google Drive, One Drive, MediaFire, Box and Zippy, but additionally they have more frequent use of offline sharing in flash drives.



Table 16.

*Frequency of Using Sharing-Related Technology by Age Group*

Technology	Frequency of Use	Younger Millennial 18-29 N=72	Older Millennial 30-37 N=71	Baby Boomer 51-64 N=53	P-value
Dropbox	Very Frequent	22 (31%)	21 (30%)	8 (15%)	0.21
	Occasionally	15 (21%)	15 (21%)	10 (19%)	
Sharepoint	Very Frequent	10 (14%)	16 (23%)	10 (19%)	0.027
	Occasionally	14 (19%)	14 (20%)	5 (9%)	
iCloud	Very Frequent	14 (19%)	15 (21%)	7 (13%)	0.11
	Occasionally	23 (32%)	14 (20%)	8 (15%)	
OneDrive	Very Frequent	22 (31%)	15 (21%)	8 (15%)	0.069
	Occasionally	15 (21%)	15 (21%)	7 (13%)	
Google Drive	Very Frequent	28 (39%)	21 (30%)	8 (15%)	<0.001
	Occasionally	19 (26%)	15 (21%)	3 (6%)	
Box	Very Frequent	8 (11%)	11 (15%)	0 (0%)	0.009
	Occasionally	14 (19%)	9 (13%)	4 (8%)	
SkyDrive	Very Frequent	8 (11%)	12 (17%)	1 (2%)	<0.001
	Occasionally	14 (19%)	13 (18%)	2 (4%)	
MediaFire	Very Frequent	9 (13%)	10 (14%)	2 (4%)	0.005
	Occasionally	10 (14%)	15 (21%)	1 (2%)	
Zippy	Very Frequent	6 (8%)	9 (13%)	2 (4%)	0.002
	Occasionally	11 (15%)	14 (20%)	2 (4%)	
Flash Drive	Very Frequent	18 (25%)	14 (20%)	4 (8%)	0.014
	Occasionally	14 (19%)	25 (35%)	15 (28%)	

In the communication category, the majority of respondents reported using Outlook (189, 73.9%), email (210, 82.7%) and text messages (181, 72.7%) occasionally or very frequently (Table 17).

Table 17.

*Frequency of Using Technology for Communication, Total*

Technology n (%)	Very Frequent	Occasionally	Rarely	Very Rarely	Never
Outlook	153 (59.8%)	36 (14.1%)	23 (9.0%)	5 (2.0%)	39 (15.2%)
Slack	38 (16.1%)	31 (13.1%)	20 (8.5%)	10 (4.2%)	137 (58.1%)
Email	180 (70.9%)	30 (11.8%)	28 (11.0%)	5 (2.0%)	11 (4.3%)
Text	112 (45.0%)	69 (27.7%)	28 (11.2%)	16 (6.4%)	24 (9.6%)
Facebook	62 (25.5%)	59 (24.3%)	27 (11.1%)	20 (8.2%)	75 (30.9%)
Social Media	58 (26.4%)	51 (23.2%)	27 (12.3%)	11 (5.0%)	73 (33.2%)
Twitter	46 (19.2%)	48 (20.0%)	24 (10.0%)	16 (6.7%)	106 (44.2%)
LinkedIn	51 (21.0%)	48 (19.8%)	28 (11.5%)	24 (9.9%)	92 (37.9%)
Instagram	35 (14.8%)	36 (15.3%)	33 (14.0%)	20 (8.5%)	112 (47.5%)
Periscope	22 (9.4%)	31 (13.2%)	24 (10.2%)	15 (6.4%)	143 (60.9%)
YouTube	58 (24.1%)	51 (21.2%)	27 (11.2%)	19 (7.9%)	86 (35.7%)
WhatsApp	38 (15.9%)	38 (15.9%)	27 (11.3%)	16 (6.7%)	120 (50.2%)
Noodle	19 (8.1%)	25 (10.6%)	27 (11.5%)	14 (6.0%)	150 (63.8%)
Google Calendar	59 (24.6%)	58 (24.2%)	24 (10.0%)	10 (4.2%)	89 (37.1%)
Other	24 (10.8%)	23 (10.4%)	13 (5.9%)	14 (6.3%)	148 (66.7%)

Instagram, Google Calendar, Slack, Periscope and YouTube are the communication tools of choice for younger and older millennials alike, and boomers dominate with the use of email with 87% usage followed closed by older millennials with 80% usage. Older millennials lead in the usage of Outlook (78%), with boomers following with 77% usage (Table 18).

Table 18.

*Frequency of Using Communication-Related Technology by Age Group*

Technology	Frequency of Use	Younger Millennial 18-29 N=72	Older Millennial 30-37 N=71	Baby Boomer 51-64 N=53	P-value
Outlook	Very Frequent	39 (54%)	39 (55%)	36 (68%)	0.14
	Occasionally	10 (14%)	16 (23%)	5 (9%)	
Slack	Very Frequent	12 (17%)	16 (23%)	1 (2%)	0.004
	Occasionally	12 (17%)	11 (15%)	1 (2%)	
Email	Very Frequent	39 (54%)	46 (65%)	43 (81%)	0.039
	Occasionally	10 (14%)	11 (15%)	3 (6%)	
Text Message	Very Frequent	28 (39%)	31 (44%)	17 (32%)	0.20
	Occasionally	21 (29%)	20 (28%)	14 (26%)	
Social Media	Very Frequent	18 (25%)	21 (30%)	7 (13%)	0.015
	Occasionally	19 (26%)	14 (20%)	3 (6%)	
Facebook	Very Frequent	21 (29%)	20 (28%)	9 (17%)	0.067
	Occasionally	18 (25%)	13 (18%)	8 (15%)	
Twitter	Very Frequent	16 (22%)	16 (23%)	5 (9%)	0.068
	Occasionally	12 (17%)	16 (23%)	9 (17%)	
LinkedIn	Very Frequent	13 (18%)	17 (24%)	7 (13%)	0.85
	Occasionally	17 (24%)	15 (21%)	6 (11%)	
Instagram	Very Frequent	15 (21%)	14 (20%)	1 (2%)	<0.001
	Occasionally	9 (13%)	16 (23%)	5 (9%)	
Periscope	Very Frequent	6 (8%)	12 (17%)	0 (0%)	0.005
	Occasionally	15 (21%)	9 (13%)	2 (4%)	
YouTube	Very Frequent	19 (26%)	21 (30%)	4 (8%)	0.004
	Occasionally	15 (21%)	12 (17%)	14 (26%)	
WhatsApp	Very Frequent	11 (15%)	14 (20%)	3 (6%)	0.19
	Occasionally	18 (25%)	10 (14%)	3 (6%)	
Noodle	Very Frequent	5 (7%)	8 (11%)	1 (2%)	0.040
	Occasionally	12 (17%)	9 (13%)	2 (4%)	
Google Calendar	Very Frequent	26 (36%)	17 (24%)	2 (4%)	<0.001
	Occasionally	15 (21%)	20 (28%)	8 (15%)	

90 respondents (35.1%) reported using external drives occasionally or very frequently (Table 19). Overall, millennials lead in backing up their data (Table 19).

Table 19.  
*Frequency of Using Backup-Related Technology by Age Group*

Technology	Frequency of Use	Younger Millennial 18-29 N=72	Older Millennial 30-37 N=71	Baby Boomer 51-64 N=53	P-value
Carbonite	Very Frequent	14 (19%)	14 (20%)	8 (15%)	0.040
	Occasionally	8 (11%)	11 (15%)	2 (4%)	
Acronis	Very Frequent	10 (14%)	9 (13%)	1 (2%)	0.009
	Occasionally	10 (14%)	11 (15%)	1 (2%)	
Genie	Very Frequent	7 (10%)	11 (15%)	0 (0%)	0.011
	Occasionally	16 (22%)	10 (14%)	2 (4%)	
StorageCraft	Very Frequent	7 (10%)	7 (10%)	1 (2%)	0.034
	Occasionally	11 (15%)	10 (14%)	2 (4%)	
Private Company Storage	Very Frequent	14 (19%)	14 (20%)	9 (17%)	0.62
	Occasionally	10 (14%)	10 (14%)	5 (9%)	
External Backup	Very Frequent	22 (31%)	19 (27%)	10 (19%)	0.004
	Occasionally	18 (25%)	12 (17%)	9 (17%)	

In the teleconferencing category, 145 respondents (57.5%) reported using Skype occasionally or very frequently (Table 20).

Table 20.  
*Frequency of Using Technology for Teleconferencing, Total*

Technology n (%)	Very Frequent	Occasionally	Rarely	Very Rarely	Never
Skype	93 (36.9%)	52 (20.6%)	21 (8.3%)	21 (8.3%)	65 (25.8%)
FaceTime	46 (19.2%)	41 (17.1%)	26 (10.8%)	23 (9.6%)	104 (43.3%)
Google Hangout	30 (12.8%)	36 (15.4%)	34 (14.5%)	15 (6.4%)	119 (50.9%)
GoToMeeting	40 (16.5%)	54 (22.3%)	30 (12.4%)	18 (7.4%)	100 (41.3%)
Free Conference	28 (11.7%)	36 (15.1%)	25 (10.5%)	17 (7.1%)	133 (55.6%)
Speek	19 (8.2%)	30 (12.9%)	21 (9.0%)	16 (6.9%)	147 (63.1%)
Join.me	25 (10.6%)	27 (11.4%)	34 (14.4%)	9 (3.8%)	141 (59.7%)
WebEx	45 (17.9%)	50 (19.8%)	27 (10.7%)	14 (5.6%)	116 (46.0%)
Uber Conference	28 (12.0%)	23 (9.9%)	17 (7.3%)	17 (7.3%)	148 (63.5%)
Open Voice	26 (11.1%)	25 (10.7%)	18 (7.7%)	18 (7.7%)	147 (62.8%)
Other	22 (9.7%)	24 (10.6%)	18 (7.9%)	17 (7.5%)	146 (64.3%)

By age group, 59% of boomers, 58% of older millennials and 50% of younger millennials use Skype very frequently or occasionally. No other category received over 50% of frequency of using technology (Table 21).

Notably, older millennials use FaceTime (43%) more than younger millennials (37%) and boomers at 15%.

Table 21.

*Frequency of Using Teleconferencing-Related Technology by Age Group*

Technology	Frequency of Use	Younger Millennial 18-29 N=72	Older Millennial 30-37 N=71	Baby Boomer 51-64 N=53	P-value
Skype	Very Frequent	25 (35%)	31 (44%)	18 (34%)	0.005
	Occasionally	11 (15%)	10 (14%)	13 (25%)	
FaceTime	Very Frequent	13 (18%)	16 (23%)	6 (11%)	0.051
	Occasionally	14 (19%)	14 (20%)	2 (4%)	
Google Hangout	Very Frequent	11 (15%)	10 (14%)	1 (2%)	0.001
	Occasionally	18 (25%)	11 (15%)	3 (6%)	
GoToMeeting	Very Frequent	11 (15%)	9 (13%)	8 (15%)	0.19
	Occasionally	10 (14%)	20 (28%)	14 (26%)	
Free Conference	Very Frequent	12 (17%)	7 (10%)	2 (4%)	0.030
	Occasionally	11 (15%)	14 (20%)	6 (11%)	
Speak	Very Frequent	9 (13%)	6 (8%)	0 (0%)	0.039
	Occasionally	11 (15%)	12 (17%)	3 (6%)	
Join.me	Very Frequent	9 (13%)	12 (17%)	1 (2%)	0.14
	Occasionally	12 (17%)	6 (8%)	3 (6%)	
Webex	Very Frequent	11 (15%)	12 (17%)	10 (19%)	0.55
	Occasionally	12 (17%)	15 (21%)	9 (17%)	
UberConference	Very Frequent	9 (13%)	11 (15%)	1 (2%)	0.006
	Occasionally	9 (13%)	7 (10%)	2 (4%)	
OpenVoice	Very Frequent	8 (11%)	11 (15%)	1 (2%)	0.044
	Occasionally	10 (14%)	7 (10%)	3 (6%)	

No project management technology was used occasionally or very frequently by more than 50% of participants (Table 22).

Table 22.  
*Frequency of Using Project Management-Related Technology by Age Group*

Technology	Frequency of Use	Younger Millennial 18-29 N=72	Older Millennial 30-37 N=71	Baby Boomer 51-64 N=53	P-value
Smartsheet	Very Frequent	13 (18%)	11 (15%)	4 (8%)	0.40
	Occasionally	11 (15%)	11 (15%)	2 (4%)	
BaseCamp	Very Frequent	7 (10%)	11 (15%)	0 (0%)	0.008
	Occasionally	15 (21%)	6 (8%)	3 (6%)	
MavenLink	Very Frequent	9 (13%)	12 (17%)	3 (6%)	0.011
	Occasionally	14 (19%)	5 (7%)	0 (0%)	
MSProject	Very Frequent	15 (21%)	10 (14%)	8 (15%)	0.33
	Occasionally	16 (22%)	11 (15%)	8 (15%)	
Hive	Very Frequent	10 (14%)	9 (13%)	0 (0%)	0.007
	Occasionally	6 (8%)	7 (10%)	2 (4%)	
Trello	Very Frequent	14 (19%)	6 (8%)	1 (2%)	0.069
	Occasionally	8 (11%)	9 (13%)	3 (6%)	
Zoho	Very Frequent	6 (8%)	12 (17%)	1 (2%)	0.027
	Occasionally	10 (14%)	5 (7%)	2 (4%)	
Jira	Very Frequent	5 (7%)	10 (14%)	1 (2%)	0.041
	Occasionally	9 (13%)	6 (8%)	1 (2%)	
Slack	Very Frequent	9 (13%)	14 (20%)	0 (0%)	0.016
	Occasionally	10 (14%)	7 (10%)	5 (9%)	
FreedCamp	Very Frequent	6 (8%)	10 (14%)	2 (4%)	0.034
	Occasionally	14 (19%)	9 (13%)	3 (6%)	
ProWorkFlow	Very Frequent	10 (14%)	11 (15%)	1 (2%)	0.084
	Occasionally	11 (15%)	5 (7%)	1 (2%)	

## **Research Question 2: Do millennials and boomers use technology differently?**

To determine whether or not millennials and boomers use technology differently in their flexible working arrangement, Likert items in the importance and frequency of use sections were scored and the mean scores compared by age category using the analysis of variance (ANOVA) technique. Possible scores ranged from 1 (assigned to “Not at All Important” and “Never” in importance and frequency of use sections respectively) to 5 (assigned to “Extremely Important” and “Very Frequent” in importance and frequency of use sections respectively).

### *Perceived Importance Tables*

Research Question 2 discusses the tools and ways that millennials differ from baby boomers. The answer is yes, they are different. For connectivity-related tools, millennials gave significantly greater importance to the Apple Watch, Amazon Echo, Surveillance Cameras and Headsets (Table 23).



Table 23.

*Perceived Importance of Connectivity-Related Technology*

Technology mean (SD)	Younger Millennial 18-29 n = 72	Older Millennial 30-37 n = 71	Baby Boomer 51-64 n = 53	p- value
Smartphone	4.3 (1.0%)	3.9 (1.4%)	4.0 (1.4%)	0.21
Apple Watch	2.2 (1.5%)	2.4 (1.6%)	1.3 (0.7%)	<0.001
Desktop Computer	3.6 (1.4%)	3.2 (1.6%)	3.0 (1.7%)	0.11
Laptop	4.0 (1.3%)	4.2 (1.3%)	3.9 (1.5%)	0.32
Broadband	3.3 (1.5%)	3.6 (1.5%)	3.5 (1.8%)	0.35
WiFi	4.5 (1.0%)	4.3 (1.2%)	4.3 (1.4%)	0.54
Ethernet	3.4 (1.4%)	3.0 (1.6%)	2.7 (1.7%)	0.35
Router	4.1 (1.1%)	4.0 (1.3%)	3.9 (1.6%)	0.89
Large Screen Monitor	3.4 (1.4%)	3.4 (1.4%)	2.7 (1.5%)	0.065
Amazon Echo	2.2 (1.4%)	2.4 (1.5%)	1.3 (0.8%)	<0.001
Surveillance Camera	2.8 (1.5%)	2.6 (1.6%)	1.6 (1.2%)	<0.001
Headset	2.9 (1.4%)	2.9 (1.6%)	2.1 (1.4%)	0.045

For sharing-related technology, younger age groups ascribed significantly greater importance to the use of OneDrive, Google Drive, Box, SkyDrive, MediaFire and Zippy (Table 24).

Table 24.

*Perceived Importance of Sharing-Related Technology*

Technology mean (SD)	Younger Millennial 18-29 n = 72	Older Millennial 30-37 n = 71	Baby Boomer 51-64 n = 53	p-value
Dropbox	3.4 (1.5%)	3.1 (1.7%)	2.6 (1.6%)	0.094
Sharepoint	2.7 (1.5%)	2.8 (1.6%)	2.4 (1.7%)	0.17
iCloud	3.3 (1.4%)	2.9 (1.6%)	2.4 (1.6%)	0.06
OneDrive	3.3 (1.6%)	2.9 (1.6%)	2.3 (1.7%)	0.003
Google Drive	3.8 (1.3%)	3.2 (1.6%)	2.2 (1.6%)	<0.001
Box	2.6 (1.5%)	2.5 (1.6%)	1.5 (1.0%)	<0.001
SkyDrive	2.5 (1.5%)	2.5 (1.7%)	1.3 (0.9%)	<0.001
MediaFire	2.4 (1.5%)	2.4 (1.6%)	1.3 (1.0%)	<0.001
Zippyshare	2.3 (1.4%)	2.3 (1.6%)	1.4 (1.1%)	0.007
Flash Drive	3.3 (1.4%)	3.1 (1.6%)	2.6 (1.5%)	0.053

For Communication-related technology, younger age groups ascribed significantly greater importance to Slack, social media, FaceBook, Twitter, Instagram, Periscope, YouTube, WhatsApp, Noodle and Google Calendar (Table 25).

Table 25.

*Perceived Importance of Communication-Related Technology*

Technology mean (SD)	Younger Millennial 18-29 n = 72	Older Millennial 30-37 n = 71	Baby Boomer 51-64 n = 53	p-value
Outlook	3.7 (1.5%)	4.0 (1.3%)	4.1 (1.5%)	0.47
Slack	2.4 (1.5%)	2.4 (1.6%)	1.2 (0.5%)	<0.001
Email	4.2 (1.1%)	4.4 (1.0%)	4.4 (1.2%)	0.25
Text Message	3.9 (1.2%)	3.7 (1.3%)	3.4 (1.5%)	0.11
Social Media	3.3 (1.5%)	3.0 (1.6%)	2.3 (1.7%)	0.006
FaceBook	3.2 (1.4%)	2.8 (1.6%)	2.1 (1.5%)	0.003
Twitter	2.8 (1.5%)	2.6 (1.5%)	1.9 (1.4%)	0.01
LinkedIn	2.8 (1.6%)	2.8 (1.6%)	2.1 (1.3%)	0.13
Instagram	2.8 (1.5%)	2.7 (1.6%)	1.5 (1.0%)	<0.001
Periscope	2.2 (1.4%)	2.3 (1.5%)	1.3 (0.7%)	<0.001
YouTube	3.1 (1.5%)	2.9 (1.7%)	2.2 (1.5%)	0.044
WhatsApp	2.7 (1.6%)	2.5 (1.7%)	1.7 (1.3%)	0.008
Noodle	2.1 (1.4%)	1.9 (1.4%)	1.3 (0.8%)	0.006
Google Calendar	3.3 (1.6%)	2.8 (1.6%)	1.9 (1.3%)	<0.001

For data backup-related technology, younger age groups ascribed significantly greater importance to Acronis, Genie and Storagecraft, while the 18-29 age groups and Seniors both ascribed greater importance to external drives for data backup, compared to the other age groups (Table 26). Perceived importance of other data backup-related technology was similar across age groups.

*Table 26.  
Perceived Importance of Data Backup-Related Technology*

Technology mean (SD)	Younger Millennial 18-29 n = 72	Older Millennial 30-37 n = 71	Baby Boomer 51-64 n = 53	p-value
Carbonite	2.6 (1.6%)	2.4 (1.7%)	1.9 (1.6%)	0.083
Acronis	2.5 (1.5%)	2.2 (1.6%)	1.3 (0.9%)	<0.001
Genie	2.4 (1.5%)	2.3 (1.6%)	1.2 (0.7%)	<0.001
Storagecraft	2.4 (1.5%)	2.1 (1.5%)	1.3 (0.9%)	0.003
Private Company Backup	2.6 (1.6%)	2.5 (1.6%)	2.3 (1.7%)	0.8
External Backup	3.6 (1.4%)	3.0 (1.6%)	2.7 (1.8%)	0.035

For teleconferencing technology, younger age groups ascribed significantly greater importance to the use of FaceTime, Google Hangout, Free Conference, Speek, Join.me, UberConference and OpenVoice (Table 27). Perceived importance of other teleconferencing-related technology was similar across age groups.

Table 27.

*Perceived Importance of Teleconferencing-Related Technology*

Technology mean (SD)	Younger Millennial 18-29 n = 72	Older Millennial 30-37 n = 71	Baby Boomer 51-64 n = 53	p-value
Skype	3.3 (1.6%)	3.2 (1.7%)	3.3 (1.7%)	0.97
FaceTime	3.0 (1.5%)	2.6 (1.5%)	2.0 (1.5%)	0.017
Google Hangout	3.0 (1.5%)	2.4 (1.5%)	1.6 (1.2%)	<0.001
GoToMeeting	2.7 (1.6%)	2.6 (1.5%)	2.7 (1.5%)	0.61
FreeConference	2.7 (1.5%)	2.3 (1.5%)	1.7 (1.2%)	0.004
Speek	2.2 (1.4%)	2.2 (1.5%)	1.3 (0.8%)	0.003
Join.me	2.3 (1.5%)	2.1 (1.5%)	1.5 (1.0%)	0.023
WebEx	2.5 (1.6%)	2.5 (1.6%)	2.6 (1.7%)	0.95
Uber Conference	2.4 (1.5%)	2.1 (1.4%)	1.3 (0.7%)	<0.001
OpenVoice	2.4 (1.5%)	2.1 (1.4%)	1.3 (0.8%)	0.002

For project management-related technology, younger age groups ascribed significantly greater importance to BaseCamp, MavenLink, Hive, Trello, Zoho, Jira, Slack, FreedCamp and ProWorkflow (Table 28).

Table 28.  
*Perceived Importance of Project Management-Related Technology*

Technology mean (SD)	Younger Millennial 18-29 n = 72	Older Millennial 30-37 n = 71	Baby Boomer 51-64 n = 53	p-value
Smartsheet	2.6 (1.6%)	2.3 (1.6%)	1.8 (1.5%)	0.12
BaseCamp	2.4 (1.5%)	2.1 (1.4%)	1.4 (1.0%)	0.007
MavenLink	2.5 (1.6%)	2.1 (1.5%)	1.6 (1.2%)	0.005
Microsoft Project	3.0 (1.5%)	2.3 (1.5%)	2.5 (1.7%)	0.1
Hive	2.6 (1.6%)	2.0 (1.4%)	1.4 (0.9%)	<0.001
Trello	2.5 (1.6%)	2.0 (1.4%)	1.4 (1.0%)	0.002
Zoho Office	2.2 (1.4%)	1.9 (1.4%)	1.4 (1.0%)	0.014
Jira	2.4 (1.5%)	2.0 (1.4%)	1.4 (1.1%)	0.002
Slack	2.2 (1.5%)	2.2 (1.5%)	1.3 (0.9%)	0.002
Freedcamp	2.2 (1.4%)	2.0 (1.4%)	1.4 (1.0%)	0.01
ProWorkFlow	2.3 (1.4%)	2.1 (1.5%)	1.4 (1.0%)	0.01

*Summary – Research Questions 1 And 2.* Connectivity tools were at the top of the list for technology that were important for supporting flexible work arrangements. Most of the tools do not work unless you are able to connect. Millennials favored more sophisticated technology such as Apple Watch versus the boomers’ Smartphone and laptop/desktop computer with a large screen.

Sharing technology was fairly important across age groups. Millennials were more likely to use Google Drive, while older workers had unheard of favorites like MediaFire and Zippyshare.

Millennials ruled with communication technology, particularly all social media platforms and Google Drive, with boomers using WhatsApp and YouTube.

Backing up is identified as important, but millennials store data in the cloud and boomers use external drives.

Millennials' teleconferencing tools of choice are Google Hangout and UberConference, whereas baby boomers' use WebEx and GoToMeeting.

Project Management had no standout tool or application, but younger age groups were more likely to use the newest software, like Hive, and boomers stuck to Microsoft Project.

Frequency of use responses were similar to the perceived importance responses. Millennials were standouts in the categories that had newer technology. Younger age groups reported significantly greater frequency of use for most technologies in all listed areas of flexible work including connectivity, sharing, communication, data backup, teleconferencing and project management.

*Summary – Research Question 3.* Participants were asked to select among a list of potential benefits of a flexible working arrangement. A free text field was also provided so that respondents could volunteer any information that they considered important. Entries in the free text fields emphasized the decreased commuting, higher productivity, ability to focus and not get caught up in office politics. One respondent volunteered “I don't have to wear suits or professional clothing. I can dress casually,” reiterating the theme of flexibility associated with flexible working arrangements. Another stated “Increased productivity. I would not be able to accomplish as much as I

do if I was working in an office setting every day. The daily distractions of co-work(ers), which on occasion are enjoyable and important, make me less productive.” A respondent reiterated that decreased commuting associated with flexible working arrangements was beneficial, saying “Increased travel flexibility, don't need to take vacation days because you can work from your vacation destination - best of both worlds.”

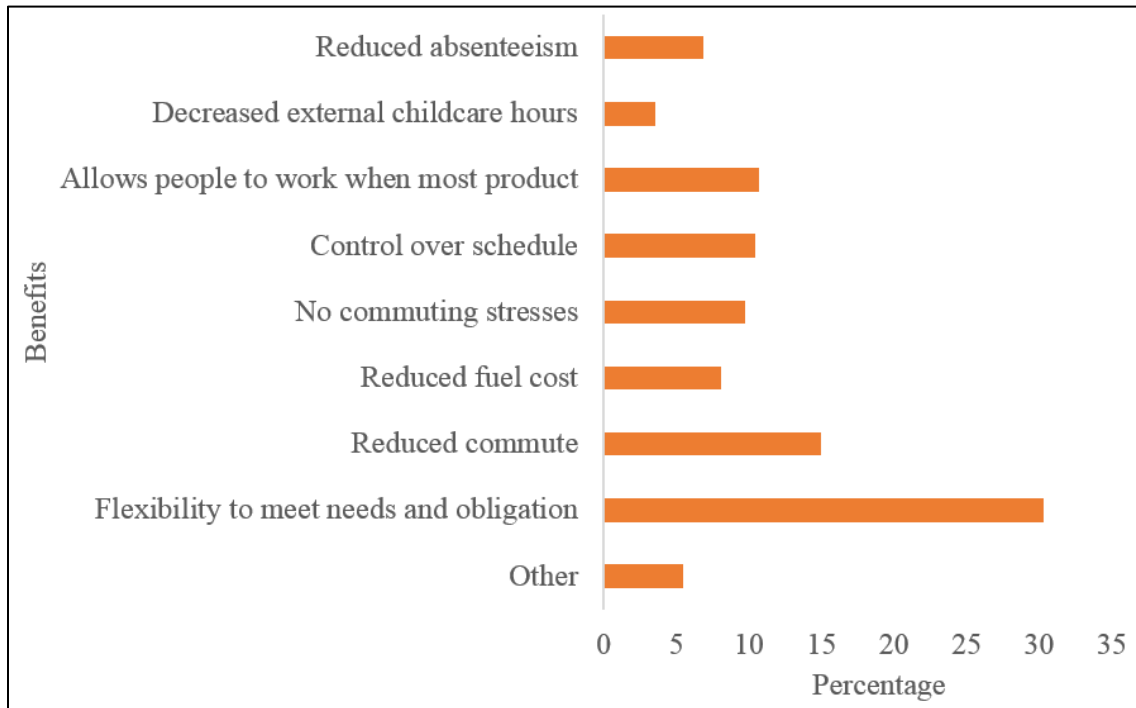


Figure 19. Benefits of Flexible Working Arrangements

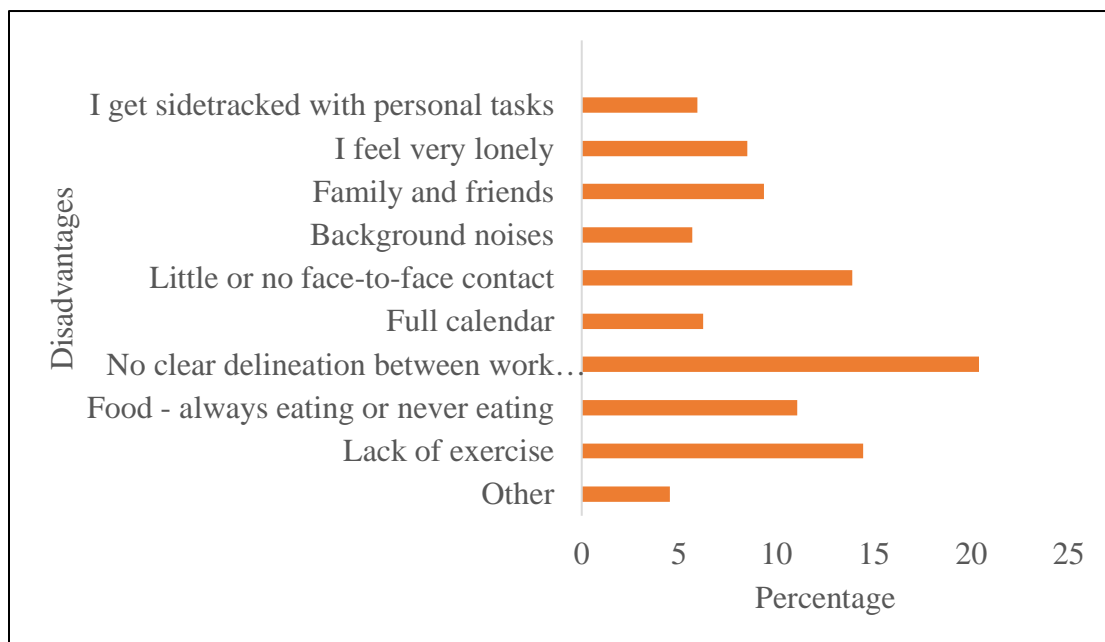
The most frequently cited benefits were the flexibility to meet needs and obligations (128, 48.7%) (Figure 19), reduced commute (63, 24.0%), ability to work when most productive (45, 17.1%) and control over schedule (44, 16.7%). The free text fields in Table 29 show that workers who do not want or value face time are also the same people who feel distracted by co-workers speaking to them. They are project-focused instead of people-focused.



Table 29.  
*Benefits of Flexible Working Arrangements*

Free Text Responses
Cuts down on commuting
Higher productivity
More pay
Not having to deal with people face to face
Ability to focus and not get caught up in office drama/politics
Ability to work more hours because you're comfortable and didn't waste a significant amount of time commuting.
Allows employees to spend more time working, when needed. Without having to worry about commuting, employees are able to start their day earlier and stay on later. This can also be a drawback. Also saves cost on meals, as you don't have to worry about food being accessible at home.
Better able to focus on certain projects when outside of the office
Don't have to drive in bad weather. You don't get exposed to sick people who come to work. If you are ill, you can still work on a limited basis.
Flexibility of work location. Work from wherever I am.
I don't have to wear suits or professional clothing. Can dress casually.
Increased productivity. I would not be able to accomplish as much as I do if I was working in an office setting every day. The daily distractions of co-workers, which on occasion are enjoyable and important, make me less productive.
Increased travel flexibility, don't need to take vacation days because you can work from your vacation destination - best of both worlds.
Less interruptions helps get more work done.
Where focus is on being at your accounts and accomplishing admin, it removes the need to also commute to/from an office leaving more time to be at accounts.
Working in a quiet environment

*Summary - Research Question 4.* Participants were asked to select among a list of potential benefits of a flexible working arrangement. Free text fields were also provided so that respondents could volunteer additional information that they considered important (Table 30). In the free text responses, respondents volunteered that they tend to work longer hours and may not get paid for the additional work. One participant stressed the decreased collaboration and lack of opportunity for “water-cooler camaraderie?” One participant considered a balance between working from home and in the office to be the best option.



*Figure 20. Disadvantages of Flexible Working Arrangements*

In Figure 20, the most frequently cited disadvantages of a flexible working arrangement were that it was often associated with a lack of delineation between work and home (72, 27.4%), a lack of exercise (51, 19.4%), little or no face-to-face contact (49, 18.6%) and decreased control of eating habits (39, 14.8%).

Table 30.

*Disadvantages of Flexible Working Arrangements*

<b>Free Text Responses</b>
I end up working for longer and harder.
You are always working but not getting paid for it.
Collaboration contributes to better ideas and communication - and also can stimulate thought processes. Virtual work limits that ability as well as "water cooler" camaraderie with colleagues that is quite important.
Due to increase productivity, I take on more work than my colleagues who are not virtual.
I don't have to wear suits or professional clothing. Dressing casually can be as much of a disadvantage as an advantage. Helps your mindset to get dressed for the part!
I don't stop working. From waking up to falling asleep, work is always easily accessible, and I can feel pressure to keep working.
It is great to have a balance of working from home and working in the office...all needs get met that way!
Lack exposure to senior leadership.
People in management may lack transparency into employee contributions. It may impact promotion opportunity for those who desire to climb the corporate ladder.
<ul style="list-style-type: none"> <li>• There is a lack of exercise, but not to the point of never leaving the desk.</li> <li>• Isolation - there are plenty of people to talk to, but it's nice to be face to face at times.</li> <li>• Discipline is a requirement for anyone who has a flexible work arrangement.</li> </ul>
You become used to working alone and the lack of face to face human interactions.

## Recommendations

### *Guideline Template for Flexible Work Arrangements*

The guideline template was created from a combination of the flexible work arrangement results, with existing, free flexible work arrangement templates from the Society for Human Resource Management (SHRM) – a human resource association - and C2G Partners. The guideline takes into consideration the needs of millennials and baby boomers expressed in previous results.

#### *Flexible Work Arrangement Policy Template.*

[Company Name] is committed to helping employees face the demands of juggling work, family, and life-related issues by offering a number of possible flexible work arrangements. These arrangements provide employees with increased flexibility with their work schedule while allowing [Company Name] to maintain a progressive and productive work environment. Alternative work scheduling is an opportunity to maintain employee productivity through various forms of creative work scheduling.

All [Company Name] employees will be considered for alternative work scheduling on a case-by-case basis in situations where creative work schedules have been shown to accomplish both work and personal goals, to provide coverage for individual department operations and to serve [Company Name] as a whole with increased productivity at no expense to quality output.

Several alternative work schedule options are available to employees:

Core Team: _____ Consultant on Billing: _____	____ Flextime, in which an employee works eight hours per workday, but there is flexibility in an employee's set scheduled starting and ending times. There is no start or end time, and you will be measured by work output.	In office _____ Virtual _____	0x __ 1x __ Weekly____ - Monthly____ Quarterly____ Other _____
	____ 10-hour day, four-day workweek, in which an employee works 10 hours per workday, reducing the workweek to four days a week.		
	____ Remote worker, where the majority of work is done virtual. Employees are mandated to attend quarterly meetings either at HQ or a designated location. Employees can also choose to come into the office for meetings		

Your manager will help you to determine the best flexible arrangement for both you and the job. Employees within the same department can have different work arrangements. Employees who are client facing are assigned client or project schedule and needs.

There will be a three-month trial period to assess the impact of the flexible work arrangement. After successful completion of the trial period, the work arrangement will stay in effect until a change is requested by either the manager or the employee. The arrangement may be canceled for any reason by management. An employee wishing to change or cancel an alternative work arrangement must obtain written approval from his or her director/manager with consent from HR.

Upon approval of your flexible schedule, the company will provide an office setup with:

1. Your choice of laptop (lightweight) or desktop computer – with microphone and camera. If desktop computer, standard or large screen monitor are available
2. All computers will be imaged with:
  - a. Skype for Business
  - b. Dropbox for Business
  - c. Automatic computer backup to Carbonite
  - d. Microsoft Office Suite including Outlook (mail, contacts, calendar)
3. Mouse
4. Flash Drive – 128gb
5. Router
6. Wi-Fi – you will be reimbursed for your wi-fi usage
7. Ethernet
8. Smartphone – you will be reimbursed for your cell usage
9. Selection of ergonomic chairs and desks
10. RingCentral – phone, teleconferencing, recording, fax

Please check with the IT Department if you need any additional tools or software.

## CHAPTER 11

### LIMITATIONS

Research Question 4, “What are some problems (disadvantages) of technology use among millennials and boomers?” got to the root of some limiting factors of having a flexible work arrangement schedule. Technology, can make workers productive, but can also cause inefficiencies when there are breakdowns. Some limitations, as identified by participants, include:

#### Lag in Communication and Response

Because most participants go into the office once per week, or work completely remotely, patience is required when it comes to communicating with the home office, regardless of where it is located. In an onsite environment, you can physically see if the worker is at their desks, coming back from a meeting or is absent from the office. Those observations are not possible in a virtual capacity. In some industries, like healthcare and crisis management, a lag in communication is a life or death matter. Wi-fi outages can also be the cause of the lag.

To counteract this lag in communication, workers can make it a best practice to check their emails or text on a regular basis. Additionally, virtual workers should make their availability know to the team. Companies can use a shared calendar, such as Microsoft Outlook, can let other workers see their availability. Per this research, most millennials like to text (instant communication), and baby boomers can develop the habit of

texting if they see communication is not being returned by phone or email.

### Time Management and Self-Discipline

Time management and self-discipline are two of the biggest limitations to flexible work arrangements, as mentioned by participants. Millennials, particularly, mentioned the need for time management and discipline as “the day is easy to get away from you.” Younger millennials are new to the workforce and lack the discipline needed to not be distracted by everything from friends and family, who feel like they are not working because they are home, to the distractions of social media. They don’t learn discipline because they are unsupervised at home.

Further, employers can deploy time management techniques and tools. One technique is to place virtual workers on a productivity model instead of an hourly wage or salary. This arrangement allows the employer to track the employee based on deliverables and can remediate if they see a loss of productivity. Employers can also utilize time management tools such as WiseTime.io that track and report when an employer logs off their computer and the amount of time spent on a project. Boomers should work with millennials to teach time management tricks and discipline.

### Miscommunication and Misunderstood Responses

In a virtual world, it is easier to misunderstand responses or miscommunicate. One participant mentioned how there is no tone in email. Workers insinuate their own tones



when reading an email or text message. The best practice is to send a clarifying email or call the worker to confirm the meaning of the email. Text messages are even easier to misinterpret. Furthermore, spell checking can change a word to something that is offensive to the reader. Miscommunications or misunderstandings also happen when a word is inadvertently left out of the communication, such as “There will be breakfast” instead of “There will be no breakfast.” When an error is made in communication, the individual should own it, apologize, make the correction, and move on.

### Online Distractions

Online distractions such as social media, shopping, gambling, isolation, and cyberbullying were mentioned by participants. Millennials report that they are always online and social media is a way of life for them. However, when in a flexible work arrangement, millennials often do not know where to draw the line on personal use of social media when their jobs also require using social media. One millennial said, “Before you know it, I’ve spent a few hours between Instagram, Facebook and Pinterest.” It is difficult to completely avoid social media, but this emphasizes the call for self-discipline. One may block out ten minutes every two hours to satisfy a social media craving, but during those two hours one should be more productive and focused so that the ten minutes on social media become a treat.

Baby boomers are easier targets for cyberbullying and mentioned that they are not always savvy enough to understand when they are being bullied until it’s over. Bullying happens in the physical workplace, and employees can be bullied by their managers online

via emails or constant chat, which takes them away from being productive and efficient in their work. Millennials also feel bullied into working harder than anyone else to prove that they are working. Employers must have clear policies for workplace bullying, encouraging the employee or worker to speak out without recrimination and impose criminal sanctions on bullies.

Isolation is one instant where social media can be helpful to stay in touch with clients and employees. Both millennials and baby boomers stated they have experienced a sense of isolation, particularly if they are working internationally and has to be up at hours where no one else in the office would not be there. The sense of isolation is felt more by people who work completely from home and never goes into the office. To combat isolation, workers can join outside groups like Meetups or Toastmasters to get out of the house at lunchtime and interact with others. These participants can schedule times to meet other staff who might be in their area, or schedule client visits. Exercise groups, or otherwise visiting the gym, also accomplishes the goal of engaging in face-to-face activities.

### Promotability, or “Climbing the Corporate Ladder”

Baby boomers were more prone to mention the lack of promotions and millennials were more concerned with upward movement in the company. Both groups felt that working from home carried a stigma due to a lack of face time. Because your manager cannot physically see you, there is an inherent lack of trust that you might not be working as hard as you should because you are home. Baby boomers are concerned because they are

at the age where they would like to earn as much as possible due to having children in college, or they have invested many years in one company. Not only are they not getting promoted, they are simply trying to keep their jobs. One baby boomer stated, "Beware of the first half of your life. I'm just hanging on till my last son graduates from college, so I switch departments to make it hard to find me." Additionally, the visible signs of a promotion, such as a nice office or cubicle, is rapidly leaving the workplace with the introduction of reconfigured floor plans to accommodate hoteling spaces for flexible workers who occasionally visit the office. Working from home helps to level that playing field. However, employers need to be aware of employment discrimination laws around fair treatment of employees. The Department of Labor has stringent laws prohibiting specific types of job discrimination in certain workplaces. Employee handbooks should clearly delineate qualifications for promotion for each function and job. Lastly, performance evaluations should rank the flexible worker against his/her peers based on the job done, not on in-office presence.

### Health Implications

One of the reasons for participants working from home was due to health reasons like hypertension from job stress, breast cancer surgery and chemotherapy, or just being an older worker with physical ailments. However, one of the limitations for a flexible worker is also health. A flexible worker sits all day, usually more hours than an office worker because they start earlier due to lack of commuting. They lack physical activity and the hectic schedule of back-to-back phone calls does not allow for exercise. Technology is the

reason that enables working from home, but the same technology is causing different ailments. One participant mentioned that “the refrigerator is right there all the time.” The range of movement is minimal, especially for those living in small apartments, and has a decreased control of eating, resulting in weight gain. Additionally, sitting in front of a computer causes strain to the eyes. Older workers require a large screen monitor in addition to a laptop or desktop computer.

Employers should take the resulting physical ailments of flexible workers into consideration when creating their medical plan. Gym memberships, fitness, diet and wellness programs, chiropractic and ergonomic equipment should be considered.

## CHAPTER 12

### FUTURE RESEARCH

This paper identified technology and tools to ensure a best-in-class flexible work arrangement practice as well as identified some guidelines for practitioners, particularly employers. There are still some areas for future research that will help extend the field and offer further insight into the role of flexible work arrangements for boomers and millennials.

#### Negative or Unintended Consequences of Technology

Most of flexible work arrangement literature focus on the positive side and leave many unaware of the negative consequences of how technology can sabotage flexible work arrangements. Discrimination, health issues—including depression and weight gain—socialization, additional work-family conflict, and work culture are all topics that are rarely discussed.

#### *Discrimination*

Blake-Beard et al. (2010) found that while flexible work arrangements allow organizations to “sustain” their workforce, diverse employees face challenges in accessing them, particularly across dimensions of gender, race, and class. Blake-Beard’s

paper offered guiding principles for organizational leaders, including making flexibility an organizational norm, better understanding employees' lives outside of work, and creating metrics of social sustainability. Chandra (2012) suggested researchers should focus beyond managerial, professional, and mostly White women in America. What can be learned about employees of color, of lower socioeconomic levels, and those in location-dependent jobs in regarding to technology? What can be learned from companies and countries, who are leaders in providing flexible options?

### *Health Issues*

Per Tausig and Fenwick (2011), in a survey conducted by the American Psychological Association in early 2011, 36% of workers said they felt tense or “stressed out” during their workday (20% said their stress levels were very high) and almost one-half said that low pay affected their stress level at work. These workers cited the lack of opportunities for advancement, heavy workload, high expectations, and long hours as significant sources of stress. Less than two-thirds of workers were satisfied with the amount of control and involvement they had at work and with the work-life balance practices of their employer. Stress is one of the top health issues for flexible workers. Worry over getting promoted, not working hard enough, and low pay are just some of the reasons to comprise employees' mental health, directly leading to depression and weight gain (Tausig and Fenwick, 2011).

Future research should investigate the stress level of in-office employees versus flexible workers. What is the average number of sick days taken by office employees versus flexible workers? How many mental health days are taken for both? How many flexible workers develop health issues based on lack of movement?

### *Socialization*

Organizational socialization is the process by which individuals become part of an organization's pattern of activities (Hodgkinson & Ford, 2007). This broad definition accommodates the impact of both the organization on the individual and the individual on the organization. In a remote, work-from-home situation, the worker is removed from the traditional office socialization process. Orientation is online or non-existent, water-cooler conversations do not happen unless you go into the office at least once per week, and it takes longer to learn about the organization and culture. One participant in this research said, "Collaboration contributes to better ideas and communication - and also can stimulate thought processes. Virtual work limits that ability as well as "water cooler" camaraderie with colleagues that is quite important." This lack, or perceived lack, of work friends can lead to a feeling of isolation or depression. Future research that will be invaluable to organizations can explore socialization tactics that can be developed for flexible workers from onboarding of a new employee with Human Resources, through regular checkpoints with their manager, and exit interviews.

### *Negative Work-Family Conflict*

Kim's 2017 paper on negative work–family/family-work spillover can be categorized based on its directionality. One direction is negative work-family spillover, which occurs when work roles and job demands result in incursions into family life; the other direction is negative family-work spillover, which occurs when family roles interfere with work-related activities.

Becoming a parent is one of the key reasons given for requesting a flexible work arrangement. Parents often feel they will have be able to spend more time with their children while working. Parenthood status requires company managers to make recurring role transitions in their work–family relations, which can cause negative work–family/family-work spillover. If the parent is working longer hours, and working hard to prove that they are working, and has a caregiver for the child, how much time is really being spent being a parent? At the same time, the perception at the office is that you're not promotable because you are spending more time with your family. Company managers have a limited amount of time to address work demands and family responsibilities simultaneously.

A participant in Almer's 2000 research on the myths of flexible work arrangement in the CPA industry stated, "There is, at times, double the guilt. You are not a good enough mom because you work, and you are not totally committed to your career because you work less than others." This comment sums up how most women feel in requesting anything but a non-traditional work arrangement.



This area is ripe for future research. Little research has been on identifying whether a different type of orientation is needed for workers who request, and take, flexible schedules. How can organizations adequately prepare the flexible worker to understand the ongoing conflicts in the work-family relationship?

### Workplace Culture

One of the most important emerging issues in the field of human resource development is how to effectively help organizations deal with the shifting demographics in the workforce. Each generation seems to be alike in one crucial area: their desire for workplace flexibility. Middle managers need to be incented and trained to accept a culture where they maintain accountability without power and control (Eversole et al., 2012). With the changing workforce, flexible workers often do not get a chance to assimilate into the current office culture. Retention of workers of all generations will be vital to the success of organizations in the future. HRD needs to pay increasing attention to helping organizations manage this shift. Both millennials and baby boomers are requesting flexible work arrangements. Despite the possible benefits of workplace flexibility in retaining workers across the generations, their implementation faces several barriers. Workplace culture often blocks the implementation of workplace flexibility. Employees may also perceive that there will be negative repercussions for them if they receive the accommodations, or even if they ask for them. Finally, allowance decisions are usually left to the discretion of the frontline

manager, who is likely to be resistant to allowing flexible work options (Eversole et al., 2012). Employees experienced less work/family conflict when fewer negative consequences for their career resulted from the use of family-friendly benefits, and when they worked fewer hours. Employees do not use the programs because it is seen as bad for careers.

Future research should help organizations to see flexibility as an investment in people. Managers need to recognize that employees have lives outside work, and make sure they have the tools and resources they need. Training for managers needs to include elements such as handling accountability without power and control, ways to measure outcomes without being able to control workers' time, and how to deal with trust issues.

### Supervisor Role

From the pilot interviews, most participants did not have to supervise other employees. It is interesting that even though all participants used technology, there was a negative correlation on the question that included technology, but the limitations of flexible work arrangement as identified by participants included 'lag in communication (via email especially), miscommunication, distractions in the remote work environment.' One participant believed that "you really can't replace the face-to-face contact" – this industry is mostly technology driven.

Future research should investigate if flexible work arrangement is better for people who do not have direct reports or in a supervisory role.

My goal is to understand how technology can help employers promote flexible work arrangement to their employees, particularly for the identified groups. Technology is an even bigger enabler in today's work environment and future research should identify if technology is a help or hindrance to both employers and employees with flexible work arrangement.

## CHAPTER 13

### EXPECTATION OF RESEARCH CONTRIBUTION

Practitioners business owners will be able to use the findings to enhance their flexible work arrangement programs by asking millennials and baby boomers exactly what tools they need and provide them with those tools. Both practitioner populations of large corporations and small business owners must change to adapt to emerging new circumstances – and the flexible work arrangement model is changing daily. They are experimenting with different ways of working to see which suits their businesses best. A far more effective way of making a change to their current model, if any, is to look at the research outcomes from academia and introduce findings into their businesses.

The flexible work arrangement policy is just a sample of how an employer can create your own document that gives consistency across an organization. They must then continue to evaluate whether the guidelines are effective, particularly to bottom-line revenue, as well as to employee retention, particularly in the millennial and boomer populations.

## CHAPTER 14

### CONCLUSION

Flexible work arrangements have become a part of the general offering that organizations utilize to attract and retain millennials and baby boomers in HR departments around the world. Some companies are built completely on a flexible work model, and our results show that participants most frequently worked in companies with a hybrid program where the employee can go into the office one, or more, times per week. At the same time, as technology becomes more advanced, it has become an enabler of flexible models, allowing the participants to work around the clock from anywhere. This paper advances the research on the tools that millennials and baby boomers use, how they use the tools differently in an FWA environment, as well as recommended best practices on to how to execute this model. Future research, particularly the unintended consequence of flexible working arrangements, will make an interesting study geared towards practitioners.

## REFERENCES CITED

- Almer, E. D., & Kaplan, S. E. (2000, April). Myths and Realities of Flexible Work Arrangements. *The CPA Journal*, 70(4), 14.
- American Staffing Association (June 2016)
- Belanger, F., Collins, R. W., & Cheney, P. H. (2001). Technology requirements and work group communication for telecommuters. *Information Systems Research*, 12(2), 155-176.
- Blake-Beard, S., O'Neill, R., Ingols, C., & Shapiro, M. (2010). Social sustainability, flexible work arrangements, and diverse women. *Gender in Management: An International Journal*, 25(5), 408-425.
- Buckley, M. R., Halbesleben, J. R. B., & Wheeler, A. R. (2016). *Research in personnel and human resources management: Volume 34*. Bingley, U.K: Emerald.
- Bureau of Labor Statistics (BLS) (2016). Monthly Labor Review.  
<http://www.dol.gov/general/topic/workhours/flexibleschedules>
- Cahn, D., & Cahn, J. (2016). *When millennials rule: the reshaping of America*. Post Hill Press.
- Chandra, V. (2012). Work-life balance: Eastern and western perspectives. *The International Journal of Human Resource Management*, 23(5), 1040-1056.
- Charness, N. (2006). Work, older workers, and technology. *Generations*, 30(2), 25-30.
- Choney, S. (2012). *Millennials 'benefit and suffer' from hyperconnected lives: report*. Available at << <http://www.today.com/money/millennials-benefit-suffer-hyperconnected-lives-report-248303>>>
- Cooper, C. L. "The Changing Psychological Contract at Work," *European Business Journal* (11:3), 1999, pp. 115-118.
- DeNisi, A. S., & Griffin, R. W. (2014). *HR*. Mason, Ohio: South-Western.
- Eversole, Barbara A., Venneberg, Donald L., and Crowder, Cindy L. (2012). Creating a Flexible Organizational Culture to Attract and Retain Talented Workers Across Generations. *Advances in Developing Human Resources*. 14(4) 607–625.
- Fleet, D., Fleet, E., & Seperich, G. (2013). *Agribusiness: principles of management*. Cengage Learning.

- Fry, R. (2016). *Millennials overtake Baby Boomers as America's largest generation*. Retrieved from << <http://www.pewresearch.org/fact-tank/2016/04/25/millennials-overtake-baby-boomers/> >> on 1 June 2017.
- Gibert, M. (2004). The meaning of technology. *Selected readings from American sources*. Univ. Politèc. de Catalunya.
- Glaser, B., & Strauss, A. (1999). *The discovery of grounded theory: Strategies for qualitative research*. New York: Aldine de Gruyter.
- Grice, M. M., McGovern, P. M., & Alexander, B. H. (2008). Flexible work arrangements and work-family conflict after childbirth. *Occupational Medicine*, 58(7), 468-474.
- Griffin, R. (2012). *Management*. Cengage Learning.
- Griffin, R. W., & Moorhead, G. (2012). *Organizational behavior: Managing people and organizations*. Mason, OH: South-Western/Cengage Learning.
- Griffin, R., Phillips, J., & Gully, S. (2016). *Organizational behaviour: managing people and organizations*. Cengage Learning.
- Guffey, M., & Loewy, D. (2015). *Essentials of business communication*. Cengage Learning.
- Heathfield, Susan M. (2016). *Advantages and Disadvantages of Flexible Work Schedules?* Updated November 10, 2016.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44, 513–524.
- Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology: An International Review*, 50, 337–421.
- Hodgkinson, G. P., & Ford, J. K. (2007). Socialization in Organizational Contexts. *International Review of Industrial and Organizational Psychology, Volume 22, 2007*. New York, NY: John Wiley & Sons.
- Jones, Jeffrey M. (2015). In U.S., Telecommuting for Work Climbs to 37%. *Gallup News*. August 19, 2015.
- Kelchtermans, S., & De, B. F. (2013). *The proceedings of the 8th European conference on Innovation and Entrepreneurship, ECIE 2013, Hogeschool-Universiteit Brussel (HUBrussel), Brussels, Belgium, 19-20 September 2013*. Academic Conferences and Publishing International Limited.

- Kim, Hyondong, Kim, Youngsang, & Kim, Dae-Lyong. (2017). Negative work–family/family–work spillover and demand for flexible work arrangements: The moderating roles of parenthood and gender. *The International Journal of Human Resource Management*, 1-24.
- Knight, P. J., & Westbrook, J. (1999). Comparing employees in traditional job structures vs telecommuting jobs using Herzberg's hygienes & motivators. *EMJ - Engineering Management Journal*, 11(1), 15-20.
- Kossek, E., Lautsch, B., & Eaton, S. (2005). Flexibility enactment theory: Implications of flexibility type, boundary management and control for work-family effectiveness. In E. Kossek & S. Lambert (Eds.), *Work and life integration: Organizational, cultural and individual perspectives* (pp. 243–262). Mahwah, NJ: Lawrence Erlbaum.
- LaMorte, Wayne W. (April 2016). Behavioral Model. Boston University School of Public Health. [http://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/BehavioralChangeTheories/BehavioralChangeTheories4.html#headingtaglink\\_3](http://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/BehavioralChangeTheories/BehavioralChangeTheories4.html#headingtaglink_3).
- Land, K. C., Sirgy, M. J., & Michalos, A. C. (2012). *Handbook of social indicators and quality-of-life research*. 113-136. London: Springer.
- Leong, F., & Barak, A. (2005). *Contemporary models in vocational psychology: a volume in honor of Samuel H. Osipow*. Routledge.
- Lingard, H., & Francis, V. (2009). *Managing work-life balance in construction*. Routledge.
- Lowe, G. S., & Graves, F. (2016). *Redesigning work: A blueprint for Canada's future well-being and prosperity*. Toronto; Buffalo; London: University of Toronto Press.
- McGuire, M. (2016). Who are millennials? The Huffington Post, << [http://www.huffingtonpost.com/michael-mcguire/who-are-millennials\\_b\\_10841764.html](http://www.huffingtonpost.com/michael-mcguire/who-are-millennials_b_10841764.html) >>
- Mudambi, S., Schuff, D., and Zifla, E., “What’s ‘Funny’ about Technology Adoption? Humorous Appropriation of Online Review Platforms,” forthcoming at ICIS 2016, Dublin, Ireland.
- NorthCoast 99. Flexible Work: Trends and Best Practices. Copyright © 2013 NorthCoast 99. [www.northcoast99.org](http://www.northcoast99.org).
- Osterman, P. (1995). Work/family programs and the employment relationship. *Administrative Science Quarterly*, 40, 681–700.
- Park, Y. J., Campbell, S. W., & Kwak, N. (2012). Affect, cognition and reward:



- Predictors of privacy protection online. *Computers in Human Behavior*, 28(3), 1019-1027.
- Pearce, J. (2009). Successful Corporate Telecommuting with Technology Considerations for Late Adopters. *Organizational Dynamics*, 38(1), 16-25
- Peters, Scott. (2015). Cornell University. Sample Study Guide. Profiles of Practitioners – Practice Stories from the Field.  
[https://courses2.cit.cornell.edu/fit117/CP\\_I\\_InterviewGuide1.htm](https://courses2.cit.cornell.edu/fit117/CP_I_InterviewGuide1.htm)
- Peugh, J., & Enders, C. (2004). Missing Data in Educational Research: A Review of Reporting Practices and Suggestions for Improvement. *Review of Educational Research*, 74(4), 525-556. Retrieved from <http://www.jstor.org/stable/3515980>
- Pew Research Center. June 10-July 12, 2015.
- Powell, G. N. (2011). *Women & men in management*. Thousand Oaks: SAGE Publications, Inc.
- Rainer, T. S., & Rainer, J. W. (2011). *The millennials: Connecting to America's largest generation*. Nashville, Tenn: B & H Pub. Group.
- Reynolds, Brie. February 5, 2018. 8 of the Top Companies for Remote Jobs Share Why They Hire Remote. *Flexjobs*. [https://www.flexjobs.com/employer-blog/top-companies-for-remote-jobs-share-why-they-hire-remote/?utm\\_campaign=website&utm\\_source=sendgrid.com&utm\\_medium=email](https://www.flexjobs.com/employer-blog/top-companies-for-remote-jobs-share-why-they-hire-remote/?utm_campaign=website&utm_source=sendgrid.com&utm_medium=email)
- Rogers, E. (1983). *Diffusion of innovations* (3rd ed.). New York: London: Free Press; Collier Macmillan.
- Schmithusen, F., Kaiser, B., Schmidhauser, A., Mellinghoff, S., Perchthaler, K. & Kammerhofer, A. (2015). *Entrepreneurship and management in forestry and wood processing: principles of business economics and management processes*. Routledge.
- Smith, A (2016). *Gig Work, Online Selling and Home Sharing*. Pew Research Center, November 17, 2016.
- Smith, V. (2013). *Sociology of work: an encyclopedia*. SAGE Publications.
- Society for Human Resource Management (SHRM). Retrieved from [https://www.shrm.org/resourcesandtools/tools-and-samples/policies/pages/cms\\_000593.aspx](https://www.shrm.org/resourcesandtools/tools-and-samples/policies/pages/cms_000593.aspx)
- Spence, M. (1973). Job Market Signaling. *The Quarterly Journal of Economics*, 87(3), 355-374.

- Tausig, M., & Fenwick, R. (2011). *Work and mental health in social context*. New York: Springer.
- The International Bank for Reconstruction and Development/*the World Bank*, 2011
- ThirdPath Institute. (2016). The Changing Needs of Families. Webinar.  
#MenWomenFlex. <http://www.thirdpath.org/>
- Tung, L. -, & Turban, E. (1996). Information technology as an enabler of telecommuting. *International Journal of Information Management*, 16(2), 103-117.
- United States Census Bureau;  
<http://www.census.gov/data/tables/2012/demo/computer-internet/computer-use-2012.html>
- Virkar, S. (2014). Trolls just want to have fun: Electronic aggression within the context of e-participation and other online political behaviour in the United Kingdom. *International Journal of E-Politics (IJEP)*, 5(4), 21-51.
- Voydanoff, P. (2005). Consequences of boundary-spanning demands and resources for work-to-family conflict and perceived stress. *Journal of Occupational Health Psychology*, 10, 491–503.
- Wattal, S., Schuff, D., and Mandviwalla, M. “Does the Internet matter? A study of the 2008 presidential primaries.” *The IBIT Report*. November 2008.
- Wattal, S., Schuff, D., Mandviwalla, M, and Williams, C., “Web 2.0 and Politics: The 2008 U.S. presidential election and an e-politics research agenda,” *MIS Quarterly* 34(4) (December 2010). pp. 669- 688.
- Webster, Sandra. April 7, 2016., *Hit the Field Research*. Assignment for Problems Solving using Qualitative Research. Prof. Lynne Andersson. Residency 3 Spring 2016.
- Workman-Stark, A. L. (2017). *Inclusive Policing from the Inside Out*. Cham: Springer International Publishing.
- Workplace Flexibility 2010. Georgetown University Law Center.  
<https://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=1009&context=legal>
- Yang, S., Liu, Y., & Wei, J. (2016). Social capital on mobile SNS addiction. *Internet Research*, Vol. 26(4), pp. 982-1000.
- Zhang, K., & Sarvary, M. (2015). Differentiation with user-generated content. *Management Science*, 61(4), 898-914.
- Zickuhr, Kathryn. (2010). Generations 2010. *Pew Research Center*.  
<http://www.pewinternet.org/2010/12/16/generations-2010/>

APPENDIX A  
SURVEY COVER LETTER

As an individual in a flexible work environment, I am seeking your input and participation in a 20-30-minute survey on my dissertation topic of “Flexible Work Arrangements: Technology Enabling Emerging Populations of Millennials and Baby Boomers.” Please let me know what you think by using the comments section to give additional information, and feel free to forward this survey to both men and women you know who work outside the office.

The official standard of a 40-hour work week has not changed for decades in the United States. A flexible work arrangement (a.k.a. virtual, compressed work week, part-time work, job sharing, flexible schedule or telecommuting) is an alternative to the traditional 9am to 5pm, 40+hours work week in office. These are some definitions of flexible work arrangements (FWA) when we refer to them in the questions.

The Fair Labor Standards Act (FLSA) does not address flexible work schedules. Alternative work arrangements such as flexible work schedules are a matter of agreement between the employer and the employee (or the employee's representative) (Bureau of Labor Statistics, 2016).

In truth, the working environment has changed as employees are expected to work more than 40 hours per week and must be accessible around the clock on weekends and after the end of the work day. Millennials are described as the always-connected-to-the-internet generation. Technology makes this possible.

This research will inform and update academics, practitioners, companies, and employees on the impact of technology on flexible work arrangements for working individuals – particularly how is technology enabling flexible working arrangements (FWA) for the emerging populations (millennials and boomers). Emerging populations are the age groups that are pushing the agenda of flexible work arrangement.

The paper will draw on a survey with a range of key informants of millennials, boomers, seniors and a control group outside those age ranges who are business owners and employees. The survey will explore diverse issues including the tools that aid in flexible work arrangement as well as the advantages and disadvantages of using technology outside the office and will result in best practices for individuals and businesses who want to participate in a flexible work arrangement.

Thank you in advance – your help is much appreciated. If you have questions, concerns, or complaints, contact Sandi Webster at (917) 697-8218 or by email at [web2685@aol.com](mailto:web2685@aol.com) and cc: me at [tug30372@temple.edu](mailto:tug30372@temple.edu)

APPENDIX B  
CONSENT FORM

Title of the research study: Flexible Work Arrangements: Technology enabling FWA for the emerging populations of millennials and seniors

Name and Department of investigator:

John Deckop, DBA Candidate Mentor and Professor, Human Resources  
Management, Temple University  
Sandra Webster, Research Assistant

This study involves research. The purpose of this research is to discover how and why these “emerging populations” of millennials and seniors are using technology to get FWA.

***What you should know about a research study:***

- Someone will explain this research study to you.
- You volunteer to be in a research study.
- Whether you take part is up to you.
- You can choose not to take part in the research study.
- You can agree to take part now and later change your mind.
- Whatever you decide, it will not be held against you.
- Feel free to ask all the questions you want before and after you decide.
- By signing this consent form, you are not waiving any of the legal rights that you otherwise would have as a participant in a research study.

The estimated duration of your study participation is no more than 30 minutes.

The study procedures consist of answering questions either by writing, typing, or verbally expressing your answers.

The reasonably foreseeable risks or discomforts are not expected beyond those associated with typical day-to-day activities.

The benefit you will obtain from the research is knowing that you have contributed to the understanding of this topic.

The alternative to participating is not to participate.

Please contact the research team with questions, concerns, or complaints about the research and any research-related injuries by calling John Deckop at (215) 204-1933 or e-mailing [jdeckop@temple.edu](mailto:jdeckop@temple.edu).

This research has been reviewed and approved by the Temple University Institutional Review Board. Please contact them at (215) 707-3390 or e-mail them at: [irb@temple.edu](mailto:irb@temple.edu) for any of the following: questions, concerns, or complaints about the research; questions about your rights; to obtain information; or to offer input.

This research does not involve videotaping participants in the study during face-to-face interviews.

**Confidentiality:** Efforts will be made to limit the disclosure of your personal information, including research study records, to people who have a need to review this information. However, the study team cannot promise complete secrecy. For example, although the study team has put in safeguards to protect your information, there is always a potential risk of loss of confidentiality. There are several organizations that may inspect and copy your information to make sure that the study team is following the rules and regulations regarding research and the protection of human subjects. These organizations include the IRB, Temple University, its affiliates and agents, Temple University Health System, Inc., its affiliates and agents, the study sponsor and its agents, and the Office for Human Research Protections.

Your signature documents your permission to take part in this research.

**DO NOT SIGN THIS FORM AFTER THIS DATE** →

4/15/18

\_\_\_\_\_  
Signature of subject

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed name of subject

\_\_\_\_\_  
Signature of person obtaining consent

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed name of person obtaining consent

Subject Initials: \_\_\_\_\_

Date: \_\_\_\_\_

Template Revision: May 16, 2013

APPENDIX C  
INTERVIEW PREPARATION GUIDE

*Unstructured Interview – Flexible Work Arrangements.* This guide was adapted from Scott Peters' 2005 Sample Study Guide. The intention is to prepare the interviewer to get the most from their interview.

Part 1

Types of Interviewers:

1. Business Owners
2. Employees
3. Flexible Workers
4. Non-Flexible Workers who were declined flexible work arrangements
5. Seniors
6. Boomers
7. Millennials

Email the consent form to the interviewee, using this as an opportunity to confirm, in writing, your interview arrangements and remind them of the practice story agreed upon.

Pre-interview Discussions

1. If I don't know the interviewee, I will spend some time introducing myself. If I know the interviewee, I will make small talk to put them at ease.
2. Script:

"Thanks for agreeing to be interviewed. I want to explain how this will work. We'll do about a 60-minute interview that will be tape recorded, transcribed, and then edited into something we call a "profile" that will include only your words, with my questions edited out.

In the interview, we'd like to focus on a flexible work arrangement that you had or requested and would like to show the challenges and possibilities of having a flexible work arrangement. It's important that we focus the interview on a specific topic, so we can get a close look into what makes what you do so rewarding and challenging. We want to focus on how technology helps you in your daily routine, and to understand how you work with your team members, and the obstacles, if any, that you had to overcome, or are still overcoming.

I would like you to focus on an incident that you've learned a lot from, something that others who want to work flexibly might find instructive. You will be anonymous in the final profile as we aggregate all the interview information.

Please sign this consent form where you can indicate the level of confidentiality you want to secure. We won't use your name in any way that you don't personally approve."

8. Once I get agreement, explain to the participant that the interview will be divided into a few parts: (1) background information (2) an explanation of the types of flexible work arrangements, (3) a brief overview of their life story and experiences, (4) technology that enables flexible work.
9. Make sure they get a chance to ask any clarifying questions they might have. These questions are just a guide and follow-up questions can be asked to clarify.
10. Finally, begin the interview.

## Part 2

- Bring audio tape/set up over phone
- Interview forms
  - Name, phone, email
  - How I know this person
  - Summary of interview



APPENDIX D

CORPORATE WORKER RANDOM SURVEY

Table 3.  
*Corporate Worker Random Survey*

<b>Self-Identified Group</b>	<b>Number</b>	<b>Age Leaving Corporate</b>	<b>Asked Category</b>	<b>Comment</b>
Male Millennials	1	40	Seniors	They don't get rid of people quickly. There are a lot of old people around here. I am always respectful when I see a 65-year old in this building. I know that they are either a senior leader, a consultant or my friend's parents coming to have lunch with them. Which one are you?
Male Millennials	2	40	Seniors	My aunt still works here and she's a senior, but she works from home so you can't see her
Male Boomers	3	40	Boomers	People are leaving at 40 because that's when the writing is on the wall. Management thinks you cost them too much but the mistake these kids make will cost them a lot more
Male Seniors	4	50	Boomers	Beware of the first half of your life. I'm just hanging on till my last son graduates from college, so I switch departments to make it hard to find me

Table 3.  
 "(continued)"

<b>Self-Identified Group</b>	<b>Number</b>	<b>Age Leaving Corporate</b>	<b>Asked Category</b>	<b>Comment</b>
Female Millennial	5	40	Boomers	I have an amazing man who reports to me. He's really my mentor because when I need to know something, I just ask him and, somehow, he always has the right answer. He must have ticked off someone because he's been here forever and he's still a manager
Female Senior	6	50	Senior	You will probably say that I'm a boomer but let me tell you that I'm treated like I'm ready for the nursing home so I consider that to be a senior citizen. If I go for a job, I'm considered too old to work so let's just say the age category has invisibly moved down
Female Boomers	7	40-50	Boomers	There are two categories of people who work here - millennials and seniors - you're a senior if you're over 40
Female Boomers	8	40-45	Boomers	I keep my resume handy even though I know I'm senior management. I don't know why they're keeping me around

Table 3.  
 "(continued)"

<b>Self-Identified Group</b>	<b>Number</b>	<b>Age Leaving Corporate</b>	<b>Asked Category</b>	<b>Comment</b>
Female Boomer	9	50	Boomers	I'm 50 and am always waiting for the ax to fall when there's a layoff. The only reason I'm still here is because I have the knowledge and patience to teach these young ones but I'm sure they will sunset me soon
Male Senior	10	55	Senior	I'm considered a dinosaur around here. Just get on the elevator and see the age group that is getting on! They average between 25-30...I know because my daughter is one of them

## APPENDIX E

### PHASES 2 AND 3 INTERVIEW QUESTIONNAIRE

1. First, I am asking you for some background information. Feel free to answer however is most comfortable for you:

- a. Your current company?
- b. How many years have you worked there?
- c. Your current title and department?
- d. How many people, if any, do you oversee?
- e. What position did you hold just prior to this position?
- f. What is your birth year?
- g. What is the gender with which you identify the most?
- h. What is your highest level of schooling completed?
- i. Are you an employee or a contractor?
- j. Are you part time or full time?

These are some definitions of flexible work arrangements (flexible work arrangement) when we refer to them in the below questions.

<b>Flexible hours of work</b>	This is where you may vary your start and finish times.
<b>Compressed working weeks</b>	This is where you may work the same number of weekly (or fortnightly or monthly) working hours, compressed into a shorter period.
<b>Time-in-lieu</b>	This is where you may work approved overtime and be compensated by time-in-lieu. This can include ‘flextime’ arrangements where you can work extra time over several days or weeks and then reclaim those hours as time off.
<b>Telecommuting</b>	This is where you may work at a location other than the official place of work.
<b>Part-time work</b>	This is a regular work pattern where you work less than full-time and are paid on a pro-rata basis for that work.
<b>Job sharing</b>	This is where a full-time job role is divided into multiple job roles and undertaken by two or more employees paid on a pro-rata basis for their part of the job.
Another arrangement with varied hours, patterns or locations of work. e.g. overtime.	

2. Tell me if you currently have a flexible work arrangement. What kind of flexible work arrangement do you have or want to have? (*e.g., work from home full time, work from home part time, have different hours to accommodate my schedule?*)
3. Tell me if your supervisor was supportive or not of your wanting a flexible work arrangement?
  - a. Do you think your supervisor felt pressured to give you technology because you were going to work from home? Do you think that was a concern of theirs?
4. Tell me if you work at the office, from home, from both?
  - a. If office, where is your office located in relation to your home?
  - b. If home, how far is your home in relation to your office?
  - c. If both, how many days per week do you work from home and office?
5. Tell me why you wanted to work in a flexible work arrangement environment? What are the benefits of working this way?
6. What are the key pieces of equipment and technology that you use in your daily activities? Name as many as you can. (*e.g., file storage, hi-speed internet, ergonomic equipment, backup, shared desk, Cisco AnyConnect*)
7. When you asked your manager for a flexible work arrangement, was there a discussion as to what technology they would require that you have?
8. How do you feel about the job providing the technology or reimbursing you for it?
9. What are the critical pieces of technology that you are missing to make you a better worker?
10. How would you change your flexible work arrangement if you don't have the technology to support it?

11. What are the challenges of being in a flexible work arrangement situation?
12. Tell me how you feel about flexible work arrangement on a job application? Do you look for it? Would you walk away from a job if they didn't offer flexible work arrangements?
13. What are some of the legal ramifications of having all this technology?

**Business owner specific questions:**

14. Do you give flexible work arrangement to your employees? Why? why not?
15. What is a rough estimate of the cost of giving technology to your workers?
16. What types of special insurance, if any, do you have to get for flexible work arrangement workers?
17. How do you reimburse them for phones and expenses?

**Senior specific questions:**

18. How would you rate your technological skills? Excellent, Very good, OK, Needs Improvement, Poor
19. What are some challenges you have as a senior in working from home?

**Millennial specific questions:**

20. Do you find benefit in going into the office a few times per week?
21. Would you prefer to go into the office more?

Thank you for your time.

APPENDIX F  
SURVEY QUESTIONNAIRE

Q1.

Do you have any form of flexible work arrangement with your employer? (flexible work arrangements can include telework, a few days of remote work each week, etc.) (Check one)

- No
- Yes

Q2. What form of flexible work arrangement do you have? (Check one)

- I work completely remotely from home in the US
- I work completely remotely from home outside the US
- I go into the office more than 1x per week
- I go into the office more than 1x per month
- I work from a satellite office

Q3. What is your age? (Check one)

- 17 or younger
- 18-29
- 30-37
- 38-50
- 51-64
- 65 or older

Q4. What is your gender? (Check one)

- Female
- Male
- Other (Please specify)

Q5. What is your job role? (Check one)

- Individual Contributor
- Management/C-Level
- Partner
- Vice President
- Owner
- Team Lead
- Senior Manager
- Manager
- Regional Manager
- Volunteer
- Freelancer
- Intern
- Administrative
- Student
- Other (Please specify)



## Connectivity

Q6. What connectivity-related technology do you have at home in order to seamlessly connect to the office? (Check all that apply and let us know how important it is to you and how often you use the hardware, software or application)

	Importance to Flexible Work Arrangement	Frequency of Use
Smart phone	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Importance to Flexible Work Arrangement	Frequency of Use
Apple Watch	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Desktop Computer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Laptop Computer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Broadband	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Wi-Fi	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ethernet	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Router	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Large Screen Monitor	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Amazon Echo	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Surveillance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cameras	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Headset	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Other (Please specify)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="text"/>		

**Filesharing**

Q7. What file-sharing technology do you have in order to seamlessly connect to the office? (Check all that apply and let us know how important it is to you and how often you use the hardware, software or application)

	Importance to Flexible Work Arrangement	Frequency of Use
Dropbox	<input type="checkbox"/>	<input type="checkbox"/>
<del>Sharepoint</del>	<input type="checkbox"/>	<input type="checkbox"/>
iCloud	<input type="checkbox"/>	<input type="checkbox"/>
One Drive	<input type="checkbox"/>	<input type="checkbox"/>
Google Drive	<input type="checkbox"/>	<input type="checkbox"/>
Box	<input type="checkbox"/>	<input type="checkbox"/>
SkyDrive	<input type="checkbox"/>	<input type="checkbox"/>
<del>MediaFire</del>	<input type="checkbox"/>	<input type="checkbox"/>
<del>Zippyshare</del>	<input type="checkbox"/>	<input type="checkbox"/>
Flash drive	<input type="checkbox"/>	<input type="checkbox"/>
	Importance to Flexible Work Arrangement	Frequency of Use
Other (Please specify) <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Communication

Q8. What communication-related technology do you have at home in order to seamlessly connect to the office? (Check all that apply and let us know how important it is to you and how often you use the hardware, software or application)

	Importance to Flexible Work Arrangement	Frequency of Use
Outlook	<input type="checkbox"/>	<input type="checkbox"/>
Slack	<input type="checkbox"/>	<input type="checkbox"/>
Email	<input type="checkbox"/>	<input type="checkbox"/>
Text	<input type="checkbox"/>	<input type="checkbox"/>
Social Media/Channel	<input type="checkbox"/>	<input type="checkbox"/>
Facebook	<input type="checkbox"/>	<input type="checkbox"/>
Twitter	<input type="checkbox"/>	<input type="checkbox"/>
LinkedIn	<input type="checkbox"/>	<input type="checkbox"/>
Instagram	<input type="checkbox"/>	<input type="checkbox"/>
Periscope	<input type="checkbox"/>	<input type="checkbox"/>
YouTube	<input type="checkbox"/>	<input type="checkbox"/>
WhatsApp	<input type="checkbox"/>	<input type="checkbox"/>
Noodle	<input type="checkbox"/>	<input type="checkbox"/>
Google Calendar	<input type="checkbox"/>	<input type="checkbox"/>
Other (Please specify) <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Backup

Q9. What data backup technology do you have at home in order to seamlessly connect to the office? (Check all that apply and let us know how important it is to you and how often you use the hardware, software or application)

	Importance to Flexible Work Arrangement	Frequency of Use
Carbonite	[Redacted]	[Redacted]
Acronis	[Redacted]	[Redacted]
Genie	[Redacted]	[Redacted]
<del>Storagecraft</del>	[Redacted]	[Redacted]
Private company backup system	[Redacted]	[Redacted]
External Backup Drive	[Redacted]	[Redacted]
Other (Please specify)	[Redacted]	[Redacted]
<input type="text"/>		

### Teleconferencing

Q10. What teleconferencing technology do you have at home in order to seamlessly connect to the office? (Check all that apply and let us know how important it is to you and how often you use the hardware, software or application)

	Importance to Flexible Work Arrangement	Frequency of Use
Skype or Skype for Business	[Redacted]	[Redacted]
FaceTime	[Redacted]	[Redacted]
Google Hangouts	[Redacted]	[Redacted]
GoToMeeting	[Redacted]	[Redacted]
Free Conference	[Redacted]	[Redacted]
<del>Speek</del>	[Redacted]	[Redacted]
Join.me	[Redacted]	[Redacted]
WebEx	[Redacted]	[Redacted]
UberConference	[Redacted]	[Redacted]
Open Voice	[Redacted]	[Redacted]
Other (Please specify)	[Redacted]	[Redacted]
<input type="text"/>		

## Project Management

Q11. What project management technology do you have in order to seamlessly connect to the office? (Check all that apply and let us know how important it is to you and how often you use the hardware, software or application)

	Importance to Flexible Work Arrangement	Frequency of Use
Smartsheet		
BaseCamp		
Mavenlink		
Microsoft Project		
Hive		
Trello		
Zoho office		
Jira		
Slack		
Freedcamp		
ProWorkflow		
Other (Please specify) <input type="text"/>		

## Other Technology

Q12. If you currently use other technology, application or software that is not listed in Q6-Q11 above, please list them here.

Technology 1

Technology 2

Technology 3

## Employee Engagement

Q13.

Remote employees are already highly engaged. Following are some examples of new, or little used, technologies that allow remote employees to increase engagement. (Check all that apply)

- Livescribe Digital pen - With Wi-Fi capability, the pen enables anyone to digitally capture written notes. The pen can also record audio that is then translated into a digital file that can be accessed with applications including Evernote.
- **Time Zone Converter** - So useful if you work with anyone across the country or in another
- country. iDoneThis - This is super useful for tracking the productivity of individuals and the whole team and achievements can be documented each day and then a recap pops up in your inbox every day.

Please list any new technology, of which you are aware, or that you would like to see, that would further increase your satisfaction in working outside of the office. How essential would this technology be to flexible work arrangement?

	Extremely Essential	Very Essential	Somewhat Essential	Slightly Essential	Not at all Essential
<u>Livescribe Digital Pen</u>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time Zone Converter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>iDoneThis</u>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology 1 <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology 2 <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology 3 <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please list any new technology, of which you are aware, or that you would like to see, that would further increase your satisfaction in working outside of the office. How essential would this technology be to flexible work arrangement?

<b>New Types of Technology</b>	(1) Extremely Essential	(2) Very Essential	(3) Somewhat Essential	(4) Slightly Essential	(5) Not At All Essential
Livescribe Digital pen					

Time Zone Converter					
iDoneThis					

Research Question 3: (Not Shown) What are the benefits of flexible work arrangement?

- What are the benefits of flexible work arrangement?
- Flexibility to meet family needs, personal obligations, and life responsibilities conveniently
- Reduced commuting time
- Reduce fuel costs
- No commuting stresses
- Control over schedule
- Allows people to work when they accomplish the most
- May decrease external childcare hours and costs
- Reduced absenteeism and tardiness
- Please add other benefits not listed above \_\_\_\_\_

Research Question 4: (Not Shown) What are some problems of technology use among millennials and boomers?

1. What are some disadvantages or downsides of having or using this technology for flexible work?

- Lack of exercise - I never leave my desk
- Food – always eating or never eat
- There is no clear delineation between work and home - I'm always working regardless of time
- I have a full calendar with back-to-back calls
- Little or no face-to-face contact with peers (not including Skype)
- Lack of control of background noises (children crying, dogs barking, etc.)
- Family and friends think you are not working
- I feel very lonely without someone to talk to
- I get sidetracked with personal tasks
- Please add other disadvantages not listed above \_\_\_\_\_

2. Please share any best practices you have regarding technology when you are working outside of the office?

3. What are some legal ramifications in a flexible work arrangement environment?

- Information security
- Home office insurance and liability issues
- Ownership of equipment and content
- Reporting structures
- How to monitor work product and deadlines
- Any obligations to attend on-site meetings
- Reserving a general right to pull the employee back into the office, if necessary
- Discrimination – is the right to telecommute offered to all employees
- Please add other legal ramifications that you see but were not listed above: