

# **Arizona State University | Healthy Urban Environments Teleworking Project Report**

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## Executive Summary

### Introduction

This report presents the findings of the 2020 Healthy Urban Environments Teleworking project conducted in collaboration with the Arizona Department of Environmental Quality and the City of Tempe (our pilot city). The project was proposed in February 2020, before the world was turned upside down due to the COVID-19 pandemic. It had been proposed as a project using a pre- and post-survey and focus groups to explore attitudes about and barriers to teleworking among City of Tempe employees, with the aim of developing generic teleworking materials that could serve as resources for the broader Phoenix area and beyond. By early April, however, it was clear that the project would need to adapt to accommodate the reality that teleworking was occurring at a greater scale than was previously imagined, without the ability to adequately plan for many, and irrespective of prior attitudes and barriers. We kept one survey and the focus groups, but modified the content and added interviews with experts. Our literature review was condensed based on the project timing.

Throughout the course of the project, we sought to incorporate lessons learned as the world evolved – even as the project team itself struggled with the challenges of the pandemic, including working from home while homeschooling children, grieving unprecedented loss, and seeking to produce guidance based on experiences that were rapidly evolving. Even now, vaccinations are just beginning to help the world open back up, and there will likely be months of transition back to a more hybrid workforce, with continued evolution regarding teleworking policy and best practices. Thus, this report does not present anything “final” about teleworking. Instead, the report presents the findings of the various phases of the project and a series of recommendations for how cities in the Phoenix area can use these findings to create stronger teleworking programs moving forward. It is expected that these recommendations may need to evolve as the world opens back up, but there are also elements that seem broadly applicable for the post-COVID-19 landscape. Following are key findings from this research.

### Key Findings

*Teleworking is widely supported within the workforce.*

Nearly 90% of survey respondents indicated that they would like to telework at least some of the time in the future, with 28% of respondents indicating that they would like to telework full-time. As might be expected, support varied based on job type, but existed for a majority of survey respondents across all job types. This support is related to clear benefits associated with teleworking, such as increased work/life balance, enhanced ability to manage health (e.g., through exercise and better eating), and reduced stress and costs associated with commuting. Teleworking was also associated with high levels of work quality: 85% of respondents stated that work was completed on time and met City standards, and many respondents noted that their productivity actually increased.

*Teleworking can help the Phoenix region meet air quality goals.*

The data suggest substantial CO<sub>2</sub>, PM 2.5, and VOC savings can be achieved via widespread part-time teleworking within the City's workforce.

*There are still significant barriers to teleworking that need to be addressed.*

Over half of the survey respondents reported missing the connections and camaraderie of the office, suggesting a need for additional social opportunities and team building. Part-time teleworking, once it is safe to do so, can likely naturally address this need. For full-time teleworkers, more intentional social and team-building opportunities are likely needed.

Survey respondents also indicated some concern about the impact of teleworking on advancement. Organizations can provide performance-based management training to ensure that managers know how to properly and uniformly evaluate both teleworking and non-teleworking employees. It may also be helpful to remind managers and employees that teleworking is still working, just from a different location; expectations about productivity and communication should be the same for both locations, unless special circumstances apply.

There is also a clear need for managers and employees to collaborate on work planning. Several focus groups participants indicated feeling stuck at times while waiting on additional guidance from their managers. Additionally, approximately one-third of teleworking survey respondents reported not knowing about or having access to a teleworking policy, and indicating that the policies themselves inconsistently covered important information related to expectations.

Additional barriers to continued teleworking include difficulty accessing all of the materials needed to telework, noted by over half of respondents, followed by technological challenges working from home (including equipment needs and needs for internet and/or secure VPN access). Issuing portable equipment in the future, such as laptops and cell phones, would build in flexibility that desktops and land lines cannot match. Other priorities to improve the teleworking experience include fast, reliable network speed, videoconferencing or conference call opportunities with colleagues, and assurance of multiple lines of communication between management and employees. Organizations may want to consider providing a wifi stipend and establishing a formal policy on what technology is required for teleworking and the provision of stipends and organization-owned equipment. The policy should cover equipment repairs and distinguish between the employee and organizational responsibility, including what is expected when an employee uses their own equipment.

*There is a need for a formal teleworking orientation to ensure minimum technological capacity and for easily-accessible IT resources for troubleshooting issues.*

The focus group participants also raised some concerns about minimum skills required to telework so as not to burden fellow employees. They suggested that Human Resources (HR)

and Information Technology (IT) departments create a formal teleworking orientation that all employees must complete before beginning to telework to ensure a minimum level of technological skill and a basic understanding of expectations for teleworking. This orientation could be available on a monthly basis and could be revisited by employees as needed. There may also be a need for a trial period for teleworkers, during which time they demonstrate their competency before being allowed to telework more regularly.

Related to the orientation, the focus groups and survey findings indicate a need for additional IT support, resources, and guidance for management and employees. In particular, short videos demonstrating basic technological requirements, such as connecting to the VPN, opening an Outlook appointment, and downloading a file, would be helpful for troubleshooting or references. There is also a clear need for procedures regarding the protection of data. The “Teleworking Tips” documents can complement organizational policies and serve as references for teleworkers and their managers.

To help supervisors manage their space and equipment needs in a new teleworking world, each organization should create a hoteling and equipment sharing system. A centrally-managed system should ultimately save the organization time and money by reducing redundancy between departments.

*There is also a need for formalized teleworking eligibility criteria and a process for appealing an eligibility decision.*

Teleworking eligibility is currently decided at the managerial level, which has led to some frustration and concerns about bias. A set of formalized teleworking criteria at the Director level could assuage concerns about managerial bias or subjectivity regarding teleworking eligibility and alternative work arrangements. The establishment of an appeals process, potentially with external and/or cross-departmental employees, would allow reconsideration of a decision and help to ensure equity across employment sectors.

*Equity concerns still exist and need to be addressed.*

Although some jobs cannot accommodate teleworking, the pandemic experience has shown that many jobs may be better able to accommodate part-time telework than previously imagined. For example, many public-facing positions have successfully used a rotating schedule with fewer employees in the office to allow part-time teleworking. Field workers can work from closer satellite offices and complete office work at home. These changes should be encouraged and incorporated into an over-arching teleworking policy and eligibility guidelines at the organization level.

Additionally, to address equity concerns related to teleworking eligibility, HR departments can provide an overview of the types of telework-eligible positions and reference employee development opportunities that may help employees gain the skills needed to apply for a different position.

## **Conclusion**

The COVID-19 pandemic created a natural experiment with teleworking that resulted in insights and lessons learned that would not have otherwise occurred. Teleworking was widely popular among survey respondents of all job types, and a large majority of respondents desire to telework at least part-time in the future. This experiment also revealed weak points in the system that need to be addressed for future teleworking efforts, as described above. We hope that the findings from this report and the included resources will strengthen and support future teleworking efforts around the Phoenix region and beyond.

## I. Introduction

Teleworking is the term used to describe working from a location outside of the main office, whether that be from a satellite office or from home. By the time of the COVID-19 global pandemic in 2020, robust teleworking programs had existed for many years across both the private and the public sectors and multiple levels of government. Teleworking has long been promoted as a way to reduce emissions related to commuting to work, save employees and employers money through reduced commuting costs and office space, increase employee work/life balance (e.g., through repurposing commute time for oneself and/or one's family), and achieve high quality work through satisfied employees. Yet prior the pandemic, most organizations were still hesitant to fully embrace teleworking due to concerns about work quality, loss of control, lack of appropriate equipment, and other reasons. Teleworking was often considered a privilege that people had to earn over time, and it was rarely offered across an organization.

The COVID-19 pandemic and associated stay-at-home orders challenged these concerns and practices, forcing many organizations to adapt to teleworking without prior planning. Some positions, like managers, analysts, and information technology (IT) professionals who heavily rely on computers, have always been able to telework more easily than those who need to be in the office due to office-based resources and other needs. Yet stay-at-home orders also forced accommodations for employees who have not traditionally been considered for teleworking, such as those who manage front-desk, public-facing positions and those who work in public safety. Suddenly, public-facing positions were working rotating schedules to minimize the number of people in the office. In some cases, public safety professionals were allowed to work from satellite offices and to complete office reports at home. Entire departments shifted to working from home full-time, often supported by IT departments quickly distributing equipment and managers providing hotspots for wireless internet.

Organizations scrambled to enact teleworking policies relevant to the stay-at-home order. Perhaps the best-known teleworking program exists at the federal level, accessible via the website [telework.gov](http://telework.gov).<sup>1</sup> Yet this program and many other “best practice” programs like it were all developed for a more traditional teleworking scenario, in which teleworking was viewed as a privilege only given to certain positions. Even teleworking experts disagreed about the outcomes of this nation-wide teleworking experiment, with some people arguing that teleworking would overtake regular office work in the future,<sup>2</sup> while others argued that teleworking would become more common but still face limitations.<sup>3</sup> As a result, those policies

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<sup>1</sup> [Telework.gov](http://Telework.gov)

<sup>2</sup> Lessons Learned from Remote Working during COVID-19: Can the Government Save Money Through Maximizing Efficient Use of Leased Space?: Hearings before the U.S. Senate Committee on Environment and Public Works. 116<sup>th</sup> Congress, 2<sup>nd</sup> session (2020) (testimony of Kate Lister).

<sup>3</sup> Shirazi, E. (2020, December 8). Personal interview.

and programs were only somewhat helpful to organizations seeking to adapt to an unprecedented situation with almost no warning.

In the midst of this nationwide experiment, the Arizona State University Healthy Urban Environments program was collaborating with the Arizona Department of Environmental Quality and the City of Tempe to develop regional teleworking resources. The project had been proposed in February 2020, prior to the COVID-19 pandemic, to explore attitudes about and barriers to teleworking among City of Tempe employees. By early April, it was clear that the project was occurring in the midst of a great natural experiment, of which the project team itself was a part. The team worked with the City of Tempe to survey employees and conduct focus groups, the data from which inform the conclusions in this report. In addition, the project team conducted interviews with several teleworking experts and a brief literature and media review to inform the Teleworking Tips that are a main deliverable of the project.

This report presents the results of the various phases of the project and main conclusions, with the aim of being a resource for organizations in the Phoenix region. At the same time, it is important to acknowledge that the COVID-19 pandemic is ongoing, and the transition back to “normal”, including what teleworking will look like in the future, will be occurring for months to come. Thus, this report does not present anything “final” about teleworking. In fact, it is expected that these recommendations may need to evolve as the world opens back up. However, we also believe there are elements that will be broadly applicable for the post-COVID-19 landscape.

## **Report Outline**

This report is organized in the following structure:

- I. Introduction – this section, which provides background on the project.
- II. City of Tempe Survey Summary – a summary of the results of the City of Tempe employee teleworking survey. The full survey report, numbering about 60 pages, is located in Appendix A. A copy of the survey is located in Appendix B for reference.
- III. City of Tempe Focus Groups Summary – a summary of the methods, findings, and conclusions from focus groups held with City of Tempe employees and managers.
- IV. Teleworking Tips for Employees – a set of reference tips, informed by the literature review and focus groups, for teleworking employees.
- V. Teleworking Tips for Managers – a set of reference tips, informed by the literature review and focus groups, for supervisors and managers of teleworking employees.
- VI. Generic Teleworking Assessment – a tool to help potential teleworkers think through various aspects of their work relative to teleworking and begin to address potential challenges.
- VII. Conclusions – a description of the key conclusions and suggested next steps from this research.

## II. City of Tempe Teleworking Survey Summary

### Introduction, Methodology, and Survey Population

This section summarizes the results of the ASU City of Tempe Teleworking Study. We conducted the survey to learn about teleworking practices and perceived barriers of and benefits to teleworking among City of Tempe employees prior to and during the State of Arizona's stay-at-home order related to the COVID-19 pandemic. The survey findings will inform a publicly-available teleworking toolkit that will be published by the Arizona Department of Environmental Quality in the future.

The survey was conducted online and was open from June 5-14, 2020. These dates corresponded with the period after the statewide stay-at-home order had been lifted, but prior to City of Tempe employees returning to in-office work. The survey received 512 responses, for a total response rate of approximately 25%. Respondents included 182 management-level employees and 322 non-supervisory employees. In terms of field of work, the data show a much higher percentage of respondents classified as "Professional" than those classified as "Line staff" or "Public safety" (43% versus 5% and 16% of the total, respectively). The vast majority of respondents (95%, n=486) indicated that they work full time.

### Key Findings

The survey data tell a compelling, if nuanced, story about the potential for teleworking to be a more regular part of the City of Tempe's work options in the future, as well as potential benefits of teleworking both for employees and the environment. The survey and full report are located in Appendices A and B, respectively. Key findings from the survey follow.

1. Overall, 89% of survey respondents indicated that they would like to telework at least some of the time in the future, with 28% of respondents indicating that they would like to telework full-time. These percentages were higher for professionals and administrative staff than for public safety and line staff (approximately 90% for the former two job types), but even within the latter two job types there was high interest in teleworking at least part time (77% and 84%, respectively).
2. Key benefits of teleworking included increased work/life balance and ability to better manage health (e.g., through exercise and eating well) and reduced stress and costs associated with commuting. These benefits were widely reported by respondents, including those in supervisory positions: nearly 75% of respondents reported increased work/life balance and ability to better manage health, while 83% reported appreciating the reduced costs and 66% reported less stress. Teleworking was also associated with high levels of work quality: 85% of respondents stated that work was completed on time and met City standards, and many respondents noted that their productivity actually increased.

3. The data suggest substantial CO2 savings could be achieved via widespread part-time teleworking within the City's workforce.
4. There are real barriers to teleworking that will need to be addressed for future efforts. For example, 56% of respondents reported missing the connections and camaraderie of the office, and 43% of respondents were neutral about or disagreed with the idea that teleworking would not affect advancement. Additional barriers include difficulty accessing everything needed to telework, noted by 51% of respondents, followed by technological challenges working from home (including some people equipment, other people needing better equipment, and needs for internet and/or secure VPN access), noted by 27% of respondents.
5. Priorities to improve the teleworking experience include fast, reliable network speed (noted by 80% of respondents), videoconferencing or conference call opportunities with colleagues (noted by 50% of respondents), assurance of multiple lines of communication between management and employees (noted by 41% of respondents), and IT assistance for teleworking employees (noted by 40% of respondents). Another 28% of respondents requested training on the use of technology to facilitate teleworking, and clearly there is a need for clear procedures regarding the protection of data. These barriers speak to a larger aspect of teleworking that was not able to be addressed under the stay-at-home order, but will need to be addressed in future policy: what is the balance between employer and employee responsibility to provide services to facilitate teleworking, and how can this be done equitably?
6. Related to equity, the survey data also revealed that teleworking may not be an option for some employees, particularly those who work on-site. However, several respondents suggested that they would like to be on site when necessary and telework otherwise, suggesting the potential for a hybrid or part-time approach.
7. Future teleworking efforts will need to be tailored to specific departmental challenges, such as the reality that certain positions are able to accommodate teleworking more easily than others. Effective teleworking policies will be informed by and tailored to each department's specific needs and roles. However, a clear tone can be set at the top to help facilitate a transition to increased teleworking when possible.
8. There is also a clear need to ensure that future teleworkers have the necessary clarity about expectations to do their jobs well: 32% of those teleworking did not know about or have access to a teleworking policy, and the policies themselves did not consistently cover important information related to expectations.

## **Next Steps**

The survey findings provided substantial ground for further exploration in the focus groups. The research team will use these groups to obtain specific feedback regarding how to design a teleworking toolkit that can guide management regarding overcoming barriers and be flexible

for management and employee needs while allowing the City of Tempe to have some level of consistency between departments. The toolkit will also be informed by additional research into best practices and findings from other pandemic-related teleworking experiments happening worldwide.

### III. City of Tempe Teleworking Focus Groups Summary

#### Introduction

This summary describes the methodology and findings from the focus groups conducted as part of the HUE Teleworking project with City of Tempe employees. The summary concludes with recommendations for the City and next steps for the project.

#### Methodology

In late January and early February of 2021, the HUE project team conducted focus groups with several City of Tempe employees to hear feedback about draft versions of the Teleworking Tips for managers and non-supervisory employees and a generic teleworking policy. We organized four focus groups: two of supervisory employees and two of non-supervisory employees. We recruited people to the focus groups via email, based on their willingness to participate as indicated at the end of the 2020 HUE Teleworking Survey. Each focus group was one hour in length and took place over Zoom; each participant was offered a \$10 electronic gift card in exchange for their participation. The focus groups were recorded for reference and the recordings and notes from the meetings were used to determine the findings and recommendations discussed in this summary.

We selected the focus group participants to achieve a balance of gender, experience, age, and job type within each group, although some groups were more balanced than others; in particular, many more women volunteered to participate than men. Our participants included the following (numbers of each category in parentheses), by category:

- Job level
  - Managers - 10
  - Non-supervisory employees - 7
- Job type
  - Administrative – 5
  - Facilities/fleet – 3
  - Professional - 8
  - Public safety - 1
- Job experience
  - 1-5 years - 7
  - 6-10 years - 6
  - 11-20 years - 3
  - More than 20 years – 1
- Gender
  - Women - 12
  - Men – 5

- Age
  - Age 25-44 - 4
  - Age 45-54 - 7
  - Age 55 or older – 6

We transcribed the conversations from the focus groups, including non-verbal communication such as nodding in agreement with someone else’s statement, and organized comments in several key areas. The findings presented in this document represent a synthesis of the comments in the following areas:

- General comments on teleworking,
- Feedback on the telework application,
- Feedback on the teleworking tips/toolkit,
- Equipment needs,
- Equity observations and concerns,
- Media related to teleworking, and
- The usefulness of a high-level emission reduction calculator.

The findings are presented together unless particularly notable for the managers or non-supervisory employees. Additionally, disagreement or multiple perspectives regarding a topic are represented in the text.

It should be noted that all of the participants supported teleworking, which, based on findings from the survey, suggests some bias within this sample. Additional work is needed by the City to investigate and understand persistent unwillingness to consider teleworking as a strategy.

## **Findings**

### *General Impressions of Teleworking*

Both the managers and the non-supervisory employees in the focus groups were highly supportive of teleworking, stating that the benefits to both the employees’ wellbeing and the City were “clear.” Multiple employees described how much better they were able to focus “without all of the distractions of the office”, including people stopping by to say hello. Another person described how meetings were more efficient because there was less socializing at either end. Managers described being “pleased” with the experience overall.

### *Who Should be Eligible for Telework? How Should Eligibility be Determined and Maintained?*

All participants agreed that decisions about teleworking should be made based on job characteristics and not personal characteristics. Participants also supported objective metrics for evaluating teleworking success; the objectivity would help managers defend any disciplinary decisions and provide employees with predictability. These ideas fit with the concept of performance-based management and seem to be critical in helping managers and

employees treat teleworking as work from outside of the office. There was some disagreement about the need for regularly scheduled check-ins, with some employees preferring the predictability and others indicating that they prefer to be contacted on an as-needed basis. These differences may reflect job type and suggest that managers should determine a plan with their employees based on what makes the most sense for the job. However, several managers discussed a primary goal of being able to trust their employees to do the work, suggesting a willingness to work with employees to develop a communication schedule that meets their needs.

Both managers and employees openly discussed that not all jobs can be eligible for teleworking; strategies to address any perceived unfairness in this regard are discussed further in the equity section. However, several managers who represented job types that are not suitable for full-time teleworking indicated that they have established rotating schedules to allow their employees to work from home when possible. These schedules varied, including versions in which employees came in during different days of the week and versions in which employees came in for one week and worked from home the next. Some managers indicated that they have been able to accommodate teleworking in a way that they had not considered before, and it is working well.

#### *Strategies to Maintain Team Cohesion*

Despite widespread recognition of the benefits of teleworking, focus group attendees also recognized some downsides, including a lack of cohesion. Several managers had developed strategies to maintain team cohesion, including:

- Bringing a team back into the office on an occasional basis for team-building activities,
- Holding brief, optional morning meetings to connect with the team each day,
- Making all meetings telework-enabled, and
- Having people connect to meetings from their desks, even when in the office, so all attendees are on equal footing.

There was widespread recognition that certain employees (e.g., younger and/or newer employees) may be less enthusiastic than others about teleworking, and that they still needed to be accommodated. Team-building activities seem to be critical to ensure that those employees have the opportunity for professional and interpersonal growth in a post-Covid teleworking world.

#### *Perceived Value of a Teleworking Application*

Multiple managers expressed concerns about something like an application that they would have to evaluate in any type of subjective manner. Managers were concerned about the workload, but even more about the potential for employees to feel hurt or angry if the manager did not “grade” them in a way that they believed was fair. However, all participants thought that giving employees a checklist of requirements and potential challenges of

teleworking could be helpful to prompt the employee to prepare for the challenges of teleworking. Additionally, there is value in establishing protocols and preferences regarding checking in, expectations, and accountability.

### *Teleworking Training*

Many participants in the employee focus groups expressed a desire that teleworkers be required to demonstrate a certain level of technological sophistication in order to be able to telework, even if their position is technically eligible. Several participants noted that a lack of skill had kept some employees from doing all of their duties during the pandemic, resulting in increased workload for more technologically-capable employees. The participants discussed several strategies for achieving a baseline level of technical competence among teleworking employees, including the following:

- Have all employees attend a telework training given by IT;
- Require that employees demonstrate a baseline level of competence before being given permission to telework, including the ability to: establish VPN connection, open Microsoft Teams, use a camera and microphone to participate in a Teams meeting, create calendar appointment, and download files from server or web;
- Create a “trial period” during which employees must continuously demonstrate their competency in order to continue teleworking; and
- Provide additional IT resources helping people to troubleshoot, such as links to IT “how-to” videos demonstrating commonly needed functions.

Managers may need performance-based management training, so that they understand how to manage based on outcomes rather than seeing people at their desks. Employees from several different job types indicated some friction around managers who had not been able to easily adapt to teleworking.

### *Perceived Value of Teleworking Toolkit and Tips*

Participants were enthusiastic about the proposed teleworking tips, although many indicated that they now know much of the information presented in the tips, given the months of learning on the job that had occurred. However, all participants agreed that these tips would be helpful to present during the teleworking orientation and to provide as resources for future teleworking. Several participants particularly appreciated the tips as a complement to the City’s high-level telework policy.

Participants suggested adding or expanding the following sections to the tips:

- Teleworking etiquette, such as the need to always be muted in a meeting unless you are speaking,
- Troubleshooting – augment with information regarding how to contact IT for support,
- Integrating in-person and teleworking employees, and

- Helping employees understand what they can and should expect from their managers.

The participants also indicated that short (e.g., two-minute) videos located on the intranet or YouTube (where not a security concern) would be helpful as teleworking resources. These videos could show an IT person sharing their screen and explaining how to do a certain function in a step-by-step manner, such as connecting to the VPN, installing new software, or using Outlook. Other videos could feature leadership at the City explaining some of the teleworking tips as a way for the City to show support for teleworking. A few participants preferred a written copy of the tips to a video, suggesting the need for both.

### *Equipment*

There was widespread recognition of the importance of connectivity and the appropriate equipment for teleworking success. Several managers mentioned that they needed to “scramble” to pull together enough equipment for their teams at the beginning of the pandemic, including giving their work laptops to employees and using their own computers. At least one manager described having some employees who do not have wifi due to affordability constraints, which resulted in decreased productivity from those employees.

The most disagreement within the focus groups came around the topic of how much support the City should provide for teleworkers, particularly with regard to providing a wifi connection. Within the managerial group, some managers stated that, “(post-Covid) if you want to telework, you should provide your wifi – it is your commute,” acknowledging that people will be able to work in the office without any need to provide their own equipment or wifi. Other managers stated that providing wifi or a stipend would help address perceived or real inequity and demonstrate the City’s commitment to environmental goals. Within the employee groups, several participants discussed a desire for a stipend from the City to address their increased electricity costs from working at home, including potentially upgraded bandwidth due to several teleworkers in the house (a particularity that may be mitigated when children are back in school full time). Other employees pointed out that wifi infrastructure is not evenly provided throughout the city, so participants in older neighborhoods may have a harder time teleworking and might need additional support. One participant urged that the City “make sure that affordability isn’t the barrier to telework.”

Other concerns related to equipment included the need to have all meetings enabled for video, ensure that all teleworkers were technologically competent (as described above), and provide training and resources for teleworkers who struggle with learning new skills. Additionally, there seems to be a clear need for guidance about who is responsible for fixing computers when teleworking and how employees can access the IT support they need. Finally, several participants remarked about a need to further digitize the City’s processes, such as submitting timesheets online, using electronic signatures for all documents, and using fillable PDF forms rather than paper forms.

### *Equity*

In addition to the equity concerns related to wifi discussed in the *Equipment* section above, there was recognition, particularly in the employee focus groups, that not all jobs are eligible for teleworking, and that the difference could be perceived as unfair, even if the participants themselves did not see it as unfair. Several employees suggested that HR could articulate a pathway to a telework-eligible job for employees who want to telework, but who are currently ineligible. The participants acknowledged that this pathway would require the employees to apply for those jobs, which often require additional training and/or education, but that the City already provides tuition reimbursement and training, creating opportunities for employees to pursue those paths if they desire.

Some participants also related tales of other colleagues who were prohibited from teleworking due to managerial decisions (“We’ve never done it before – why would we start now?”), despite having jobs similar to other telework-eligible jobs. This discrepancy was perceived as unfair and counterproductive to employee morale and the City’s environmental goals. Participants indicated a need for strong leadership from the top to set the tone for teleworking, as well as the creation of an independent panel to review teleworking requests that were denied. Participants proposed that the panel could be established as part of the next union contract, or as a group or groups selected by Human Resources to independently review positions to determine their eligibility, establish a process for appealing a teleworking decision, and review petitions for teleworking.

Employees also strategized about work modifications that could increase a perception of fairness even among those who are not eligible for teleworking. For example, employees who work in the field could be allowed to drive the nearest field office to their house to pick up their city vehicle, rather than needing to go to the main office; in one participant’s case, this would save an additional 20 miles of driving each field day, resulting in both a time savings and reduced emissions.

### *Future Teleworking Concerns*

For those who will telework part time or manage part-time teleworkers in the future, there is some concern about how equipment will be shared. There is also recognition of the need for people to have a space to return to for accessing the network and/or team-building activities, even as there is recognition that a benefit to the City could be reduced rent from reduced space. The practice of hoteling is recommended to address space concerns; however, additional discussion with managers of various groups about equipment needs is likely necessary to determine how to move forward with practices for sharing equipment.

### **Conclusions and Next Steps**

The findings presented here complement the 2020 survey findings with a more nuanced and detailed understanding of the benefits and challenges to continued teleworking. The

participants were pleased with their teleworking experience and suggested some areas for improvement. Action areas for the City include:

1. **Create a formal teleworking orientation** to ensure a minimum level of technological skill to allow for teleworking. The orientation should cover critical skills for working remotely, like connecting to the network, and include an assessment to demonstrate sufficient understanding of the critical processes.
2. **Provide performance-based management training** to ensure that managers know how to properly and uniformly evaluate both teleworking and non-teleworking employees.
3. **Establish a process to review teleworking eligibility, appeals, and alternative work arrangements.** Directors should articulate the criteria for teleworking and alternative work arrangements to help protect both non-supervisory employees and managers from concerns about subjectivity or bias. Including an appeals process, potentially in another department, will further protect from bias and help ensure equity across employment sectors. Alternatively, the entire process, including determining teleworking eligibility, could be the purview of an outside body, potentially comprised of a selection of managers and employees from across departments.
4. **Provide additional IT support, resources, and guidance for management and employees.** In particular, short videos demonstrating basic technological requirements would be helpful for troubleshooting or references.
5. **Consider providing a wifi stipend and establishing a formal policy on such provision.** Such a policy could encourage additional teleworking and help the City reach its sustainability goals. Any policy would need to consider potential tax implications for employees.
6. **Consider providing guidance for how employees who are currently ineligible for teleworking can find a telework-eligible position.** This guidance could include a basic description of the types of telework-eligible positions, and reference the City's current employee development opportunities, like tuition reimbursement and additional training, which may help employees gain needed skills.
7. **Create a hoteling and equipment sharing system** to facilitate managerial tasks related to teleworking.

The findings from the focus groups will inform the final project deliverables. Future work could include creating telework videos based on some of these findings as region-wide resources.

## **IV. Teleworking Tips for Employees and Managers**

This section contains the Teleworking Tips documents for employees and managers. These tips were developed based on the City of Tempe survey findings and a broader literature and policy review. The tips were included for review by the City of Tempe focus group participants, discussed in the focus groups, and revised based on focus group feedback.

Each set of tips covers five main areas: teleworking fundamentals, communication and expectations, professionalism, health and wellbeing, and troubleshooting.

*Teleworking Fundamentals* covers basic aspects of teleworking, such as the need to be able to manage work and time efficiently, meet deadlines, and connect to the VPN.

*Communication and Expectations* covers the importance of being clear about expectations, maintaining connection with fellow employees, and actively communicating to stay on top of challenges.

*Professionalism* covers best practices in time management, teleworking etiquette related to meetings and scheduling, and ways to manage progress toward advancement.

*Health and Wellbeing* covers work/life balance, healthy workspaces, and strategies for social connection with fellow employees.

*Troubleshooting* covers considerations for long-term teleworking success, resources for addressing technology challenges, and additional teleworking training and resources.

There is overlap between the two sets of tips, but there are also fundamental differences in certain sections based on the distinct responsibilities and roles of managers in comparison to non-supervisory employees.

# Teleworking Tips for Employees

## TELEWORKING FUNDAMENTALS

**Assess whether teleworking is right for you.** Successful teleworkers are:

1. Able to work with minimal direct supervision
2. Organized in their work practices
3. Able to plan for their work (with some managerial input)
4. Able to meet schedules and deadlines
5. Effective with time management
6. Effective communicators
7. Comfortable with technology



Image credit: Valley Metro

**Review your agency's teleworking policy and related IT policies.** These policies likely include information and guidelines related to:

1. Eligibility,
2. Scheduling,
3. Timekeeping,
4. Dos and don'ts of teleworking,
5. Workspace requirements,
6. IT support, information security, and data privacy, and
7. Equipment usage and expenses, e.g. for printing access and cost.

**Ensure that you have participated in any required teleworking orientations or technology assessments.** For example, you will likely need to be able to perform the following actions to successfully telework:

1. Connect to your agency's VPN,
2. Open and use your agency's collaboration software (such as Microsoft Teams),
3. Use your camera and microphone for meetings,
4. Create, accept, and open calendar appointments,
5. Download files from a server or web.

There may be additional position-specific functions that you need to be able to perform; check with your manager to make sure that you know all that will be required of you.

If you have a question that is not answered by your agency's policy or training, discuss it with your manager and document the discussion in writing.

# Teleworking Tips for Employees

## COMMUNICATION & EXPECTATIONS

**Discuss and document your manager's expectations** for the following areas:

1. Communication (including frequency and format),
2. Accountability (timelines for project deliverables and check-ins),
3. Work generation (who is responsible for generating work assignments),
4. Confidentiality and privacy (related to project and/or client information),
5. Teleworking eligibility (what is required to remain eligible; teleworking frequency),
6. Work site and availability expectations (e.g., the need to be present during work hours unless PTO is used), and
7. Performance (outcomes).

### Maintain connection

Check in with fellow employees to see how they are doing and help them troubleshoot issues. Consider a regularly-occurring brief morning meeting to facilitate connection. Include a video conference option in every meeting to help maintain connection with other teleworkers.



Image credit: elenabsl.Shutterstock.com

### Communication is key

1. Take advantage of check-ins with your manager to air concerns or troubleshoot problems. Create a list of topics to discuss and move through them during the check-in like a regular meeting agenda. If you are organized, you will help your manager be more present for you and may be able to move through the check-in/troubleshooting session more quickly.
2. Be forthright with your manager or colleagues about any challenges to your performance and potential solutions or adjustments that need to be made. Have this conversation as soon as you are clear that you need help.
3. Reach out to co-workers to maintain relationships and collaboration generally, and in specific instances when you need help or feedback.

# Teleworking Tips for Employees

## PROFESSIONALISM

### Employ **time management** best practices:

1. Create a workday routine.
2. Take the time to plan.
3. Tackle your highest priority items first.
4. Limit physical and digital distractions to facilitate success.

### Remember these teleworking etiquette tips:

1. Be predictable and transparent with your calendar so your colleagues know when you are available and how they can reach you if needed. Delete old meetings or other events that you do not plan to attend.
2. Participate in video calls with your video on to help you stay engaged and reduce the likelihood of becoming distracted by email or other work. Encourage your colleagues to do the same.
3. Remain muted in conference calls until you speak. Background noise, even as minor as typing, can be distracting and seem disrespectful to others.

### Manage your progress toward advancement in the following ways:

1. Document expectations in writing for reference when discussing advancement. Revisit expectations as necessary over time to reflect any changes to your situation.
2. Be clear about what is achievable for each project, work with your manager to set reasonable goals, and strive to achieve those goals. Remember that teleworking is just working outside of the office and should neither fundamentally change your role nor negatively impact job performance (and in fact may benefit it).
3. Provide progress updates to your manager at an agreed-upon frequency. If there are items or aspects of teleworking that are particularly concerning for your manager, be clear about how you are handling them.
4. Stay involved with your team and be willing to help strategize about gaps or challenges and how you and others can fill them in a balanced way.
5. Understand that you may need to be flexible regarding your teleworking schedule depending on office needs. If schedule changes occur, discuss with your manager how those changes will be balanced by changes on other days.
6. Ask for help from your manager, colleagues, or IT when needed, whether assistance with a project deliverable to upgraded technology to enhance productivity.
7. Keep track of your accomplishments and review them with your manager in meetings.
8. Humbly but confidently pass on positive feedback received from customers or other colleagues to your manager so they see external validation of your work.

# Teleworking Tips for Employees

## HEALTH & WELLBEING

### Take breaks and aim for work/life balance

1. Aim for a balance between screen time and off-screen time to help support long-term success and happiness teleworking.
2. Incorporate time for exercise, healthy eating, and spirituality/mindfulness breaks to help you stay focused. Many teleworkers use the time formerly spent commuting to invest in their health and well-being.
3. Strive to eliminate distractions from your workspace so that you can stay on task.
4. Incorporate a minor routine to signify “arrival” to and “departure” from the workday, such as opening and closing office blinds.

### Create a healthy workspace

1. Construct a workspace that allows you to do the following:
  - a. Keep your head aligned
  - b. Type with your wrists straight
  - c. Keep your back straight
2. Ensure adequate lighting and ventilation.
3. Add an element that acts as a reminder of the office and helps signify a shift to professionalism when you arrive. This could be as simple as a candle or knickknack, as long as it signifies a change for you. Wearing at least some work clothing instead of casual clothing can also help subconsciously convey professionalism.
4. Protect your workspace from internal and external distractions as much as possible. This may mean closing windows and/or doors to mitigate outside noise, using white noise or noise canceling headphones to create a neutral sound space, shutting internet windows unrelated to work, and mitigating visual distraction (e.g., evidence of household chores) through a space separator like a screen or a hanging sheet.

### Take care of your social side

Reach out to coworkers to schedule regular opportunities for social interaction and down time, e.g., virtual social hours, lunch hours, or other non-work activities. These opportunities can be purely social or intended as loose brainstorming sessions to provide space for unstructured creative time with your colleagues.



Image credit: Kay Scanlon / Los Angeles Times / Getty Images

# Teleworking Tips for Employees

## TROUBLESHOOTING

### Think long-term

Are there aspects of teleworking that are not working for you? Think through the challenges and what you would need to address them, and let your manager know before you hit a crisis point.

### Assess your technology and training needs

Are you missing any technology and/or equipment you need to be successful? Do you need training in any aspect of teleworking, such as time management, software, and/or other office functions? If so, check with your IT department about available offerings that can help meet your needs. If you still need help, schedule a meeting with your manager to discuss your needs and strategize about how to fulfill them. If possible, come to the meeting prepared with information about training opportunities and specific equipment needs to facilitate access to those opportunities and items.

### Troubleshoot problem areas

Is anything not working well, whether due to process or equipment issues? Schedule a meeting with IT, your manager, or colleagues, as applicable, to examine identified issues and develop solutions.

### Teleworking eligibility

If you believe you should be eligible to telework more than you are allowed to currently, discuss your preference with your manager. If that discussion does not resolve your concern, talk with someone in Human Resources.

### For additional teleworking information, reference:

[www.telework.gov](http://www.telework.gov)

[Employee Training in Telework Fundamentals \(Telework.gov\)](#)

[Microsoft Teams training videos](#)

### Acknowledgements

These tips draw from the resources available on [Telework.gov](http://Telework.gov) and [eWorkPlace](http://eWorkPlace), as well as presentations sponsored by the [Association of Commuter Transportation](#). They were also informed by survey and focus group research with City of Tempe employees.



Image credit: Pixta

pixtastock.com - 65178395

# Teleworking Tips for Managers

## TELEWORKING FUNDAMENTALS

**Remember that teleworking is working, just doing so outside of the office.** That said, certain traits are associated with greater success while teleworking. These include:

1. Ability to work with minimal direct supervision
2. Organization in terms of work practices
3. Ability to plan ahead for work (with your help, as appropriate)
4. Ability to meet schedules and deadlines
5. Effectiveness with regard to time management
6. Effectiveness with regard to communication
7. Comfort with technology

Encourage your employee to review this [assessment](#) to help them determine whether teleworking is a good fit.

**Review your agency's teleworking policy and related IT policies** and encourage your employees to do the same. These policies likely include information and guidelines related to:

1. Eligibility,
2. Scheduling,
3. Timekeeping,
4. Dos and don'ts of teleworking,
5. Workspace requirements,
6. IT support, information security, and data privacy, and
7. Equipment usage and expenses, e.g., for printing access and cost.

Familiarity with the teleworking and IT policies will help you support your teleworking employees and address teleworking-related challenges. Make sure you and your employees have participated in any required teleworking orientation or technology assessment.

**Teleworking eligibility should be decided based upon the position and not the person.**

We now know that most positions can telework at least part time. For example, public-facing positions can telework on a rotating schedule, and employees who work in the field can complete reports from a home or satellite office. If an employee needs special accommodation, work with Human Resources as necessary to accommodate teleworking in a transparent way.

In the event that you cannot approve a special request to telework, follow these guidelines to protect yourself and your employee:

1. Respond promptly to the request.
2. Provide a written explanation and include data to support your reasoning.
3. Relatedly, follow agency policies and procedures for the denial and cite them where relevant in your explanation.
4. Include any options for an appeal or future teleworking available to the employee.

# Teleworking Tips for Managers

## COMMUNICATION & EXPECTATIONS

**Establish and communicate clear expectations** about:

1. Communication (including frequency and format of general communications and specifically with regard to responsiveness),
2. Accountability (timelines for project deliverables, accurate documentation of teleworking in timesheets, and methods for check-ins),
3. Confidentiality and privacy (related to project and/or client information),
4. Teleworking eligibility (who is eligible for teleworking and how often),
5. Teleworking schedule (fixed versus flexible schedule),
6. Teleworking restrictions (e.g., the need to be present during work hours unless PTO is used),
7. Workflow (who is responsible for developing tasks and projects), and
8. Performance (outcomes).

Document these expectations in writing, preferably in a teleworking agreement or contract with each employee.

**Give support** – Check in regularly with your employees to see how they are doing, brainstorm about next steps and/or future work, and help them troubleshoot issues.

**Receive support** - When needed, delegate work to employees who have additional capacity, particularly when it can help the employee build or improve upon a skill.

### Communication is key

1. Establishing regular check-ins provides employees with the security of a space to air concerns or troubleshoot problems with you. Mutually agreeing upon the frequency of check-ins shows respect for employees' autonomy while providing accountability for progress.
2. Clearly communicate your expectations for the outcome and trust the employee to develop the process. If challenges arise, be forthright about them and discuss ways to mitigate them.
3. Foster employee connection and collaboration through brief morning meetings or longer weekly meetings.



Image credit: elenabsl.Shutterstock.com

# Teleworking Tips for Managers

## PROFESSIONALISM

**Manage by results, not process** – Teleworking provides an opportunity to replace the traditional process-based method of assessing progress with an outcome-based method that is ultimately more impactful for success. Follow these tips:

- Be consistent in the outcomes you expect from office employees and teleworkers, relative to their job duties.
- Communicate clear expectations about outcomes and let your employees tailor ways to meet them. Use the following questions as a framework for expectations:
  - What must be done?
  - Why must it be done?
  - How well must it be done?
  - By when must it be done?
  - What constitutes a completed job?
- Work with employees to develop a high-level [work plan](#) for each assignment.
- Use consistent accountability methods for teleworkers and office workers.
- Connect performance reviews to outcomes for teleworkers and office workers.
- Tie advancement to clear milestones to provide clarity and motivation for your employees. This clarity will also protect you and your employees from concerns about bias.

**Plan for teleworkers at every meeting** – Teleworking is likely a permanent aspect of work going forward and needs to be treated as such. Follow these tips:

- Include a teleworking option – video if possible – in all meeting invitations; consider having all employees attend the meeting via video, even when in the office.
- Strongly encourage or require all teleworkers to participate on video to mitigate the tendency to be distracted by emails or other work while on the call.
- Remind employees to remain muted when not talking, to avoid disruptive noise.
- Remind employees to “raise hands” or type into the chat box so that they don’t talk over each other on video or phone conference calls.
- Monitor the chat box so as not to miss important thoughts or feedback.

**Think long-term** – How can you work with your employees to set up structures that work for long-term teleworking? Honestly assess your concerns and be open to hearing their concerns and desires so that you can collaborate on solutions.

**Be policy-driven** – Follow teleworking policies at all times to ensure that there is no subconscious bias in your decisions. Teleworking eligibility should be defined based on HR policy, and should be pursued proactively, rather than reactively.

# Teleworking Tips for Managers

## HEALTH & WELLBEING

**Take breaks and aim for work/life balance, and encourage your employees to do the same, including:**

1. Aim for a balance between screen time and off-screen time to help support long-term success and happiness teleworking.
2. Incorporate time for exercise, healthy eating, and spirituality/mindfulness breaks to help you stay focused. Many teleworkers use the time formerly spent commuting to invest in their health and well-being.
3. Strive to eliminate distractions from your workspace so that you can stay on task.
4. Incorporate a minor routine to signify “arrival” to and “departure” from the workday, such as opening and closing office blinds.

## **Support a healthy workspace for yourself and your employees**

1. Work with HR to determine the extent to which you should evaluate your employees’ workspaces; there may be liability requirements for an evaluation.
2. Remind employees that healthy workspaces include the following:
  - a. Proper head alignment (eyes straight ahead)
  - b. Straight wrist alignment while typing
  - c. Chairs that support a straight back
  - d. Adequate lighting and ventilation
3. Encourage employees to add an element that acts as a reminder of the office and helps signify a shift to professionalism when they arrive. This could be as simple as a candle or knickknack, as long as it signifies a distinction between home and office.
4. Encourage employees to protect their workspace from internal and external distractions, including by mitigating outside noise through white noise and closing windows and doors, designating times for responding to email, and mitigating visual distraction (e.g., in the household) through a space separator like a screen.

**Remember the importance of social interaction and down time**, both for yourself and your employees. Encourage social connection through, e.g., virtual happy hours, lunch hours, or other non-work activities (socially distanced if necessary). Occasional team-building activities at the office may also help. Staying connected may be particularly important for newer employees or more extroverted employees.



Image credit: Kay Scanlon / Los Angeles Times / Getty Images

# Teleworking Tips for Managers

## TECHNOLOGY & TRAINING

**Assess technology and training needs** – Do you and all of your employees have the technology (hardware, software, data protection, and virtual access) needed to be successful while teleworking? Remember that if part-time teleworkers can reserve certain duties for the office, they may not need complete access from home.

Do you or your teleworking employees need any training? [Time management](#) and other training related to teleworking can help employees build skills that will increase their chances of success.

If you identify a need for technology or training for yourself or your employees, think through how you can help meet this need to set the stage for teleworking success.

## TROUBLESHOOTING

### Troubleshoot problems with performance

If related to teleworking in general, investigate what isn't working, and why not. Communicate your concerns with your employees and ask for their help to develop solutions.

If you experience problems with an isolated employee's performance, schedule a meeting with them to review the expectations in their teleworking agreement, provide specific, constructive feedback tied to objective data, and strategize about potential solutions. Modify the teleworking agreement as necessary to clearly articulate expectations, and set a timeframe for the employee to demonstrate improvements in performance.

In the event that an employee demonstrates an inability to successfully complete their duties while teleworking, discuss the situation with your Human Resources department to determine next steps. Ensure that your concerns are backed up by objective data to protect both you and your employee from potential allegations of subjectivity.

### For additional teleworking information, reference:

[www.telework.gov](http://www.telework.gov)

[Manager Training in Telework Fundamentals \(Telework.gov\)](#)

[www.eworkplace-mn.com](http://www.eworkplace-mn.com)

[Microsoft Teams training videos](#)

[Teleworking on Short Notice](#) (Association of Commuter Transportation)

### Acknowledgements

These tips draw from the resources available on [Telework.gov](#) and [eWorkPlace](#), presentations sponsored by the [Association of Commuter Transportation](#), and findings from survey and focus group research with City of Tempe employees.

## V. Generic Telework Self-Assessment<sup>4</sup>

*This tool is meant to guide you, the potential teleworker, to think through and prepare for challenges to teleworking. You are encouraged to discuss the findings from this self-assessment with your manager, particularly if you have identified any challenges and need help developing solutions.*

1. Considering the nature of your job, how long per day and how many days per week do you think you can accommodate teleworking?

<input type="checkbox"/> Morning or afternoon	<input type="checkbox"/> Full day
<input type="checkbox"/> 1 day/week	<input type="checkbox"/> 2 days/week
<input type="checkbox"/> 3 days/week	<input type="checkbox"/> 4 days/week
<input type="checkbox"/> 5 days/week	
<input type="checkbox"/> Other _____	

2. Specify below the hours and days you propose to telework. Your hours and telework days must be consistent with provisions of the existing labor contract or personnel policy.

**Proposed Telework Schedule**

	Week 1					Week 2				
Hours	Mon	Tue	Wed	Thu	Fri	Mon	Tue	Wed	Thu	Fri
AM										
PM										

3. Why have you proposed these hours and days?
4. Do you have a comfortable/accommodating space available for teleworking? If your agency has any requirements for your space (e.g., related to worker’s compensation liability), ensure that you have considered those requirements.

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<sup>4</sup> This telework policy is adapted from the eWorkPlace telework Telework Toolkit originally developed by the Midwest Institute for Telecommuting Education (MITE).

5. Consider any potential distractions/obligations that may exist in your telework office. Do you have a plan to resolve them?

**6. JOB CHARACTERISTICS**

Think through the following aspects of your job and how frequently they occur. How might you need to adjust to accommodate these aspects while teleworking?

	Frequent/ High	Occasional/ Medium	Almost Never/Low
Required face-to-face contact			
Ability to control meeting schedules			
Required telephone communication			
Ability to work independently (vs. on a team)			
Ability to control and schedule workflow			
Dependence upon in-office reference materials			
Dependence upon support staff			

**7. EMPLOYEE CHARACTERISTICS**

Think about your work style and how you might need to adjust while teleworking.

	Frequent/ High	Occasional/ Medium	Almost Never/Low
Need for supervision and/or feedback			
Ability to meet deadlines			
Quality of organizational and planning skills			
Discipline regarding work			
Reliability concerning work hours			
Computer proficiency level			
Desire/need to be around people			
Desire for scheduling flexibility for any reason			
Level of job knowledge			
Ability to be productive			
Quality of work			

8. Do the information, data, and materials you work with need to be secured?  
 \_ Yes      \_ No      \_ Not Applicable

9. **Communications:** Which of the following methods will you use to ensure timely and effective communications with your supervisor, team, and support staff?

- Checkpoints with the manager (daily or weekly)
- Checkpoints with coworkers or work group
- Email and voice mail checks
- Required attendance for video and/or in-person meetings

10. If you have customers, how will you maintain customer communications?

11. **Telework Equipment** - Which technology will be provided by your employer and which will you provide? Check all that apply on either list; be sure to discuss the policies around using your own equipment with your manager.

Equipment Type	Employer Provides	I Provide
Desktop or laptop		
Connectivity (Broadband or wireless)		
Printer, scanner, fax, copier capacity		
Telecommunications such as cell phone, pager, or other		
Software (list) _____		
Other (list) _____		

12. Is there any other equipment you need to do your job remotely?

13. Are there any applications that will not be accessible to you while teleworking? If so, think through how you will access them when you need them.

## VI. Emission Reduction Calculator

As part of this project, we worked with the City of Phoenix to develop a high-level emission reduction calculator that could be used to estimate broad emissions savings due to teleworking across the workforce. Maricopa County currently has a sophisticated emission reduction calculator linked to logged commute data from employees through the Share the Ride website,<sup>5</sup> but the focus group conversations revealed that there are barriers to motivating some managers and employees to fill out the data. Additionally, some project partners expressed a need for a simpler tool that can estimate emissions without relying on employee involvement.

The resultant tool allows managers to estimate emissions savings for CO<sub>2</sub>, VOCs, NO<sub>x</sub>, and PM 2.5 annually and for both the winter and summer seasons, given seasonal differences in emissions. The manager enters the number of employees, their average roundtrip driving distance, and their annual number of work weeks, as well as how many days a week the employees will telework. The calculator automatically weights the data based on the percentage of passenger vehicles versus light trucks in the Phoenix region and presents results for emissions saved in terms of number of tree seedlings grown for 10 years (for CO<sub>2</sub> offset) and hours of leaf-blowing saved (for VOCs, NO<sub>x</sub>, and PM 2.5).

For example, a manager who supervises 10 employees who drive an average roundtrip distance of 30 miles and work 48 weeks per year (i.e., have 4 weeks of vacation) could see the following emissions savings:

### Average 2 days/week teleworking

CO<sub>2</sub> savings: 393 tree seedlings grown for 10 years

VOC savings: 599 hours of leaf blowing saved

NO<sub>x</sub> savings: 11,421 hours of leaf blowing saved\*

PM 2.5 savings: 40 hours of leaf blowing saved

### Average 5 days/week teleworking

CO<sub>2</sub> savings: 982 tree seedlings grown for 10 years

VOC savings: 1,497 hours of leaf blowing saved

NO<sub>x</sub> savings: 28,553 hours of leaf blowing saved\*

PM 2.5 savings: 100 hours of leaf blowing saved

\*Leaf-blowing emits more VOCs and PM 2.5 than NO<sub>x</sub>, so the relative savings for NO<sub>x</sub> equates to many more hours of leaf-blowing.

Valley Metro will continue to finalize this calculator and will work to share it on the web.

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<sup>5</sup> <https://sharetheride.com/#/>

## VII. Conclusions

This report presents deliverables, key findings, and next steps for regional teleworking resources and policies for the Phoenix region. The Teleworking Tips documents and generic teleworking assessment are ready for use and can be immediately available for dissemination. While the final host for the emission reduction calculator is still being decided, the calculator can be embedded on a regional website for near-term use. The survey report and focus groups findings can also serve as resources for regional agencies and organizations seeking more in-depth research about the teleworking experience. However, we have also distilled the key findings from those two phases below to provide an overall understanding of the research and guidance for next steps.

### Key Findings

*Teleworking is widely supported within the workforce.*

The survey and focus groups revealed widespread support for teleworking among City of Tempe employees, including nearly 90% of survey respondents indicating that they would like to telework at least part time in the future, and nearly 30% of respondents indicating that they would like to telework full time. While support varied based on job type, with professionals and administrative employees more likely to express support for full-time teleworking, a majority of survey respondents across all job types expressed a desire for at least part-time teleworking. This support is related to clear benefits associated with teleworking, such as increased work/life balance, enhanced ability to manage health (e.g., through exercise and better eating), reduced stress and costs associated with commuting, and job competitiveness. Teleworking was also associated with high levels of work quality: 85% of respondents stated that work was completed on time and met City standards, and many respondents noted that their productivity increased.

*Teleworking can help the Phoenix region meet air quality goals.*

The emission reduction calculator suggests that substantial CO<sub>2</sub>, PM 2.5, and VOC savings can be achieved via widespread teleworking, even if just part time, within the City's workforce. Teleworking should be a key part of any future emissions reduction strategy.

*There are significant barriers to teleworking that need to be addressed.*

This natural experiment with teleworking has clarified both the benefits of and challenges to teleworking full-time. A key concern is that over half of the survey respondents reported missing the connections and camaraderie of the office, suggesting a need for additional social opportunities and team building. Part-time teleworking, once it is safe to do so, can

likely naturally address this need. For full-time teleworkers, more intentional social and team-building opportunities will likely be needed.

Survey respondents also indicated some concern about the impact of teleworking on advancement, although this sentiment was registered early in the pandemic and may have waned over time. Regardless, organizations should emphasize performance-based management and provide related training to ensure that managers know how to properly and uniformly evaluate both teleworking and non-teleworking employees. It may also be helpful to remind managers and employees that teleworking is still working, just from a different location; expectations about productivity and communication should be the same for both locations, unless special circumstances apply.

There is also a clear need for managers and employees to collaborate on work planning. Several focus groups participants indicated feeling stuck at times while waiting on additional guidance from their managers. Additionally, approximately one-third of teleworking survey respondents reported not knowing about or having access to a teleworking policy, and the policies themselves inconsistently covered important information related to expectations. Many of the focus groups participants reported that they believed that their organizational policy was too bare to be helpful for teleworking, expressing a desire for more detail. The Teleworking Tips documents are intended to complement organizational policies, referring to and relying on a stated policy to be most helpful.

Additional barriers to continued teleworking include difficulty accessing everything needed to telework, noted by over half of respondents, followed by technological challenges working from home (including equipment needs and needs for internet and/or secure VPN access). Issuing portable equipment in the future, such as laptops and cell phones, would build in flexibility that desktops and land lines cannot match. Other priorities to improve the teleworking experience include fast, reliable network speed, videoconferencing or conference call opportunities with colleagues, and assurance of multiple lines of communication between management and employees. Organizations may want to consider providing a wireless internet stipend and establishing a formal policy on what technology is required for teleworking and the provision of stipends and organization-owned equipment. The policy should cover equipment repairs and distinguish between the employee and organizational responsibility, including what is expected when an employee uses their own equipment.

*There is a need for a formal teleworking orientation to ensure minimum technological capacity and for easily-accessible IT resources for troubleshooting issues.*

The focus group participants also raised some concerns about minimum skills required to telework so as not to burden fellow employees. They suggested that Human Resources (HR) and Information Technology (IT) departments create a formal teleworking

orientation that all employees must complete before beginning to telework to ensure a minimum level of technological skill and a basic understanding of expectations for teleworking. This orientation could be available monthly and could be revisited by employees as needed. There may also be a need for a trial period for teleworkers, during which time they demonstrate their competency before being allowed to telework more regularly.

Related to the orientation, the focus groups and survey findings indicate a need for additional IT support, resources, and guidance for management and employees. In particular, short videos demonstrating basic technological requirements, such as connecting to the VPN, opening an Outlook appointment, and downloading a file, would be helpful for troubleshooting or references. There is also a clear need for procedures regarding the protection of data. The more generic “Teleworking Tips” documents can complement these resources.

To help supervisors manage their space and equipment needs in a new teleworking world, each organization should create a hoteling and equipment sharing system. A centrally-managed system should ultimately save the organization time and money by reducing redundancy between departments.

*There is also a need for a formal teleworking effort that includes external evaluation of position eligibility.*

Teleworking eligibility is currently decided at the managerial level, which has led to some frustration and concerns about bias. Managers and employees in the focus groups proposed the establishment of a formalized teleworking eligibility process, which could occur at the Director level or through an independent body. This process should articulate the criteria for teleworking and include an appeals process to review a disputed eligibility decision. A formalized process would help protect non-supervisory employees and managers from concerns about subjectivity or bias and help to ensure equity across employment sectors.

*Equity concerns still exist and need to be addressed.*

Although some jobs cannot accommodate teleworking, the pandemic experience has shown that many jobs may be better able to accommodate part-time telework than previously imagined. For example, many public-facing positions have successfully used a rotating schedule with fewer employees in the office to allow part-time teleworking. Field workers can work from closer satellite offices and complete office work at home. These changes should be encouraged and incorporated into an over-arching teleworking policy and eligibility guidelines at the organization level.

Additionally, to address equity concerns related to teleworking eligibility, HR departments can provide information about telework-eligible positions and underscore

that employee development opportunities can help employees gain the skills they need for advancement.

## **Conclusion**

The COVID-19 pandemic created a natural experiment with teleworking that resulted in insights and lessons learned that would not have otherwise occurred. When teleworking was made mandatory, most employees and managers found that they enjoyed it. Survey results reveal that it was widely popular among survey respondents of all job types, with a large majority of respondents indicating the desire to telework at least part-time in the future. This desire fits well with the region's efforts to reduce emissions; as demonstrated, substantial emissions can be saved by even part-time teleworking for a large group of people.

At the same time, this natural experiment also revealed weak points in the system that need to be addressed for future teleworking efforts, including a need for policies and provision related to equipment, many more resources for employees struggling with teleworking (whether due to the cost or the technological challenges), and an unbiased, job-based assessment of teleworking eligibility. These challenges seem surmountable, and we hope that the findings from this report and the included resources will strengthen and support future teleworking efforts around the Phoenix region and beyond.

# Appendix A. City of Tempe/HUE Teleworking Survey Final Report

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## **1. Introduction & Methodology**

This report summarizes the results of a recent City of Tempe Teleworking Study conducted by researchers at Arizona State University and the Arizona Department of Environmental Quality. The survey was conducted to learn about teleworking practices and perceived barriers of and benefits to teleworking among City of Tempe employees prior to and during the State of Arizona's stay-at-home order related to the COVID-19 pandemic. The survey findings will inform a publicly-available teleworking toolkit published by the Arizona Department of Environmental Quality.

The survey was conducted online using the platform SurveyGizmo. The research team worked with the City Manager to send a link to the survey via email to City of Tempe employees on June 5, 2020. Two survey reminders were also sent via email before the survey closed on June 14, 2020. These dates occurred in the period after the statewide stay-at-home order had been lifted, but prior to City of Tempe employees returning to in-office work. The survey received 512 responses, for a total response rate of approximately 25%. No incentives were offered for participation.

The following sections describe the survey findings. Because the survey had separate questions for employees who supervise or manage employees compared to those who do not, the results are presented by job classification. When results for managers, supervisors, deputy directors, and directors are presented or discussed in aggregate, the term "management" or "management-level" is used. Note that this survey does not contain traditional sociodemographic information like sex, age, and race because the survey team wanted employees to feel comfortable describing their teleworking experience, including barriers, benefits, and needs. Due to the small and specific survey population (the City of Tempe workforce), sociodemographic information might have facilitated respondent identification in a way that could have compromised anonymity. A copy of the survey can be found in the Appendix for reference.

All analyses were conducted using Stata IC. Statistical significance was determined via Chi-square tests, tests of proportion, or Kruskal Wallis tests, the latter of which is a non-parametric version of an ANOVA (analysis of variance) test that allows for non-normally distributed variables like the ordinal commute time and distance variables used in this analysis.

Note that sample sizes are listed in all charts to facilitate an understanding of the analyses. Significance tests are reserved for samples of a sufficient size (generally not less than 60, and preferably closer to 100). For some of the management questions, sample sizes are very small; readers should use caution when attempting to draw conclusions or generalize from the results.

## 2. Results

### 2.1 Work and Management Experience

To understand the survey sample, respondents were asked questions about their field of work, years of experience, job classification, supervisory experience, full-time status, and requirements to be in the field or a location other than the primary work site. Table 1 organizes the information about the sample according to job classification, in keeping with a division throughout the survey regarding questions for “management-level” employees (directors, deputy directors, managers, and supervisors) in contrast to questions for non-supervisory employees (non-supervisors).

The data indicate that the majority of survey respondents do not supervise other employees (n=322). Among the management-level employees (n=182), there were fewer respondents the higher the level of supervision, which likely reflects the distribution of positions at the City and may also reflect response bias. Eight people declined to select a job classification. In terms of field of work, the data show a much higher percentage of respondents classified as “Professional” than those classified as “Line staff” or “Public safety” (43% versus 5% and 16% of the total, respectively), which may reflect challenges of responding to surveys while working, staff distributions, a greater prevalence of teleworking within certain professions, or response bias.<sup>6</sup> The survey also received three times as many responses from employees who had worked for the City for over ten years (n=381) than from those who had worked for the City for ten years or fewer (n=127), which again may reflect response bias or a higher prevalence of long tenures within the City workforce. Among management-level employees, 47% (n=86) manage between 1 and 5 employees, 27% (n=50) manage between 6 and 10 employees, and 18% (n=32) manage 11 or more employees. Eight percent (n=14) of management-level employees declined to answer this question.

The vast majority of respondents (95%, n=486) indicated that they work full time. Respondents who indicated that they worked part time were asked whether they were working part time prior to the COVID-19 pandemic, and whether their position had changed in response to the pandemic. Of the 26 respondents that work part time, only 4 (15%) indicated that their position had changed in response to the pandemic.

Respondents were also asked if they are required to work in the field or at a location other than the primary work site. Twenty-seven percent (n=136) of all respondents indicated that they are required to work in the field. An affirmative response to this question was most common among supervisors and non-supervisory employees. Table 2 shows that a requirement to work in the field or at a secondary site was much more common among public safety employees, line staff, and those who self-classified as “other.”

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<sup>6</sup> Twelve percent of respondents selected “other” as their field of work. A survey glitch prevented the capture of additional information for this question.

**Table 1. Characteristics of Survey Respondents**

	Director / Deputy Director (n=25)	Manager (n=50)	Supervisor (n=107)	Non- supervisor (n=322)	Total (n=512)
<b>Field of work</b>					
Administrative	4%	16%	16%	29%	24%
Line staff	4%	-	4%	6%	5%
Professional	76%	58%	42%	38%	43%
Public safety	16%	16%	19%	16%	16%
Other	-	10%	20%	11%	12%
<i>Total</i>	<i>100%</i>	<i>100%</i>	<i>101%<sup>a</sup></i>	<i>101%<sup>a</sup></i>	<i>100%</i>
<b>Years of experience</b>					
0-5 years	-	-	5%	19%	13%
6-10 years	4%	4%	7%	15%	12%
11-20 years	24%	26%	29%	34%	31%
More than 20 years	72%	70%	58%	32%	43%
<i>Total</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>
<b>Number of employees supervised</b>					
1-5 employees	48%	42%	50%	n/a	47% <sup>b</sup>
6-10 employees	28%	26%	28%	n/a	27% <sup>b</sup>
More than 10 employees	24%	28%	11%	n/a	18% <sup>b</sup>
Decline to say	-	4%	11%	n/a	8% <sup>b</sup>
<i>Total</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>n/a</i>	<i>100%</i>
<b>Current work schedule</b>					
Full-time	100%	100%	99%	93%	95%
Part-time	-	-	1%	7%	5%
<i>Total</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>
<b>Required to work in field?</b>					
Yes	8%	16%	32%	28%	27%
No	92%	84%	68%	72%	73%
Decline to say	-	-	-	1%	-
<i>Total</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>

<sup>a</sup> Totals of 101 are due to rounding of percentages.

<sup>b</sup> Values reflect percentages of total among employees with supervisory roles only (n=182).

**Table 2. Field of Work by Worksite Requirements**

	Admin (n=121)	Line staff (n=24)	Professional (n=218)	Public Safety (n=82)	Other (n=60)	Total (n=512)
Required to work in the field or at a secondary worksite?						
Yes	17%	38%	15%	51%	47%	26%
No	83%	63%	85%	49%	53%	74%
<i>Total</i>	<i>100%</i>	<i>101%<sup>a</sup></i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>

<sup>a</sup> Totals of 101 are due to rounding of percentages.

## 2.2 Commuting Prior to the Pandemic

The survey also asked questions about commuting prior to the pandemic, including main mode, frequency of teleworking, and commute time and length. As shown in Table 3, about 87% of respondents (n=443) indicated that they drove alone for their main commute mode prior to the pandemic. No other modal option achieved more than 4% of the mode share within the sample. Respondents were also asked about teleworking frequency in the average week prior to the pandemic. No group had more than 5% of employees who teleworked once/week or more during the average week prior the pandemic. Teleworking is further discussed in Section 2.3.

**Table 3. Pre-Pandemic Commuting Characteristics of Survey Respondents**

	Director / Deputy Director (n=25)	Manager (n=50)	Supervisor (n=107)	Non- supervisor (n=322)	Total (n=512)
Main commute mode prior to pandemic					
Drive alone	80%	94%	89%	87%	87%
Bus / Light rail	4%	-	4%	5%	4%
Carpool/vanpool	4%	-	5%	2%	3%
Bicycle / E-bike	8%	4%	2%	2%	3%
Multiple modes	4%	2%	1%	2%	2%
Walk	-	-	-	1%	1%
Telework	-	-	-	1%	1%
<i>Total</i>	<i>100%</i>	<i>100%</i>	<i>101%<sup>a</sup></i>	<i>100%</i>	<i>100%</i>
Telework frequency in average pre-pandemic week					
2-3 days/week	4%	-	-	3%	2%
1 day/week	4%	-	1%	5%	4%
Occasionally	32%	14%	10%	10%	12%
Never	60%	86%	89%	82%	82%

Missing / Decline to say	-	-	-	1%	-
<i>Total</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>
<b>Length of typical pre-pandemic commute, one-way</b>					
15 min or less	8%	20%	27%	18%	19%
16-30 min	40%	28%	37%	35%	35%
31-45 min	24%	32%	21%	28%	26%
46-60 min	28%	12%	10%	11%	12%
More than 60 min	-	8%	5%	8%	7%
Missing	-	-	-	1%	1%
<i>Total</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>
<b>Distance of typical pre-pandemic commute, one-way</b>					
1 mile or less	-	2%	1%	1%	1%
1.1 – 3 miles	8%	4%	11%	7%	7%
3.1 – 5 miles	4%	12%	12%	11%	11%
5.1 – 10 miles	36%	22%	22%	22%	22%
10.1 – 20 miles	32%	26%	33%	33%	32%
More than 20 miles	20%	34%	22%	26%	26%
Missing / Decline to say	-	-	-	1%	1%
<i>Total</i>	<i>100%</i>	<i>100%</i>	<i>101%<sup>a</sup></i>	<i>100%</i>	<i>100%</i>

<sup>a</sup> Totals of 101 are due to rounding of percentages.

Respondents reported a spectrum of distances from and travel times to work. Nineteen percent of respondents live five miles or fewer from work, compared to the 58% who live more than 10 miles from work. Correspondingly, 54% of respondents indicate commutes of 30 minutes or less. Driving is the most common mode regardless of distance or time, which likely reflects the strong driving culture in Tempe and the surrounding areas. Even among the ten respondents who indicated that they did not have a main mode, 70% still drove 2-3 days/week. Driving was also commonly used to access light rail, while those who used the bus were most likely to walk for access. However, there was a significant ( $p \leq 0.01$ ) association between commute times and distances and commute mode, in that walking is more likely to be associated shorter distances and shorter commute times. This correlation is also present for bicycling, although a few respondents report bicycling even for trips that take 31-45 minutes (see Table 4). Additionally, the proportion of public transit usage increases as commute times increase, with the highest proportion associated with the longest commutes (over 60 min).

This distribution of distances underscores the potential challenges of prompting mode shift within the City of Tempe population as a way to encourage ozone reduction. However, it also highlights the potential benefit of teleworking in terms of time recuperated from commuting; this and other benefits is discussed in Section 2.3.6.

**Table 4. Commute Travel Times by Main Commute Mode Prior to the Pandemic**

Main Commute Mode	One-way Commute Times <sup>a</sup>					
	≤ 15 min (n=95)	16-30 min (n=176)	31-45 min (n=130)	46-60 min (n=59)	61+ min (n=37)	Total (n=497)
Drive alone	91%	91%	88%	92%	76%	89%
Light rail / Bus	1%	2%	5%	5%	19%	4%
Bicycle / E-bike	5%	2%	4%	-	-	3%
Carpool / Vanpool	1%	4%	2%	3%	5%	3%
Walk	2%	1%	-	-	-	1%

<sup>a</sup> Column totals sum to 100%

### 2.2.1 Job Type and Commuting Behavior

About ninety percent of employees drove alone in all job classifications other than public safety, in which 99% of employees drove alone, and professionals, in which 80% of employees drove alone. Among the professionals who did not drive, approximately even numbers of people bicycled, car- or vanpooled, used light rail, and used a mixture of modes.

## 2.3 Carbon Reduction Due to Teleworking

In addition to the quality of life benefits associated with teleworking, there are clear environmental benefits associated with the reduction in driving, particularly when driving is the main commute mode of a workforce. To understand the environmental benefits associated with teleworking, the research team calculated carbon emission reductions associated with the decline in driving among those who telecommuted, as well as those who indicated that they would like to continue teleworking. These are general estimates based on the following assumptions:

1. The fleet reflects the average passenger car emissions in the United States, as calculated by the Environmental Protection Agency (411g CO<sub>2</sub> per mile driven).<sup>7</sup>
2. The sample reflects the population of City of Tempe workers in terms of commute mode (87% drive alone), percentage of people who drove alone prior to the stay-at-home order and who teleworked under the stay-at-home order (71%), and percentage of people who drove alone prior to the stay-at-home order and would like to telework at least part time in the future (63%).
3. Average mileage is calculated as the midpoint between the two ends of the ranges for each category given in the survey. For example, people who indicated that their commute

<sup>7</sup> Environmental Protection Agency. (2014). Greenhouse Gas Emissions from a Typical Passenger Vehicle. EPA-420-F-14-040. Accessed September 27, 2020: <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100JPPH.PDF?Dockey=P100JPPH.PDF>

was between 5.1 and 10 miles long are estimated to have a commute that is 7.55 miles long, one-way.

4. One working year is 48 working weeks, allowing time for holidays and vacation during which there would be no commute.
5. These numbers reflect a base population of 2,000 City of Tempe employees.

Using these assumptions, an 8-week timeframe associated with the stay-at-home order resulted in employees of the City of Tempe saving *573 metric tons of CO<sub>2</sub> by teleworking instead of driving alone*. Going forward, if employees who want to telework at least part-time were to do so half-time (e.g., 10 days/month), *the City could help save 1,576 metric tons of CO<sub>2</sub> over one year*. The teleworking toolkit will contain additional research and guidance to make this type of calculation going forward.

## **2.4 Experience with Teleworking Prior to and During the COVID-19 Pandemic**

This section describes the findings associated with teleworking patterns prior to and during the pandemic, including who teleworked, reasons why some employees did not, and general barriers to and benefits of teleworking.

### **2.4.1 Who Teleworked Prior to and During the Stay-at-Home Order?**

Only 17% of respondents (n=87) reported teleworking even occasionally in the average week prior to the stay-at-home order, and only 6% (n=32) reported teleworking at least one day a week (Table 5). Teleworking was more likely among directors and non-supervisory staff than others. There was no clear relationship between teleworking and years of experience in the field or distance or travel time to work. In terms of field of work, professionals were much more likely to report occasionally teleworking than other employee types.

In contrast, just over 70% of the 512 respondents (n=365) reported that they were currently teleworking due to the stay-at-home order (SAHO) related to the pandemic. Among the 147 respondents who indicated that they were *not* currently teleworking, 58% reported being considered essential workers and 41% reported needing to be physically present on the job. While there was some overlap between those two categories, they were not consistently related. Public safety employees were significantly ( $p \leq 0.001$ ) more likely to report not teleworking than other employees, fitting with their significantly ( $p \leq 0.01$ ) greater likelihood of self-reporting as essential and/or needing to be present on the job (see Table 5).

**Table 5. Teleworking Covariates Associated with Field of Work**

	Field of Work					
	Professional (n=219)	Admin (n=121)	Public Safety (n=82)	Other (n=61)	Line Staff (n=24)	Total (n=512)
<b>Occasionally teleworked prior to pandemic</b>	28%	9%	11%	9%	4%	17%
<b>Currently teleworking</b>	83%	77%	44%	64%	54%	71%
<b>Required to be in the field</b>	15%	17%	51%	46%	38%	27%
<b>Considered essential</b>	9%	14%	47%	10%	17%	17%
<b>Need to be physically present</b>	5%	8%	27%	26%	13%	12%

Supervisors were the least likely job classification to report teleworking during the pandemic, at 61%, followed by managers at 68%. In contrast, 75% of non-supervisory employees and 84% of directors/deputy directors reported teleworking at the time of the survey. Supervisors were also the most likely of any job classification to report that they needed to be physically present on the job (27%, compared to 9% of non-supervisory employees and 6% of managers). Supervisors were approximately as likely as managers and non-supervisory employees to report being essential (21% compared to 20% and 16%, respectively). Not surprisingly, the stay-at-home order led to a large increase in both the number of management-level employees managing teleworkers and the percentage of the workforce that was teleworking, as shown below.

**Prior to the stay-at-home order**

- 18% (n=33 of 182) of management-level employees reported managing teleworkers
- 52% of management-level employees managing teleworkers (n=17 of 33) reported that very few (20% or fewer) of their employees teleworked

**During the stay-at-home order**

- 59% (n=107 of 182) of management-level employees reported managing teleworkers
- 78% of those managing teleworkers (n=84 of 107) reported that all or almost all (over 80%) of their employees were teleworking

At the management level, professionals (84%, n=82) were significantly ( $p \leq 0.001$ ) more likely than public safety (31%, n=32) or administrative (58%, n=26) employees to manage teleworkers.

### 2.4.2 Teleworking Policies: Prevalence and Content Prior to and During the Stay-at-Home Order

Only 13% (n=68) of respondents indicated that their department had a telework policy prior to the stay-at-home order. Nearly 56% of all respondents (n=285) indicated that there was no telework policy, with the remaining 31% indicating that they didn't know whether there was a policy. In contrast, 63% of respondents indicated that their department had a teleworking policy during the pandemic. Indicating that there is a teleworking policy under the stay-at-home order is significantly ( $p \leq 0.01$ ) positively associated with teleworking under the order, as might be expected, but still 32% of those teleworking during the pandemic indicated that there was no policy or that they did not know of such a policy.

Table 6 compares the elements of teleworking covered in current departmental policies to those in teleworking policies developed prior to the stay-at-home order. The policy elements are similar between the two time periods, with the most notable difference being the higher percentage of current policies covering timesheet logging (from 15% to 32% before and during the stay-at-home order, respectively). For both periods, the category “general work expectations” refers to guidance that respondents reported as general in nature and not necessarily covering the more specific categories proposed in the survey. The similarity in policy elements between the time periods may reflect best practices and/or policy sharing between departments as current policies were developed. Note that decreases in percentages from “prior to” to “during” the pandemic may belie the overall increase in each area due to the much larger number of respondents indicating that a teleworking policy is in place.

**Table 6. Elements of Telework Policies Prior to and During the Stay-at-Home Order**

	Prior to stay-at-home order (n=68)	During stay-at-home order (n=324)
Email / Phone responsiveness	60%	63%
Eligibility	63%	59%
Meeting attendance expectations	50%	55%
Check-in frequency	35%	43%
Timesheet logging	15%	32%
General work expectations <sup>1</sup>	10%	8%
Check-in length	6%	12%
Other <sup>2</sup>	4%	2%

<sup>1</sup> Derived from open-text responses referring to general as opposed to specific guidance about teleworking.

<sup>2</sup> "Other" consisted of responses mentioned by fewer than two people, including technology usage and telework limitations (after “general work expectations” had been coded separately).

Table 7 shows how teleworking policies compare to one another with regard to the various elements. At least 60% of all job types reported that the current teleworking policy covers

email/phone responsiveness, although still at least 30% of each group did not report this area being covered. Eligibility has even larger gaps, with 67% of professionals indicating that it is covered, but only 48% of administrative and “other” staff. Meeting attendance expectations, check-in frequency, and timesheet logging were similarly mixed across job type. These findings reflect a need for greater clarity about expectations regarding accountability and operations while teleworking both overall and to varying greater or lesser degrees depending on the field of work.

**Table 7. Elements of Current Teleworking Policies, by Job Type**

	<b>Professional (n=150)</b>	<b>Admin (n=77)</b>	<b>Public Safety (n=40)</b>	<b>Other (n=40)</b>	<b>Line Staff (n=16)</b>	<b>Total (n=323)</b>
Email/phone responsiveness	60%	68%	68%	63%	69%	63%
Eligibility	67%	48%	65%	48%	56%	59%
Meeting attendance expectations	61%	51%	43%	55%	56%	55%
Check-in frequency	38%	53%	38%	43%	63%	43%
Timesheet logging	28%	29%	48%	40%	38%	33%
Check-in length	8%	18%	13%	13%	19%	12%
General guidance	11%	6%	3%	3%	6%	8%

Among those currently teleworking (n=365), 65% of respondents indicated that their department had provided best practices or guidance specifically related to teleworking during the COVID 19 pandemic. As might be expected, respondents whose departments had created a new or revised teleworking policy were significantly ( $p \leq 0.001$ ) more likely to report having received best practices or guidance. Among current teleworkers whose departments provided best practices or guidance about teleworking (n=236), most (68%) indicated that the resources were shared via discussion, while the remaining resources were shared via policy documentation.

### 2.4.3 Motivators for Teleworking Prior to the Stay-at-Home Order

Although teleworking during the stay-at-home order was connected to an urgent need, future teleworking efforts will benefit from being designed around the perceived benefits of teleworking during normal times. To better understand the benefits of teleworking during non-pandemic times, those who teleworked at least occasionally prior to the stay-at-home order and those who managed or supervised teleworking employees prior to the stay-at-home order were asked which of a list of pre-identified benefits motivated them or their employees, respectively, to telework. In both cases, respondents could select all that applied.

#### Motivations to Telework Prior to the Stay-at-Home Order by Job Type

Table 8 displays the results of employee’s motivations to telework according to job type. As is clear from the table (and fitting with the results in Table 5), professionals were by far the most likely to have teleworked prior to the pandemic; the sample sizes are very small for all other job

types. However, it is still worthwhile to examine the main motivations, which include valuing the time saved/job flexibility, not needing to be in the office, the ability to be more productive elsewhere, and being able to achieve less stress/greater work-life balance. In all cases, professionals and administrative staff were the most likely to indicate the motivators, with the exception of specific person care. Decreased personal expenses were cited by about half of respondents who had teleworked, while specific person care/household duties were selected by only 20% of respondents overall. Perhaps encouragingly for the City, just five respondents (6%) indicated that they had a health issue or disability that could not be accommodated at the office.

It is notable that few public safety or “other” staff selected many of the benefits, and neither were likely to list other motivators via an open text response. This finding, together with small sample sizes for both public safety and line staff, may reflect a disconnect between teleworking and the nature of those jobs.

**Table 8. Motivators for Teleworking Prior to the Stay-at-Home Order Among Those Who Teleworked at Least Occasionally, by Job Type**

	Professional <sup>1</sup> (n=61)	Admin (n=11)	Public Safety (n=9)	Other (n=5)	Line Staff (n=1)	Total <sup>2</sup> (n=87)
Valued time saved / flexibility	79%	73%	44%	40%	-	71%
Not necessary to be in the office	72%	64%	56%	60%	-	68%
Ability to be more productive elsewhere	67%	64%	33%	40%	-	61%
Less stress / greater work-life balance	61%	55%	44%	40%	-	56%
Decreased personal expenses	52%	55%	22%	-	-	46%
Specific person care / household duties	16%	36%	11%	20%	100%	20%
Health issue / disability not accommodated	7%	0%	0%	20%	-	6%

1 Columns reflect the percentage of each job type selecting the motivator *among those who occasionally teleworked prior to the pandemic*. Columns do not sum to 100%, as respondents could select multiple motivators.

2 The total reflects those who occasionally teleworked prior to the pandemic and who responded to the question.

Those who directed, managed, or supervised employees who teleworked at least occasionally prior to the stay-at-home order were also asked what they perceived to be their employees’ motivations for teleworking. The results closely mirror the responses of the employees themselves, with the only difference being that management-level staff overall selected not needing to be physically present in the office as the top motivator for employees to telework, followed by valuing the time saved/flexibility; these were reversed in order among the employees themselves (see Table 9). Note that the ordering of the motivators by management-level staff in the professional area matches the order of the teleworking employees in that area.

Beyond ordering, however, there may be a disconnect between employees’ motivations for teleworking and what the management-level employees believe. For example, 73% and 64% of

administrative employees valued the time saved and the ability to be more productive elsewhere, respectively, while these reasons were cited by only 25% and 0% of management-level administrative staff. It is possible that this single management-level administrator managed all of the teleworking administrative staff (and therefore was the only person who could name the motivator), but a similar mismatch existed between management and employees within public safety, particularly with regard to teleworking reducing stress/allowing greater work-life balance and valuing time saved/flexibility. A manager or supervisor may be more sympathetic to teleworking requests if they understand that teleworking leads to reduced stress and greater productivity, rather than just not needing to be in the office to do the work. These results suggest that it may be important to clarify teleworking benefits in order to design an effective teleworking program for the future.

**Table 9. Management-Level Impressions of Employees’ Motivators to Telework Prior to the Stay-at-Home Order, by Job Type<sup>1</sup>**

	Professional <sup>2</sup> (n=20)	Admin (n=4)	Public Safety (n=6)	Other (n=3)	Total <sup>3</sup> (n=33)
Not necessary to be in the office	65%	50%	50%	33%	58%
Valued time saved / flexibility	70%	25%	17%	-	48%
Ability to be more productive elsewhere	50%	-	17%	33%	36%
Less stress / greater work-life balance	45%	25%	17%	-	33%
Decreased personal expenses	30%	25%	17%	-	24%
Specific person care / household duties	30%	25%	-	33%	24%
Health issue / disability not accommodated	25%	-	-	-	15%

1 Line staff are excluded because no line staff indicated that they managed any teleworkers prior to the pandemic.

2 Columns reflect the percentage of each job type selecting the motivator *among those who managed/supervised teleworkers prior to the pandemic*. Columns do not sum to 100%, as respondents could select multiple motivators.

3 The total reflects those who managed teleworkers at least occasionally prior to the pandemic, and who responded to the question.

### Motivations to Telework Prior to the Stay-at-Home Order by Job Classification

The overall order of motivators seen in Tables 8 and 9 remained the same for all job classifications except managers, who were more likely to cite the ability to be productive elsewhere than that it was not necessary to be in the office (see Table 10). Note that directors/deputy directors were consistently the least or near least likely to select any of the motivators, with no more than 40% selecting any one category. In contrast over 80% of managers and supervisors and 73% of non-supervisors selected that they valued the time saved/flexibility of teleworking. Well over 50% of managers, supervisors, and non-supervisors cited the motivators of not needing to be in the office, greater productivity, and less stress/greater work-life balance. Over 50% of supervisors and non-supervisors also cited the motivator of decreased personal expenses.

Management-level employees’ perceptions of motivators to telework among their employees were also examined by job classification (Table 11). The same ordering as was present by job type also emerged by job classification, with 58% of respondents citing the motivation of not needing to be in the office, followed by valuing the time saved/flexibility. The order of the top two motivators was reversed for directors/deputy directors, of whom nearly 80% cited the value of time saved/flexibility. It is also notable that, similar to management-level impressions according to job type, there may be a disconnect between what motivates employees and what their bosses think motivates them, as a lower percentage of managers and supervisors selected the varying benefits across the board (the opposite was true for directors/deputy directors). Again, this mismatch will likely be important to address for an effective teleworking program in the future.

**Table 10. Motivators for Teleworking Prior to the Stay-at-Home Order Among Occasional Teleworkers, by Job Classification**

	Director/ Dep Director (n=10)	Manager (n=7)	Supervisor (n=12)	Non- supervisor (n=56)	Total <sup>2</sup> (n=85)
Valued time saved / flexibility	40%	86%	83%	73%	72%
Not necessary to be in the office	30%	57%	83%	71%	67%
Ability to be more productive elsewhere	30%	71%	67%	64%	61%
Less stress / greater work-life balance	30%	57%	58%	61%	56%
Decreased personal expenses	20%	14%	50%	54%	46%
Specific person care / household duties	20%	29%	33%	16%	20%
Health issue / disability not accommodated	10%	14%	8%	4%	6%

1 Columns reflect the percentage of each job type selecting the motivator *among those who occasionally teleworked prior to the pandemic*. Columns do not sum to 100%, as respondents could select multiple motivators.

2 The total reflects those who occasionally teleworked prior to the pandemic and who responded to the question.

**Table 11. Management-Level Impressions of Employees’ Motivators to Telework Prior to the Stay-at-Home Order, by Job Classification**

	Director/ Dep Director (n=9)	Manager (n=10)	Supervisor (n=14)	Total <sup>2</sup> (n=33)
Not necessary to be in the office	67%	60%	50%	58%
Valued time saved / flexibility	78%	30%	43%	48%
Ability to be more productive elsewhere	44%	20%	43%	36%
Less stress / greater work-life balance	44%	20%	36%	33%
Decreased personal expenses	33%	0%	36%	24%
Specific person care / household duties	56%	10%	14%	24%
Health issue / disability not accommodated	33%	10%	7%	15%

1 Columns reflect the percentage of each job type selecting the motivator *among those who managed/supervised teleworkers prior to the pandemic*. Columns do not sum to 100%, as respondents could select multiple motivators.  
 2 Total reflects those who managed teleworkers at least occasionally prior to the pandemic and who responded to the question. Line staff are excluded, as no line staff indicated that they managed teleworkers prior to the pandemic.

#### 2.4.4 Barriers to Teleworking Prior to and During the Stay-at-Home Order

An effective teleworking program will not only take advantage of and facilitate the benefits of teleworking, it will also work to address barriers to teleworking. To that end, respondents were asked about barriers to teleworking prior to, during, and after the stay-at-home order.

##### Barriers to Teleworking Prior to the Stay-at-Home Order

Employees at all levels who did not telework prior to the stay-at-home order were asked what kept them from doing so, while supervisors were asked similar questions about their non-teleworking employees. Table 12 shows the percentage of employees of each job type indicating barriers to teleworking prior to the pandemic. For all job types other than public safety, the most common barrier to teleworking (reported by 62% of respondents who did not telework, n=257) was a perception or reality that it was prohibited. For public safety, in contrast, the main reason was a need to be physically present on the job (66% of public safety, compared to 37% of the total). However, 30% of employees who did not telework reported that the agency lacked the appropriate tools, like video-conferencing software. Twenty-four percent of this sub-sample, including 28% of administrative staff and 35% of line staff, reported lacking the appropriate tools to telework, such as a laptop. Only 10% of this sub-sample of respondents indicated a worry about productivity, and only 15% indicated the barrier of enjoying being in the office – data that support a potential transition to more prevalent teleworking in the future, if other barriers can be addressed.

**Table 12. Employee-Reported Barriers to Teleworking Prior to the Stay-at-Home Order, by Job Type**

	Professional <sup>1</sup> (n=155)	Admin (n=110)	Public Safety (n=73)	Line Staff (n=23)	Other (n=30)	Total (n=257)
Agency/management discouraged or prohibited <sup>2</sup>	68%	71%	37%	70%	55%	62%
I needed to be physically present at the job <sup>2</sup>	30%	27%	66%	30%	42%	37%
Agency lacked appropriate tools (e.g., video-conferencing software)	34%	36%	19%	30%	18%	30%
I lacked appropriate tools at home (e.g., laptop)	23%	28%	25%	35%	15%	24%
I enjoyed being in office	19%	15%	10%	4%	15%	15%
Agency lacked data protections and/or a secure connection	12%	16%	14%	26%	5%	13%
I believed it would negatively impact productivity	14%	5%	15%	0%	7%	10%

1 Columns reflect percentage of each job type selecting the barrier *among those who never teleworked prior to the pandemic and who answered the question*. Columns do not sum to 100%; respondents could select multiple barriers.

2 Includes both field workers and those who primarily interact with the public.

3 Includes responses of “I didn’t know it was possible” and “not allowed.”

Table 13 shows the percentage of management-level employees citing these barriers to their employees teleworking. In general, the findings from Tables 12 and 13 are complementary, but reveal some important differences between employee and management perceptions of barriers. For example, comparing the percentages of “N” columns (indicating that no employees teleworked) to the percentages in Table 12 (among employees who never teleworked), both employees and management-level professional and administrative staff recognized the prohibition of teleworking as the top barrier, but in both cases a higher percentage of employees stated it as a barrier, suggesting that communication about teleworking options is important. The top barrier for public safety was the need to be present on the job, but employees listed this barrier less often than management staff, suggesting that a need for clarification about the necessity of in-person work is important for that field. Both line staff and “other” employees cited agency/management prohibition as the top barrier, while the management-level employees in these groups were more likely to state the need to be present on the job, again suggesting the need for better communication about options and why teleworking is or is not allowed. The lack of home and office tools for teleworking was also frequently mentioned by both employees and management staff in all lines of work.

The data in Tables 14 and 15 show the prevalence of these barriers by job classification. While the total percentages don’t change, the data show that some concerns vary substantially by management level. For example, 47% of the director/deputy director category indicated a worry about productivity as a barrier to teleworking, compared to less than 20% for any other group.

When asked about their impressions of their employees' barriers, that number fell to only 25% of those directors/deputy directors who never managed teleworkers prior to the pandemic, underscoring it as their concern. Other variations within the data correspond to the data in Tables 12 and 13, supporting the need to provide adequate tools for teleworking and to clarify if and when teleworking is an option.

**Table 13. Management-Level Impressions of Barriers to Teleworking Prior to the Stay-at-Home Order, by Job Type**

	Professional		Admin		Public Safety		Line Staff		Other		Total	
	Some <sup>1</sup> (20) <sup>3</sup>	None <sup>2</sup> (70)	S (4)	N (22)	S (6)	N (26)	S (0)	N (5)	S (3)	N (23)	S (33)	N (146)
My employees needed to be physically present at the job <sup>4</sup>	20%	30%	50%	50%	33%	81%	n/a	80%	0%	78%	24%	51%
Agency/management discouraged or prohibited <sup>5</sup>	40%	57%	50%	68%	17%	27%	n/a	20%	33%	26%	36%	47%
My employees lacked appropriate tools at home (e.g., laptop)	20%	39%	25%	41%	33%	19%	n/a	0%	0%	22%	21%	32%
Agency lacked appropriate tools (e.g., video-conferencing software)	50%	36%	25%	32%	33%	12%	n/a	0%	0%	13%	39%	26%
My employees enjoyed being together in office	30%	16%	25%	18%	17%	12%	n/a	20%	0%	0%	24%	13%
Agency lacked data protections and/or a secure connection	10%	17%	25%	14%	17%	4%	n/a	0%	0%	4%	12%	12%
My employees believed it would negatively impact productivity	15%	7%	25%	9%	17%	12%	n/a	20%	33%	0%	18%	8%

1 “S” columns reflect the percentage of each job type selecting the barrier *among those who managed/supervised some teleworkers prior to the pandemic and who answered the question*. Columns do not sum to 100%, as respondents could select multiple barriers.

2 “N” columns reflect the percentage of each job type selecting the barrier *among those who did not manage any teleworkers prior to the pandemic and who answered the question*. Columns do not sum to 100%, as respondents could select multiple barriers.

3 Numbers in parentheses are the sample sizes for each group.

4 Includes both field workers and those who primarily interact with the public.

5 Includes responses of “I didn’t know it was possible” and “not allowed.”

**Table 14. Employee-Reported Barriers to Teleworking Prior to the Stay-at-Home Order, by Job Classification**

	Director/ Dep Director <sup>1</sup> (n=9)	Manager (n=28)	Supervisor (n=60)	Non- supervisor (n=159)	Total (n=256)
Agency/management discouraged or prohibited <sup>2</sup>	60%	65%	63%	60%	62%
I needed to be physically present at the job <sup>3</sup>	33%	33%	43%	36%	37%
Agency lacked appropriate tools (e.g., video-conferencing software)	33%	40%	23%	30%	29%
I lacked appropriate tools at home (e.g., laptop)	27%	16%	15%	29%	24%
I enjoyed being in office	40%	16%	14%	13%	15%
Agency lacked data protections and/or a secure connection	13%	7%	11%	16%	13%
I believed it would negatively impact productivity	47%	19%	8%	7%	10%

1 Columns reflect the percentage of each job classification selecting the barrier *among those who never teleworked prior to the stay-at-home order and who answered the question*. Columns do not sum to 100%, as respondents could select multiple barriers.

2 Includes responses of “I didn’t know it was possible” and “not allowed.”

3 Includes both field workers and those who primarily interact with the public.

**Table 15. Management-Level Impressions of Barriers to Teleworking Prior to the Pandemic, by Job Classification**

	Director/ Dep Director		Manager		Supervisor		Total	
	Some <sup>1</sup> (9) <sup>3</sup>	None <sup>2</sup> (16)	S (10)	N (39)	S (14)	N (91)	S (33)	N (146)
My employees needed to be physically present at the job <sup>4</sup>	22%	38%	30%	44%	21%	57%	24%	51%
Agency/management discouraged or prohibited <sup>5</sup>	22%	63%	50%	56%	36%	41%	36%	47%
My employees lacked appropriate tools at home (e.g., laptop)	22%	50%	30%	41%	14%	24%	21%	32%
Agency lacked appropriate tools (e.g., video-conferencing software)	56%	44%	40%	33%	29%	20%	39%	26%
My employees enjoyed being together in office	33%	44%	30%	18%	14%	5%	24%	13%
Agency lacked data protections and/or a secure connection	11%	25%	20%	10%	7%	10%	12%	12%
My employees believed it would negatively impact productivity	33%	25%	30%	13%	0%	2%	18%	8%

1 Columns reflect the percentage of each job classification selecting the barrier *among those who managed/supervised some teleworkers prior to the stay-at-home order and who answered the question*. Columns do not sum to 100%, as respondents could select multiple barriers.

2 Columns reflect the percentage of each job classification selecting the barrier *among those who did not manage any teleworkers prior to the stay-at-home order and who answered the question*. Columns do not sum to 100%, as respondents could select multiple barriers.

3 Numbers in parentheses are the sample sizes for each group.

4 Includes both field workers and those who primarily interact with the public.

5 Includes responses of “I didn’t know it was possible” and “not allowed.”

### Barriers to Teleworking During the Stay-at-Home Order

Recall that Table 5 in Section 2.3.1 showed that most respondents (71%) reported teleworking at the time of the survey, including a majority of respondents from all groups other than public safety (of whom 44% reported teleworking). Respondents who reported not teleworking (n=147) were asked whether they were considered essential and/or needed to be physically present; they could also supply their own reasons in an open-response format. Table 16 lists the barriers to teleworking at the time of the survey. Fifty-nine percent of non-teleworking respondents, including 83% of public safety and 61% of administrative staff, stated that they were considered essential. Forty-six percent of respondents, including 52% of public safety and 73% of “other”, stated that they needed to be physically present. While there was some overlap between these responses, only 25% of non-teleworking respondents selected both that they were essential and that they needed to be physically present on the job.

Note that some respondents indicated via open text that they disagreed with their designations as essential and/or the need to be physically present. For example, one respondent wrote that, *“I was told I was essential, but my job could easily be done from home in a pandemic situation. I could have come in once a week to pick up additional work as needed.”* Another employee wrote, *“I need to be physically present on the job during significant portions of the week (but NOT at all times).”* This mismatch between employee and management expectations will be critical to address for successful future teleworking efforts.

The remaining barriers naturally have fewer responses because they were derived from the open-text responses. Among those barriers, 11% of people, including 21% of professionals and 18% of line staff, had already been called back by the time of the survey. Five percent of people, including 11% of administrative staff, reported that they had never been allowed to telework due to management expectations or a prohibition. Technological limitations related to equipment shortages and inadequate space at home were mentioned by 4% of respondents.

**Table 16. Barriers to Teleworking During to the Stay-at-Home Order, by Job Type**

	Professional <sup>1</sup> (n=38)	Admin (n=28)	Public Safety (n=46)	Line Staff (n=11)	Other (n=22)	Total (n=147)
Considered essential	50%	61%	83%	45%	32%	59%
Need to be physically present <sup>2</sup>	37%	39%	52%	27%	73%	46%
Already called back <sup>3</sup>	21%	11%	2%	18%	9%	11%
Management expectations/ prohibition <sup>3</sup>	5%	11%	2%	1%	-	5%
Technological limitations <sup>3</sup>	11%	4%	2%	-	-	4%

1 Columns reflect the percentage of each job type selecting the barrier *among those who were not teleworking at the time of the survey and who answered the question*. Columns do not sum to 100%, as respondents could select multiple barriers.

2 Includes those who need to be physically present “at all times” and those who need to be present part of the time.

3 Derived from open-text responses to “other: please describe” option.

Barriers to teleworking during the stay-at-home order also varied according to job classification (see Table 17). Managers and non-supervisory employees were more likely to report being considered essential than other job classifications, although the differences were not stark. In contrast, 71% of supervisors reported needing to be physically present, compared to no more than 38% of managers and non-supervisory employees, and only 25% of directors/deputy directors. Supervisors and non-supervisory employees were more likely than directors/deputy directors and managers to report already having been called back by the time of the survey. Management expectations were most likely to be reported by non-supervisory employees (9%), while technological limitations were associated with small percentages of all job classifications other than director/deputy director (of whom no one reported this barrier).

**Table 17. Barriers to Teleworking During to the Stay-at-Home Order, by Job Classification**

	Director/ Dep Director <sup>1</sup> (n=4)	Manager (n=16)	Supervisor (n=42)	Non- supervisor (n=82)	Total (n=147)
Considered essential	50%	63%	55%	62%	59%
Need to be physically present <sup>2</sup>	25%	38%	71%	38%	46%
Already called back <sup>3</sup>	-	6%	12%	12%	11%
Management expectations/ prohibition <sup>3</sup>	-	6%	-	9%	5%
Technological limitations <sup>3</sup>	-	6%	2%	5%	4%

1 Columns reflect the percentage of each job type selecting the barrier *among those who were not teleworking at the time of the survey and who answered the question*. Columns do not sum to 100%, as respondents could select multiple barriers.

2 Includes those who need to be physically present “at all times” and those who need to be present part of the time.

3 Derived from open-text responses to “other: please describe” option.

### Concerns about Teleworking Among Management-Level Employees

Those who managed teleworking employees at the time of the survey were asked about the degree to which their concerns about teleworking had been addressed given the stay-at-home order. The results suggest that concerns about tools and data protections had been mostly addressed by the time of the survey, while concerns about the need to be physically present and to guarantee accountability and productivity, may still need attention. Due to small sample sizes and similarity in responses between job types and classifications, responses are presented in the aggregate. Respondents reflect only those who answered the questions, and indicated the following:

- Among those concerned about the agency lacking the appropriate tools (n=46), 85% indicated that their concerns had been mostly addressed.
- Among those concerned about data protections (n=16), 88% indicated the concerns had been mostly addressed.
- Concerns about employees lacking sufficient tools (n=42) were considered mostly addressed by 71% of respondents.
- Only 11 management-level employees indicated concerns about productivity or accountability for teleworking employees. Of those respondents, only 45% felt that their concerns had been at least mostly addressed for accountability, and only 36% felt that way regarding productivity.
- Only 50% of respondents concerned about the need to be physically present (n=24) indicated that their concerns had been mostly or completely addressed.

Additional research during the project focus groups can help clarify specific needs in each of these areas.

#### 2.4.5 Strategies to Address Barriers to Teleworking

Key to addressing some of the barriers and concerns in Section 2.3.4 is clear communication between management and employees. Employees and management were asked whether and how clear expectations and requirements had been discussed, and how management kept track of progress. Seventy-six percent of non-supervisory respondents who were teleworking at the time of the survey (n=238) indicated that their manager had discussed “clear expectations and requirements” with regard to teleworking with them. Among job types, the percentage of respondents indicating this clarity was highest for public safety (87%), line staff (82%), and “other” staff (83%), in comparison to administrative (76%) and professional staff (71%). These findings indicate that 24% of employees (and 29% of professionals, who are more likely to telework) may lack important clarity about job expectations while teleworking.

An important aspect of teleworking is the ability to track progress as needed. Management-level employees and non-supervisory employees reported a variety of ways of tracking employees’ progress, as shown in Table 18. Overall, both employees and management-

level employees report using phone calls or video conferences most often, followed by written communication through email, chat, or text, and then by progress reports or project deliverables. Eleven percent of non-supervisory employees reported not having their progress tracked or not knowing how it is tracked, in comparison to 3-6% of management employees reporting not tracking progress, but it is unclear from the data if this is due to survey bias, a lack of sufficient communication regarding expectations, or some other unknown factor.

**Table 18. Strategies for Tracking Employee Progress, by Job Classification**

	Director/ Dep Director <sup>1</sup> (n=23)	Manager (n=34)	Supervisor (n=50)	Non- supervisor (n=240)	Total (n=347)
Phone / video calls	96%	85%	84%	63%	71%
Email / chat / text	70%	68%	72%	48%	54%
Progress reports / deliverables	26%	53%	46%	35%	37%
Project management software / worklog <sup>2</sup>	4%	3%	6%	6%	6%
Don't keep track / unknown	4%	3%	6%	11%	9%

<sup>1</sup> Columns reflect the percentage of each job type selecting the strategy *among those who were teleworking or managing teleworkers at the time of the survey and who answered the question*. Columns do not sum to 100%, as respondents could select multiple strategies.

<sup>2</sup> Derived from open-text responses to “other: please describe” option.

A similar dynamic exists when examining progress tracking according to job type, with management-level employees in each job type often reporting using a method much more than non-supervisory employees report it (see Tables 19 and 20). The smaller number of management-level employees and their relationship to potentially multiple non-supervisory employees precludes a confident interpretation of this discrepancy. In both cases, the vast majority of employees report that progress is being tracked, although it may be important to set clear expectations about tracking progress going forward (perhaps particularly for administrative staff, of whom 19% reported not knowing or not having progress tracked).

**Table 19. Strategies for Tracking Employee Progress as Reported by Non-Supervisory Employees, by Job Type**

	Professional (n=105) <sup>1</sup>	Admin (n=73)	Public Safety (n=25)	Line Staff (n=11)	Other (n=24)	Total (n=347)
Phone / video calls	75%	53%	48%	64%	67%	64%
Email / chat / text	52%	40%	36%	45%	63%	47%
Progress reports / deliverables	29%	36%	56%	55%	33%	35%
Don't keep track / unknown	10%	19%	-	9%	-	11%
Project management software / worklog <sup>2</sup>	7%	1%	16%	9%	8%	6%

1 Columns reflect the percentage of each job type selecting the strategy *among non-supervisory employees teleworking at the time of the survey and who answered the question*. Columns do not sum to 100%, as respondents could select multiple strategies.

2 Derived from open-text responses to “other: please describe” option.

**Table 20. Strategies for Tracking Employee Progress as Reported by Management-Level Employees, by Job Classification**

	Professional (n=69) <sup>1</sup>	Admin (n=15)	Public Safety (n=10)	Line Staff (n=3)	Other (n=10)	Total (n=107)
Phone / video calls	90%	93%	80%	33%	90%	88%
Email / chat / text	71%	87%	60%	-	70%	70%
Progress reports / deliverables	51%	33%	30%	33%	30%	44%
Project management software / worklog <sup>2</sup>	6%	-	-	-	10%	5%
Don't keep track / unknown	4%	7%	-	-	10%	5%

1 Columns reflect the percentage of each job type selecting the strategy *among management-level employees managing teleworkers at the time of the survey and who answered the question*. Columns do not sum to 100%, as respondents could select multiple strategies.

2 Derived from open-text responses to “other: please describe” option.

### Access to Resources While Teleworking

The survey also asked questions about teleworking tools for those respondents who are currently teleworking or supervising teleworking employees. It should be noted that the nature of the stay-at-home order was such that there was little preparation for teleworking, so lacking access to resources is not an indictment of the City or any group within the City. That said, it is helpful to understand the resource need for future teleworking efforts.

When asked whether they had all the resources they needed for teleworking, 78% of current teleworkers said yes, ranging from 81% of directors/deputy directors to 74% of non-supervisory staff and 78% of administrative staff to 69% of public safety staff (see Tables 21 and 22). When asked about specific types of resources, respondents were most likely to report having access to web-conference services (92% of all respondents), followed closely by cloud-based

document sharing (90% of all respondents). Eighty-seven percent of respondents reported having access to hardware, although many wrote in open-response text to clarify that they were using their home computers and equipment to do their work, pointing out that they were not being compensated by the City for this use. Additionally, access to hardware varied substantially between job classifications, with 100% of directors/deputy directors having access as compared to 83% of supervisors and 87% of non-supervisory employees. A similar dynamic existed with regard to home internet, which was reported by 90% of directors/deputy directors, but only 71% of managers and 81% of non-supervisory employees (81% of total teleworking respondents). The small percentage of responses to phone access most likely reflect that it was not a pre-set category; instead, it was derived through evaluating common responses to the open text “other: please describe” option. For all of these options, it will be important for the City to understand whether and how lack of access to these resources impacted employees’ abilities to successfully perform their work duties.

When management-level employees were asked about their employees’ access to teleworking resources, 38% of managers and supervisors reported that their employees lacked access to some needed resources for teleworking (Table 21). This discrepancy exists across job types, with the exception of line staff (for whom the sample size is very small). When asked about specific resources, managers were the most likely to report lower coverage. Only 76% and 71% of managers reported that most of their employees had the hardware and access to VPN that they needed, respectively. Note that the findings between the more general and more specific employee resource questions (i.e., “My employees have all of the resources they need” versus “Most...of my teleworking employees have access to (x) resource...”) may not directly align, given that there may be resources the survey did not cover. These findings can be further explored through the toolkit development focus groups.

**Table 21. Access to Teleworking Resources, by Job Classification**

	Director/ Dep Director <sup>1</sup> (n=21)	Manager (n=34)	Supervisor (n=65)	Non- supervisor (n=240)	Total (n=360)
I have all of the resources I need to telework	81%	82%	78%	74%	76%
<i>I have access to the following technology resources during the stay-at-home order:</i>					
Web-conference services	100%	100%	95%	89%	92%
Cloud-based document sharing	100%	85%	95%	88%	90%
Hardware: laptop/desktop/tablet	100%	85%	83%	87%	87%
VPN / secure network	95%	85%	88%	82%	84%
Home internet	90%	71%	82%	81%	81%
Phone <sup>2</sup>	10%	12%	-	4%	4%

	Director/ Dep Director <sup>1,3</sup> (n=23)	Manager (n=34)	Supervisor (n=47)	Non- supervisor (n/a)	Total (n=104)
My employees have all of the resources they need to telework	74%	62%	62%	n/a	64%
<i>Percentage of each group indicating that “Most (at least 81%) of my teleworking employees have access to the following technology resources during the stay-at-home order”:</i>					
Web-conference services	100%	91%	98%	n/a	96%
Cloud-based document sharing	100%	91%	94%	n/a	94%
Home internet	96%	94%	92%	n/a	93%
Hardware: laptop/desktop/tablet	83%	76%	82%	n/a	80%
VPN / secure network	78%	71%	76%	n/a	75%

1 Columns reflect the percentage of each job type selecting the strategy *among those who were teleworking or managing teleworkers at the time of the survey and who answered the question.*

2 Derived from open-text responses, so may not represent true prevalence within the survey.

3 Note that sample sizes differ for this question due to being restricted to management-level employees and varying response levels.

An analysis of specific resources by job type reveals large discrepancies, but the discrepancies may be related to job function and therefore more concerning in some cases than others (see Table 22). For example, 97% of professionals reported having access to web-conference services, compared to 69% of line staff, which may reflect job-related need. Variations in access to hardware and internet, however, may be more concerning. Ninety percent of professionals reported access to hardware (again, may reflect personal rather than city-provided hardware) and 85% reported access to home internet, as compared to 82% and 80% for administrative staff, and 89% and 67% of public safety staff. As stated above, the small percentage of responses to phone access most likely reflect that it was not a pre-set category, rather than who has access to a phone. Moreover, a substantial proportion of management-level employees across job types believe that their employees do not have all of the resources they need. As with Table 21, the percentages between the more general and more specific employee outreach questions may vary due to who was answering which questions and limitations to the more specific resource question. This is an area for future outreach as part of the teleworking toolkit development.

**Table 22. Access to Teleworking Resources, by Job Type**

	Professional (n=181) <sup>1</sup>	Admin (n=93)	Public Safety (n=36)	Line Staff (n=13)	Other (n=39)	Total (n=362)
I have all of the resources I need to telework	78%	78%	69%	69%	67%	76%
<i>I have access to the following technology resources during the stay-at-home order:</i>						
Web-conference services	97%	90%	78%	69%	92%	92%
Cloud-based document sharing	94%	84%	89%	85%	92%	90%
Hardware: laptop/desktop/tablet	90%	82%	89%	92%	82%	87%
VPN / secure network	94%	91%	44%	77%	64%	85%
Home internet	85%	80%	67%	77%	79%	81%
Phone <sup>2</sup>	7%	1%	-	-	3%	4%
	Professional (n=69) <sup>1,2</sup>	Admin (n=15)	Public Safety (n=10)	Line Staff (n=3)	Other (n=10)	Total (n=104)
My employees have all of the resources they need to telework	69%	67%	50%	100%	40%	64%
<i>Percentage of each group indicating that “Most (at least 81%) of my teleworking employees have access to the following technology resources during the stay-at-home order”:</i>						
Web-conference services	97%	93%	100%	100%	90%	96%
Cloud-based document sharing	99%	87%	100%	67%	80%	94%
Home internet	94%	93%	90%	100%	90%	93%
Hardware: laptop/desktop/tablet	78%	80%	90%	100%	80%	80%
VPN / secure network	84%	73%	60%	33%	40%	75%

1 Columns reflect the percentage of each job type selecting the strategy *among those who were teleworking or managing teleworkers at the time of the survey and who answered the question.*

2 Note that sample sizes differ for this question due to being restricted to management-level employees and varying response levels.

The survey asked those respondents who indicated that they did not have all of the resources they needed to successfully telework to list what they need; Tables 23 and 24 show the results by job classification and type. Sample sizes were small for most individual groups, so the results are discussed in aggregate here. The most common response overall was a work-provided laptop with the necessary software (32%, n=25). Several respondents said that they were required to use their personal devices to do their work. For example, *“Required to use personal internet, cellular, iPad and desktop. Was told we as professionals should have these. Some who complained were provided with equipment. Most of us were intimidated into not speaking up.”* Another person described discomfort with using personal devices: *“I have had to log out of all my personal accounts and use my work accounts on my personal devices. I'm uncomfortable with this, as well as with giving my personal cell phone number to clients, etc.”* Another person

received a laptop but needed additional software: *“The laptop provided does not have all the software I use and my desktop connection is very slow to the point where it is almost unusable.”*

The second most common response related to the need for a home printer and/or printer paper and ink (23%, n=18). For example, *“Having a printer/scanner would allow me to work more fluidly at home, currently I have to go to the office for any printing and scanning and sometimes it delays the work I am trying to process.”* Monitors were also requested by several respondents (16%, n=13), followed by a few requests for scanner or fax capability, software, VPN access, a work phone, and high-speed internet. A few people mentioned the need for furniture such as an ergonomic workstation and file storage.

**Table 23. Desired Teleworking Resources, by Job Classification<sup>1</sup>**

	Director/ Dep Director <sup>1</sup> (n=3)	Manager (n=6)	Supervisor (n=13)	Non- supervisor (n=57)	Total (n=79)
Laptop	-	67%	46%	26%	32%
Printer and/or printing supplies	33%	-	31%	23%	23%
Monitor	33%	17%	15%	16%	16%
Scanner or fax capability	33%	-	8%	11%	10%
Software	-	-	15%	11%	10%
VPN	-	17%	-	11%	9%
Phone	-	-	8%	11%	9%
High-speed internet	-	17%	8%	7%	8%
Furniture (ergonomic set-up, file storage)	-	-	-	5%	4%

<sup>1</sup> Responses from employees who indicated that they did not have all of the teleworking resources they need.

**Table 24. Desired Teleworking Resources, by Job Type<sup>1</sup>**

	Professional (n=37) <sup>1</sup>	Admin (n=17)	Public Safety (n=11)	Line Staff (n=3)	Other (n=11)	Total (n=79)
Laptop	32%	29%	36%	-	36%	32%
Printer and/or printing supplies	24%	29%	9%	-	27%	23%
Monitor	22%	18%	-	33%	9%	16%
Scanner or fax capability	11%	6%	18%	-	9%	10%
Software	8%	-	36%	-	9%	10%
VPN	5%	12%	18%	-	9%	9%
Phone	8%	6%	18%	-	9%	9%
High-speed internet	8%	6%	-	-	18%	8%
Furniture (ergonomic set-up, file storage)	8%	-	-	-	-	4%

<sup>1</sup> Responses from employees who indicated that they did not have all of the teleworking resources they need.

Only 37 management-level employees indicated that their employees did not have all of the resources they need. Of those, 49% (n=18) discussed the need for laptops or desktops for their employees. Nineteen percent (n=7) discussed the need for VPN access, 14% (n=5) discussed the need for work telephones, and 11% (n=4) discussed the need for internet and printers.

#### 2.4.6 Opinions about Teleworking

Respondents were asked their opinions (5-point Likert scale, from strongly agree to strongly disagree) about teleworking during normal conditions and under the stay-at-home order. Questions included aspects of both professionalism and quality of life. Management-level staff were also asked opinions about the effect of teleworking on their employees.

#### How Teleworking Impacts Professionalism and the Ability to Accomplish Work

Table 25 shows the percentage of management-level and non-supervisory employees who agreed or strongly agreed with statements about the impact of teleworking on professionalism. Overall, it seems clear that teleworking is viewed positively and as a viable option for work, and that agreement increased almost universally during the stay-at-home order. For example, approximately 85% of management-level and non-supervisory employees agreed or strongly agreed that work quality meets standards while teleworking and that work is completed on time. Ninety-three percent of management-level and 83% of non-supervisory employees agree that workers are able to communicate effectively while teleworking (a significant increase from “normal” times for management), and 82% of respondents agree that workers in the office have no problems connecting with teleworkers (a significant increase from “normal” for both management and non-supervisory employees). There was also a significant increase in the proportion of both groups stating that it is not difficult to hold group meetings while teleworking (from 63% to 84% for management, and 65% to 75% for non-supervisory employees). These findings suggest that the experience of teleworking under the stay-at-home has enabled progress with regard to some barriers to teleworking prior to the pandemic.

However, other findings suggest areas that may still need improvement. For example, still 24% of management and 30% of non-supervisory employees did not agree that teleworking provides a competitive edge for the City with regard to employee attraction and retention. More importantly, 37% of management and 43% of non-supervisory employees did not agree that telework has no impact on a worker’s ability to advance, suggesting that there is concern and/or skepticism among a substantial proportion of the workforce about negative consequences of teleworking. The latter barrier, in particular, will need to be addressed to ensure the success and permeability of any future teleworking efforts.

Agreement with these statements was also examined according to job type, as shown in Tables 26 and 27. It is clear that agreement with the statements varied according to job type and classification within job type, both in terms of percentage of respondents agreeing and how the experience under the stay-at-home order affected agreement. For example, the percentage of

non-supervisory employees who agreed with the various statements in the normal and stay-at-home periods increased nearly universally for professionals, administrative staff, and line staff (see Table 26). Among public safety and “other” staff, however, percentage agreement with many statements remained static or even slightly decreased. Additionally, the percentage of professionals and administrative staff expressing agreement with various statements was routinely higher than the percentage for public safety, likely reflecting some of the barriers in Table 16 that were more present for public safety staff. As in Table 25, the fairly low percentage of non-supervisory employees agreeing that teleworking has no impact on advancement (58%) was consistent across job classification, but particularly salient for line staff, public safety, and “other” staff. Similarly, while 72% of non-supervisory respondents agreed or strongly agreed that telework makes the City more competitive with regard to employee attraction/retention, only 50% of public safety staff agreed with this statement. Non-supervisory public safety staff were also the least likely to state that they can communicate effectively while teleworking (63% compared to 84% on non-supervisory staff overall).

The opinions of management-level staff across job classification are shown in Table 27. Overall, impressions of teleworking among management staff significantly improved from “normal” to the stay-at-home period, although the percentage of respondents agreeing or strongly agreeing with each statement varied according to job type. Similar to the findings in Table 26, management within professional, administrative, and “other” job types have the highest levels of agreement with the statements, while the results for public safety and line staff show both high and low levels of agreement, depending on the statement. For example, 80% and 87% of professional and administrative management staff, respectively, agree that telework provides the city with a competitive edge, compared to only 44% and 33% of public safety and line staff management, respectively. In terms of affecting advancement, administrative management showed much higher agreement than administrative staff (80% compared to 62% in Table 26), as well as higher agreement than professional management (62%) and both public safety and line staff (33%). Work being completed on time and meeting City standards was high (at least 80%) among all groups except line staff and “other” staff, who were less likely to agree with work being completed on time (67% and 70%, respectively). These findings will inform the focus groups and help the toolkit be flexible with regard to the needs of varying departments.

**Table 25. Agreement with Statements About the Impact of Teleworking on Professionalism, by Job Classification<sup>1</sup>**

<i>Percentage of each group indicating that they agree or strongly agree with the following statements under normal (“NOR”) conditions and under the COVID-19 stay-at-home order (“SAH”):</i>										
	<b>Director/ Deputy Director (n=23)</b>		<b>Manager (n=34)</b>		<b>Supervisor (n=49)</b>		<b>Total Management (n=106)</b>		<b>Non- Supervisory (n=318)</b>	
	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH
We are able to communicate effectively while teleworking. <sup>2,3**</sup>	83%	96%	76%	88%	78%	96%	78%	93%	79%	83%
Work is completed on time.	83%	96%	82%	79%	78%	88%	80%	87%	86%	85%
Work quality meets City standards.	87%	91%	82%	82%	82%	88%	83%	87%	85%	84%
It is not difficult to hold group meetings while teleworking. <sup>***/^^</sup>	70%	83%	56%	76%	65%	90%	63%	84%	65%	75%
Workers in the office have no problems connecting with teleworking employees. <sup>4**/^^</sup>	65%	78%	59%	79%	67%	86%	64%	82%	74%	82%
Telework provides City a competitive edge related to employee attraction/retention. <sup>^</sup>	74%	83%	59%	74%	65%	76%	65%	76%	63%	70%
Telework has no impact on a worker’s ability to advance. <sup>5</sup>	48%	61%	53%	59%	49%	67%	50%	63%	55%	57%

1 Answers reflect management-level staff who directed/managed/supervised teleworkers under the stay-at-home order, and all non-supervisory staff.

2 Each row reflects a different statement.

3 Statement for non-supervisory employees: “I am able to communicate effectively while teleworking.”

4 Statement for non-supervisory employees: “I am able to connect with fellow teleworking employees.”

5 Statement for non-supervisory employees: “Telework has no impact on my ability to advance.”

Significant differences indicated by the following:

Between total management responses for normal and stay-at-home conditions: \*  $p \leq 0.05$ ; \*\*  $p \leq 0.01$ ; \*\*\*  $p \leq 0.001$

Between total non-supervisory responses for normal and stay-at-home conditions: ^  $p \leq 0.05$ ; ^^  $p \leq 0.01$ ; ^^ ^  $p \leq 0.001$

**Table 26. Agreement with Statements About the Impact of Teleworking on Professionalism Among Non-Supervisory Staff, by Job Type<sup>1</sup>**

<i>Percentage of each group indicating that they agree or strongly agree with the following statements under normal (“NOR”) conditions and under the COVID-19 stay-at-home order (“SAH”):</i>												
	<b>Professional (n=125)</b>		<b>Admin (n=95)</b>		<b>Public Safety (n=46)</b>		<b>Line Staff (n=18)</b>		<b>Other (n=34)</b>		<b>Total (n=318)</b>	
	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH
Work is completed on time. <sup>2</sup>	91%	89%	88%	92%	74%	70%	78%	89%	85%	82%	86%	86%
Work quality meets City standards.	89%	90%	91%	92%	70%	67%	72%	78%	88%	79%	86%	85%
We are able to communicate effectively while teleworking.	80%	87%	88%	91%	65%	63%	61%	72%	82%	85%	80%	84%
Workers in the office have no problems connecting with teleworking employees. <sup>^^</sup>	77%	87%	85%	91%	59%	59%	50%	78%	71%	82%	75%	83%
It is not difficult to hold group meetings while teleworking. <sup>^^</sup>	72%	80%	66%	80%	57%	57%	56%	67%	65%	79%	66%	76%
Telework provides City a competitive edge related to employee attraction/retention. <sup>^</sup>	68%	77%	65%	77%	50%	50%	61%	72%	65%	68%	64%	72%
Telework has no impact on a worker’s ability to advance.	57%	62%	60%	62%	59%	57%	28%	33%	53%	50%	56%	58%

1 Answers reflect staff all non-supervisory staff who answered the question.

2 Each row reflects a different statement.

Significant differences between total non-supervisory responses for normal and stay-at-home conditions indicated by: <sup>^</sup>  $p \leq 0.05$ ; <sup>^^</sup>  $p \leq 0.01$ ; <sup>^^^</sup>  $p \leq 0.001$

**Table 27. Agreement with Statements About the Impact of Teleworking on Professionalism Among Management-Level Staff, by Job Type<sup>1</sup>**

<i>Percentage of each group indicating that they agree or strongly agree with the following statements under normal (“NOR”) conditions and under the COVID-19 stay-at-home order (“SAH”):</i>												
	Professional (n=69)		Admin (n=15)		Public Safety (n=9)		Line Staff (n=3)		Other (n=10)		Total (n=106)	
	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH
We are able to communicate effectively while teleworking.**	74%	94%	93%	100%	78%	89%	100%	100%	80%	80%	78%	93%
Work is completed on time. <sup>2</sup>	74%	88%	100%	93%	89%	89%	100%	67%	80%	70%	80%	87%
Work quality meets City standards.	80%	87%	93%	87%	89%	89%	100%	100%	80%	80%	83%	87%
It is not difficult to hold group meetings while teleworking.***	62%	88%	67%	73%	33%	67%	100%	100%	80%	80%	63%	84%
Workers in the office have no problems connecting with teleworking employees.**	64%	87%	80%	73%	56%	78%	67%	67%	50%	70%	64%	82%
Telework provides City a competitive edge related to employee attraction/retention.	67%	80%	80%	87%	44%	44%	33%	33%	60%	80%	65%	76%
Telework has no impact on a worker’s ability to advance.	45%	62%	80%	80%	33%	33%	33%	33%	60%	80%	50%	63%

<sup>1</sup> Answers reflect staff who directed/managed/supervised teleworkers under the stay-at-home order.

<sup>2</sup> Each row reflects a different statement.

Significant differences between total management responses for normal and stay-at-home conditions indicated by: \*  $p \leq 0.05$ ; \*\*  $p \leq 0.01$ ; \*\*\*  $p \leq 0.001$

### How Teleworking Impacts Quality of Life

The survey also asked participants about their impressions with regard to the effect of teleworking on quality of life. In general, the percentage of respondents agreeing or strongly agreeing with each statement was fairly high during the stay-at-home order and increased from normal to stay-at-home periods across job classifications, although the increases tended to be larger for management-level employees, suggesting that they had been less enthusiastic about teleworking than non-supervisory employees prior to the stay-at-home order (Table 28). Still, there were clear differences in the percentage of agreement between statements. For example, about 65% of both non-supervisory and management staff agreed with the statement, “I am less stressed while teleworking.” Just over 70% of both levels agree that they are “able to better manage (their) health while teleworking,” and nearly 75% of both levels agree that they are “able to find better work/life balance while teleworking.” Finally, over 80% of both levels agree that they “appreciate the decreased expenses” associated with teleworking. When asked about these statements specifically for their employees, agreement among management-level staff closely approximated the findings among non-supervisory staff.

As shown in Tables 29 and 30, there was again a difference in results according to job type. Within non-supervisory employees (Table 29), the most agreement, across job types, was found with the statement that they appreciated decreased personal expenses associated with teleworking. Administrative staff were typically the most likely to express agreement with the various statements, followed by professionals and then line staff. Public safety staff were less likely to agree with the statements than other job types (with the exception of “other” staff), although agreement within public safety did consistently increase between normal and stay-at-home conditions. In contrast, “other” staff displayed consistently lower amounts of agreement overall and in some cases a reduction in agreement.

Among management-level employees (Table 30), there were significant increases in the proportions of respondents agreeing that employees are less stressed, use fewer sick days, and appreciate the decreased expenses when teleworking, although these varied according to job type. For example, public safety management staff often displayed no changes in agreement between the two periods, and even a decrease in some cases (personal morale being improved and employees reporting better work/life balance). The data also revealed significant ( $p \leq 0.05$ ) increases in the proportion of management-level employees reporting that they are able to better manage health and appreciate the decreased expenses when teleworking (again flat for public safety). Interestingly, public safety management seems to have a worse opinion of teleworking for their employees than the employees have for themselves, suggesting a mismatch that could be addressed through better or different communication strategies. In contrast, “other” management seems to overestimate the benefits for their non-supervisory staff, underscoring the need for different communication to get a true sense of employee wellbeing. These findings will be further explored through the focus groups.

**Table 28. Agreement with Statements About the Impact of Teleworking on Quality of Life, by Job Classification<sup>1</sup>**

<i>Percentage of each group indicating that they agree or strongly agree with the following statements under normal (“NOR”) conditions and under the COVID-19 stay-at-home order (“SAH”):</i>										
	<b>Director/ Deputy Director (n=23)</b>		<b>Manager (n=34)</b>		<b>Supervisor (n=49)</b>		<b>Total Management (n=106)</b>		<b>Non- Supervisory (n=318)</b>	
	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH
I appreciate the decreased expenses (e.g., savings on gas, parking, or transit).**/^^^	70%	78%	62%	91%	71%	84%	68%	85%	69%	82%
<i>My employees</i> appreciate the decreased expenses (e.g., savings on gas, parking, or transit).**	57%	65%	56%	85%	65%	84%	60%	80%	n/a	n/a
Personal morale is improved among teleworkers. <sup>2,3</sup>	61%	78%	56%	68%	71%	86%	64%	78%	58%	64%
<i>My employees</i> report better work/life balance while teleworking.	57%	65%	53%	68%	67%	84%	60%	75%	n/a	n/a
I am able to find better work/life balance while teleworking.	65%	74%	50%	71%	67%	76%	61%	74%	68%	73%
I am able to better manage my health while teleworking.*	61%	70%	44%	65%	67%	84%	58%	75%	64%	72%
<i>My employees</i> take less sick leave while teleworking.*	57%	74%	44%	59%	59%	78%	54%	71%	n/a	n/a
I am less stressed while teleworking.	43%	57%	41%	62%	67%	76%	54%	67%	62%	65%
<i>My employees</i> report less stress while teleworking.*	48%	57%	50%	68%	53%	67%	51%	65%	n/a	n/a

1 Answers reflect management-level staff who directed/managed/supervised teleworkers under the stay-at-home order, and all non-supervisory staff.

2 Each row reflects a different statement.

3 Statement for non-supervisory employees: “My morale is improved while teleworking.”

Significant differences indicated by the following:

Between total management responses for normal and stay-at-home conditions: \*  $p \leq 0.05$ ; \*\*  $p \leq 0.01$ ; \*\*\*  $p \leq 0.001$

Between total non-supervisory responses for normal and stay-at-home conditions: ^  $p \leq 0.05$ ; ^^  $p \leq 0.01$ ; ^^^  $p \leq 0.001$

**Table 29. Agreement with Statements About the Impact of Teleworking on Quality of Life Among Non-Supervisory Staff, by Job Type<sup>1</sup>**

<i>Percentage of each group indicating that they agree or strongly agree with the following statements under normal (“NOR”) conditions and under the COVID-19 stay-at-home order (“SAH”):</i>												
	<b>Professional (n=125)</b>		<b>Admin (n=95)</b>		<b>Public Safety (n=46)</b>		<b>Line Staff (n=18)</b>		<b>Other (n=34)</b>		<b>Total (n=318)</b>	
	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH
I appreciate the decreased expenses (e.g., savings on gas, parking, or transit). <sup>^^</sup>	71%	83%	75%	91%	70%	76%	61%	78%	53%	68%	69%	82%
My morale is improved while teleworking. <sup>2</sup>	62%	68%	62%	73%	54%	59%	56%	50%	38%	47%	58%	65%
I am able to find better work/life balance while teleworking.	72%	73%	71%	81%	57%	67%	61%	78%	62%	56%	68%	73%
I am able to better manage my health while teleworking.	68%	74%	67%	78%	59%	65%	44%	72%	65%	62%	65%	72%
I am less stressed while teleworking.	67%	69%	62%	67%	52%	61%	61%	72%	56%	50%	62%	65%

1 Answers reflect staff all non-supervisory staff who answered the question.

2 Each row reflects a different statement.

Significant differences between total non-supervisory responses for normal and stay-at-home conditions indicated by: <sup>^</sup>  $p \leq 0.05$ ; <sup>^^</sup>  $p \leq 0.01$ ; <sup>^^^</sup>  $p \leq 0.001$

**Table 30. Agreement with Statements About the Impact of Teleworking on Quality of Life Among Management-Level Staff, by Job Type<sup>1</sup>**

<i>Percentage of each group indicating that they agree or strongly agree with the following statements under normal (“NOR”) conditions and under the COVID-19 stay-at-home order (“SAH”):</i>												
	<b>Professional (n=69)</b>		<b>Admin (n=15)</b>		<b>Public Safety (n=9)</b>		<b>Line Staff (n=3)</b>		<b>Other (n=10)</b>		<b>Total (n=106)</b>	
	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH	NOR	SAH
I appreciate the decreased expenses (e.g., savings on gas, parking, or transit).**	64%	87%	73%	73%	78%	78%	100%	100%	70%	90%	68%	85%
<i>My employees</i> appreciate the decreased expenses (e.g., savings on gas, parking, or transit).**	57%	83%	80%	80%	56%	56%	33%	67%	70%	90%	60%	80%
Personal morale is improved among teleworkers. <sup>2,3</sup>	59%	75%	93%	93%	78%	67%	33%	100%	50%	80%	64%	78%
<i>My employees</i> report better work/life balance while teleworking.	57%	74%	80%	93%	56%	44%	33%	67%	70%	80%	60%	75%
I am able to find better work/life balance while teleworking.	59%	75%	73%	80%	44%	44%	67%	67%	70%	80%	61%	74%
I am able to better manage my health while teleworking.*	58%	77%	73%	80%	56%	56%	33%	67%	50%	70%	58%	75%
<i>My employees</i> take less sick leave while teleworking.*	51%	71%	67%	67%	67%	89%	67%	67%	40%	60%	54%	71%
I am less stressed while teleworking.	49%	68%	80%	80%	33%	33%	100%	33%	50%	80%	54%	67%
<i>My employees</i> report less stress while teleworking.*	48%	64%	60%	73%	56%	56%	-	33%	70%	80%	51%	65%

1 Answers reflect staff who directed/managed/supervised teleworkers under the stay-at-home order.

2 Each row reflects a different statement.

Significant differences between total management responses for normal and stay-at-home conditions indicated by: \*  $p \leq 0.05$ ; \*\*  $p \leq 0.01$ ; \*\*\*  $p \leq 0.001$

### Priorities to Improve Teleworking Among Employees and Managers

The survey also asked management-level staff overseeing teleworking employees and non-supervisory employees who were teleworking at the time of the survey to rank eight items in terms of which would be the most important to assist them as either management working with teleworking employees or employees who telework. Table 31 shows the percentage of each job classification that ranked each item as the first, second, or third most important. Among both employees and management-level staff, fast, reliable network speed was by far the most commonly selected item among the top three options, selected in the top three by 80% of the sample. The difference in the percentage of respondents selecting fast, reliable network speed and the next most commonly-selected item, video conference/ conference call opportunities with colleagues for work – selected by only 53% of the sample, is particularly notable for non-supervisory employees. The third and fourth most-selected items were assurance of multiple lines of communication between employees and management staff (41% overall) and IT assistance for teleworking/teleworking employees (40% overall), respectively. Communication was more of a priority for management, while IT assistance was a higher priority for non-supervisory employees. These data illuminate areas of need and provide insights into both a future teleworking policy and physical needs to make teleworking successful.

**Table 31. Priorities to Improve Teleworking, by Job Classification<sup>1</sup>**

	Director/ Dep Director <sup>1</sup> (n=23)	Manager (n=34)	Supervisor (n=49)	Non- supervisor (n=240)	Total (n=346)
Fast, reliable network speed	74%	74%	69%	84%	80%
Videoconferencing or conference call opportunities with your colleagues for work	52%	56%	49%	53%	53%
Assurance of multiple lines of communication w/ teleworking employees <sup>3</sup>	57%	47%	49%	37%	41%
IT assistance for teleworking employees <sup>5</sup>	48%	29%	41%	41%	40%
Training on the use of technology to facilitate teleworking	26%	32%	27%	28%	28%
Clear in-office meeting scheduling procedures	22%	6%	12%	21%	18%
Regular assessment of teleworking program results <sup>2</sup>	9%	29%	20%	14%	16%
Time management training by teleworking employees <sup>4</sup>	13%	12%	20%	8%	11%

1 Answers reflect management-level staff who directed/managed/supervised teleworkers under the stay-at-home order, and all non-supervisory staff.

2 Statement for non-supervisory employees: “Regular assessment of your progress”

3 Statement for non-supervisory employees: “Assurance of multiple lines of communication with your manager.”

4 Statement for non-supervisory employees: “Time management training”

5 Statement for non-supervisory employees: “IT assistance for teleworking”

Priorities to improve teleworking were also examined by job type, as shown in Tables 32 and 33. Among both non-supervisory employees and management-level staff, fast, reliable network speed remained the most commonly selected item among the top three options, at 85% and 72% of respondents, respectively. This was the case across job type, with the exception of management-level administrative staff (for whom it was the second most selected). The tendency for non-supervisory teleworking staff to be more likely to name fast, reliable network speed than management-level employees was also consistent across job type. Video conferencing/conference call opportunities remained the distant second-most commonly selected priority (54% of non-supervisory employees and 52% of management), although this varied widely across job type, from 36% among line staff to 64% among professionals within non-supervisory staff, and 33% among line staff and public safety to 67% among administrative staff within management. Video conferencing was a lower priority among public safety and line staff at both levels.

Management ranked “assurance of multiple lines of communication” a close third overall (50%), while non-supervisory teleworking employees ranked IT assistance for teleworking (40% overall) as a more distant third priority. For all job types but administrative, non-supervisory employees rank assurance of multiple lines of communication much lower than their counterparts in management. Recognition of the need for IT assistance is closer between the two groups, but the discrepancy suggests that management may not fully understand the challenges for non-supervisory teleworking employees. Just over one-quarter of respondents (27% of non-supervisory teleworkers and 28% of management-level staff) named training on the use of technology to facilitate teleworking, and this varied widely between job types, suggesting a need for more preparation for future teleworking efforts. These data provide insights to instruct the focus group and teleworking toolkit development.

**Table 32. Priorities to Improve Teleworking Among Non-Supervisory Teleworking Employees, by Job Type<sup>1</sup>**

	Professional (n=105)	Admin (n=73)	Public Safety (n=25)	Line Staff (n=11)	Other (n=24)	Total (n=240)
Fast, reliable network speed	86%	82%	88%	100%	88%	85%
Videoconferencing or conference call opportunities with your colleagues for work	64%	45%	40%	36%	63%	54%
IT assistance for teleworking employees	37%	44%	44%	45%	54%	42%
Assurance of multiple lines of communication with teleworking employees	34%	48%	32%	27%	25%	37%
Training on the use of technology to facilitate teleworking	27%	30%	28%	45%	13%	27%
Clear in-office meeting scheduling procedures	21%	18%	20%	27%	25%	20%

Regular assessment of teleworking program results	16%	11%	20%	9%	8%	14%
Time management training by teleworking employees	5%	14%	8%	9%	13%	9%

1 Responses represent non-supervisory employees who were teleworking at the time of the survey.

**Table 33. Priorities to Improve Teleworking Among Management-Level Employees, by Job Type<sup>1</sup>**

	Professional (n=69)	Admin (n=15)	Public Safety (n=9)	Line Staff (n=3)	Other (n=10)	Total (n=106)
Fast, reliable network speeds	75%	60%	78%	33%	70%	72%
Videoconferencing or conference call opportunities with your colleagues for work	51%	67%	33%	33%	60%	52%
Assurance of multiple lines of communication with teleworking employees	52%	33%	44%	67%	60%	50%
IT assistance for teleworking employees	43%	33%	33%	-	30%	39%
Training on the use of technology to facilitate teleworking	25%	33%	44%	-	40%	28%
Regular assessment of teleworking program results	20%	27%	11%	33%	20%	21%
Time management training by teleworking employees	13%	13%	22%	67%	20%	16%
Clear in-office meeting scheduling procedures	13%	13%	-	67%	-	12%

1 Responses represent those who managed teleworking employees at the time of the survey.

## 2.5 Prospects and Lessons Learned for Future Teleworking

To understand the potential for future teleworking, the survey asked questions about interest in future teleworking among employees at all levels, support for future teleworking among management-level employees, and barriers to future teleworking.

### 2.5.1 Interest in Future Teleworking

The 365 respondents who are currently teleworking were asked whether they would want to continue to do so in the future. Of the 362 people who responded, only 3% said no, while 61% answered “Yes, some of the time”, and another 28% answered , “Yes, all of the time.” Non-supervisory employees were much more likely to answer “Yes, all of the time” (see Table 34),

with decreasing likelihood as level of responsibility increased; the reverse trend was evident for the response, “Yes, some of the time.”

In terms of job type, approximately 90% of professionals, administrative staff, and those classified as “other” expressed a desire to telework at least some of the time in the future, with professionals the most likely to express a desire to telework all of the time (followed again by administrative staff). In contrast, only 78% of public safety staff expressed a desire to telework in the future, with the vast majority of those respondents stating that they would like to telework just some of the time. Eighty-five percent of line staff stated a desire to telework in the future, split fairly closely between some and all the time.

**Table 34. Interest in Future Teleworking**

	Yes, all the time	Yes, some of the time	Unsure	No
<i>Job Classification</i>				
Director/Deputy Director (n=21)	10%	81%	10%	-
Manager (n=34)	15%	74%	12%	-
Supervisor (n=65)	20%	66%	11%	3%
Non-supervisory staff (n=240)	34%	55%	6%	5%
<i>Job Type</i>				
Professional (n=181)	34%	56%	7%	3%
Administrative (n=93)	26%	65%	6%	3%
Public Safety (n=36)	8%	69%	14%	8%
Line Staff (n=13)	38%	46%	15%	-
Other (n=39)	18%	72%	8%	3%
<i>Total (n=362)</i>	<i>28%</i>	<i>61%</i>	<i>8%</i>	<i>3%</i>

### 2.5.2 Willingness to Allow Employees to Telework in the Future

The survey also asked those who currently manage teleworking employees (n=107) whether they would allow those employees to continue teleworking in the future (see Table 35). Sixty-five percent of respondents indicated that they would allow currently teleworking employees to telework some of the time, and another 12% indicated that they would allow them to telework all of the time. Directors and deputy directors were more likely than managers and supervisors to be sure about allowing teleworking in the future. Among job types, professionals were the most likely to be sure about allowing teleworking (87%), although administrative staff were the most likely to state that they would allow employees to work full-time (20%). Public safety management staff expressed the most uncertainty (60%), but no respondent answered “no.”

**Table 35. Willingness to Allow Current Teleworking Staff to Telework in the Future**

	Yes, all the time	Yes, some of the time	Unsure	No
<i>Job Classification</i>				
Director/Deputy Director (n=23)	13%	83%	-	4%
Manager (n=34)	12%	65%	18%	6%
Supervisor (n=50)	12%	58%	20%	10%
<i>Job Type</i>				
Professional (n=69)	13%	74%	10%	3%
Administrative (n=15)	20%	47%	13%	20%
Public Safety (n=10)	-	40%	60%	-
Line Staff (n=3)	-	67%	-	33%
Other (n=10)	10%	60%	10%	20%
<i>Total (n=107)</i>	<i>12%</i>	<i>65%</i>	<i>15%</i>	<i>7%</i>

Among management staff who indicated openness to future teleworking (n=83), 84% indicated they would also allow additional employees to telework in the future (see Table 36). Directors/ deputy directors were the least likely to say yes, at 73%, while managers were the most likely, at 92%. There were differences according to job type, although still broad support with the exception of line staff. However, the small sample sizes suggest that additional research would be helpful to understand the representativeness of the answers.

**Table 36. Willingness to Allow Non-Teleworking Staff to Telework in the Future**

	Yes	Unsure	No
<i>Job Classification</i>			
Director/Deputy Director (n=22)	73%	23%	5%
Manager (n=26)	92%	8%	-
Supervisor (n=35)	86%	14%	-
<i>Job Type</i>			
Professional (n=60)	85%	13%	2%
Administrative (n=10)	90%	10%	-
Public Safety (n=4)	75%	25%	-
Line Staff (n=2)	-	100%	-
Other (n=7)	100%	-	-
<i>Total (n=83)</i>	<i>84%</i>	<i>14%</i>	<i>1%</i>

Of those who indicated a willingness to allow future employees to telework (n=70), 79% indicated that they would allow it for all or almost all of their employees. This equated to approximately 70% of directors/deputy directors and managers and over 90% of supervisors. Similarly, about 80% of professionals and administrative staff would allow all or almost all of future employees to telework, compared to 71% of “other” and 33% of public safety staff.

These results are reflected in findings from a separate question, asked of all survey respondents, about who should be allowed to telework “under normal conditions” (see Table 37). The results reveal broad support for teleworking: 74% of respondents (n=511) indicated that they view it as an option for anyone who can do it effectively. Responses differed significantly ( $p \leq 0.001$ ) according to job classification, with 82% of non-supervisory staff selecting that teleworking should be an option for anyone who can do it effectively, compared to 60% of management staff. Similar difference existed between job classifications, with 78% of professionals and 83% of administrative staff broadly supporting teleworking, compared to only 55% of public safety staff. While the survey did not ask respondents directly whether their support for teleworking had changed due to the stay-at-home experience, the data in Tables 24-29 suggest that overall support for teleworking increased through the experience.

**Table 37. Opinions About Teleworking as a Routine Future Option**

	Option for anyone who can do it effectively	Option for appropriate role or occasional circumstance	Option only when all other options have been considered
<i>Job Classification</i>			
Director/Deputy Director (n=25)	68%	32%	0%
Manager (n=50)	60%	34%	6%
Supervisor (n=107)	58%	36%	7%
Non-supervisory staff (n=322)	82%	14%	4%
<i>Job Type</i>			
Professional (n=218)	78%	19%	3%
Administrative (n=121)	83%	15%	2%
Public Safety (n=82)	55%	33%	12%
Line Staff (n=24)	67%	25%	8%
Other (n=61)	70%	26%	3%
<i>Total (n=506)</i>	74%	21%	5%

### 2.5.3 Barriers to Future Teleworking Among Employees of All Levels

To understand why some managers and employees did not want to telework or allow employees to telework full time or at all, the survey asked questions about barriers to telework, as shown in

Tables 38-40. Respondents were presented with a list of barriers and allowed to select all that applied, as well as to provide an open-text response. Note that respondents were not given a “no barriers” response option, as it was assumed that if they were not teleworking full-time there was some barrier preventing them from doing so.

Table 38 shows that valuing the office camaraderie was the top reason overall (56% of total) for not teleworking full-time in the future among directors/deputy directors, managers, and non-supervisory employees; it was the second most common barrier listed for supervisors. Difficulty accessing everything needed from the office was a close second in terms of barriers (51% of total), although it was much more common among supervisors and non-supervisory employees than directors/deputy directors and managers. Other important barriers included technological challenges while working from home (27% of total), which was listed by 33% of non-supervisory staff. Approximately 20% of the sample listed distractions from home and the need to be present in person or on site as barriers. Being present on site was derived from open response answers to “other: please describe” and included people who needed to be present full time and those who stated that they needed to be present occasionally.

**Table 38. Barriers to Future Full-Time Telework Among Employees, by Job Classification at All Levels**

	Director/ Dep Director (n=19)	Manager (n=29)	Supervisor (n=52)	Non- supervisor (n=158)	Total (n=258)
I value the office camaraderie	68%	52%	56%	56%	56%
Difficulty accessing everything needed from office (e.g., files, physical items)	37%	31%	58%	54%	51%
Tech challenges working from home	11%	21%	19%	33%	27%
Too many distractions at home	11%	17%	25%	17%	18%
Need to be present in person / on site <sup>1</sup>	16%	24%	19%	17%	18%
Collaboration tools insufficient for teleworking	5%	7%	8%	16%	12%
Agency/Management prohibition <sup>1</sup>	11%	3%	10%	9%	9%
Teleworking stresses relationships with employees/manager <sup>2</sup>	32%	7%	6%	7%	9%

<sup>1</sup> Answer derived from open-text responses.

<sup>2</sup> Management-level staff were asked about relationships with employees; non-supervisory staff were asked about relationship with manager.

When examining the data by job type, it is evident that some barriers affect certain job types more than others. For example, non-supervisory staff within administrative and public safety roles were more likely to have difficulty accessing everything they need than those in

professional or line staff roles (Table 39). Public safety staff were also the most likely to report having technology challenges working from home, and public safety and line staff were over twice as likely as professionals and over six times as likely as administrative staff to cite the need to be present in person/on site to do their work. These differences were not as stark for management within public safety and line staff (Table 40), suggesting that a clear understanding of how barriers differentially affect job classification within job type will be critical for future teleworking success. The differences between job types in general underscore the need for a teleworking policy that can be tailored to the different needs and challenges of each profession.

Fortunately, the data suggest few interpersonal challenges experienced as stress between employees and managers, although both professional and public staff management were more likely to name this barrier than their non-supervisory staff. This mismatch likely relates to the urgent nature of teleworking under the stay-at-home order, something that will be further explored via focus groups. Additionally, distractions at home were cited by approximately 16% of both management-level staff and non-supervisory staff. This number is encouragingly low considering that forty percent of respondents reported having school-aged children at home during the survey, and that the presence of children did not significantly impact responses regarding future teleworking. However, the ability to telework without distraction in the future may be an important discussion point between employees and management. Finally, 16% of non-supervisory employees and 7% of management-level staff named insufficient collaboration tools as a barrier. While small percentages compared to other barriers, the importance of collaboration in most cases suggests a need for further exploration via the focus groups.

**Table 39. Barriers to Future Full-Time Telework Among Non-Supervisory Staff, by Job Type**

	Professional (n=59)	Admin (n=52)	Public Safety (n=22)	Line Staff (n=6)	Other (n=18)	Total (n=157)
I value the office camaraderie	56%	58%	55%	50%	67%	57%
Difficulty accessing everything needed from office (e.g., files, physical items)	47%	63%	64%	33%	56%	55%
Tech challenges working from home	34%	27%	45%	33%	33%	33%
Need to be present in person / on site <sup>1</sup>	20%	6%	41%	50%	17%	19%
Too many distractions at home	17%	13%	18%	0%	33%	17%
Collaboration tools insufficient for teleworking	19%	15%	18%	0%	11%	16%
Agency/Management prohibition <sup>1</sup>	10%	12%	5%	17%	6%	10%
Teleworking stresses relationship with manager	8%	8%	5%	0%	6%	7%

<sup>1</sup> Answer derived from open-text responses.

**Table 40. Barriers to Future Full-Time Telework Among Management, by Job Type**

	Professional (n=57)	Admin (n=16)	Public Safety (n=11)	Line Staff (n=2)	Other (n=14)	Total (n=100)
I value the office camaraderie	61%	63%	45%	50%	43%	57%
Difficulty accessing everything needed from office (e.g., files, physical items)	42%	56%	45%	50%	50%	46%
Need to be present in person / on site <sup>1</sup>	18%	19%	18%	0%	36%	20%
Tech challenges working from home	16%	25%	36%	50%	0%	18%
Teleworking stresses relationships with employees	14%	0%	18%	0%	7%	11%
Too many distractions at home	5%	6%	18%	50%	7%	8%
Agency/Management prohibition <sup>1</sup>	7%	13%	9%	50%	0%	8%
Collaboration tools insufficient for teleworking	7%	13%	9%	0%	0%	7%

<sup>1</sup> Answer derived from open-text responses.

#### 2.5.4 Barriers Among Management to Allowing Employees to Telework Full-Time in the Future

The barriers to allowing employees to telework full time in the future were further explored among management-level staff. The results in Table 41 are similar in ordering to those in Table 39, but different in magnitude. For example, difficulty accessing everything needed was indicated by 40% of management as a barrier for future teleworking among employees – lower than the 55% of non-supervisory staff who named it as a current barrier, but still relatively high. Similarly, only 35% of management named valuing the office camaraderie as a barrier to future teleworking among employees, even though 57% of non-supervisory staff named it as a current barrier. Management also seemed to underestimate the extent of technological challenges as a future barrier, at 16% compared to 33% of non-supervisory employees in Table 39. These results suggest that a key part of future teleworking success is helping management and their staff understand how each has experienced teleworking and ideas for improving future efforts.

**Table 41. Barriers to Allowing Employees to Telework Full-Time in the Future, by Job Classification**

	Director/ Dep Director (n=23)	Manager (n=34)	Supervisor (n=50)	Total (n=107)
Difficulty accessing everything needed from office (e.g., files, physical items)	35%	41%	42%	40%
I value the office camaraderie	57%	32%	26%	35%
Need to be present in person / on site <sup>1</sup>	13%	21%	26%	21%
Tech challenges working from home	17%	18%	14%	16%
Too many distractions at home	22%	18%	8%	14%
Agency/Management prohibition <sup>1</sup>	0%	6%	16%	9%
Teleworking stresses relationships with employees	4%	21%	0%	7%
Collaboration tools insufficient for teleworking	17%	3%	6%	7%

<sup>1</sup> Answer derived from open-text responses.

When looking at barriers to allowing future teleworking by job type, the findings are similar to those described above, with slight variations, and underscore the need for management and staff within each job type to be able to clearly discuss and strategize solutions to barriers to teleworking (see Table 42). For example, compared to non-supervisory employees’ responses in Table 39, management-level professionals were the most likely to underestimate the valuing of office camaraderie (56% compared to 36%, respectively), although this underestimation was consistent across job type. The difference in citing the barrier of difficulty accessing everything needed was larger among administrative and public safety staff than professionals. Underestimation of technological challenges as a barrier between management and non-supervisory staff was more likely for public safety, professional, and “other” staff. Conclusions about line staff management should be made with caution due to the small sample size.

**Table 42. Barriers to Allowing Employees to Telework Full-Time in the Future, by Job Type**

	Professional (n=69)	Admin (n=15)	Public Safety (n=10)	Line Staff (n=3)	Other (n=10)	Total (n=107)
Difficulty accessing everything needed from office (e.g., files, physical items)	36%	40%	40%	67%	60%	40%
I value the office camaraderie	42%	13%	20%	33%	30%	35%
Need to be present in person / on site <sup>1</sup>	19%	33%	0%	67%	30%	21%
Tech challenges working from home	19%	13%	20%	0%	0%	16%
Too many distractions at home	16%	0%	30%	0%	10%	14%

Agency/Management prohibition <sup>1</sup>	6%	20%	30%	0%	0%	9%
Teleworking stresses relationships with employees	10%	0%	0%	33%	0%	7%
Collaboration tools insufficient for teleworking	9%	13%	0%	0%	0%	7%

<sup>1</sup> Answer derived from open-text responses.

### 3. Discussion

The survey data tell a compelling, if nuanced, story about the potential for teleworking to be a more regular part of the City of Tempe’s work options in the future, as well as potential benefits of teleworking both for employees and the environment. **Overall, 89% of survey respondents indicated that they would like to telework at least some of the time in the future, with 28% of respondents indicating that they would like to telework full-time.** These percentages were higher for professionals and administrative staff than for public safety and line staff (approximately 90% for the former two job types), but even within the latter two job types there was high interest in teleworking at least part time (77% and 84%, respectively). Hundreds of open-response answers illustrate this positivity, such as,

*“This has been a great test for the city and it proves that the vast majority of employees can work from home. That old government perception that employees won't work if they are at home no longer applies. It's not an equity issue. Employees have different shifts now - some work 4/10, 9/80 or traditional. Some start at 6 a.m. and some at 9 a.m. We all accept a position knowing that it's an office position or a field work position or working directly with the public. Working from home reduces air pollution and traffic congestion. This is a win/win for employees and the city and a few vocal people who simply don't like it or trust it shouldn't influence the entire conversation. Tempe is a progressive city and we should lead by example and follow the private sector and implement a robust telecommuting policy. Please be a leader Tempe and allow all those who can and want to work from home do so.”*

**Key benefits of teleworking included increased work/life balance and ability to better manage health (e.g., through exercise and eating well) and reduced stress and costs associated with commuting.** These benefits were widely reported by respondents: nearly 75% of respondents reported increased work/life balance and ability to better manage health, while 83% reported appreciating the reduced costs and 66% reported less stress. These survey findings were exemplified through open-response answers. For example, one respondent noted,

*“I think teleworking is a great idea that should be a regular part of work life. It saves me from taking public transportation, it saves me time, I get more sleep, I actually eat better because I can access my stove/fridge on my lunch break and it is good for the environment.”*

Another respondent stated,

*“Teleworking has allowed me time (in lieu of commute) to work on my physical and mental fitness. Before the pandemic, my physical fitness routine was non-existent and I had very little time to carve out for mindfulness exercises. Since teleworking because of the pandemic, I have been working out 4-5 days a week at home (using the time I normally would have been commuting) and have healthy breaks for mindfulness resets.”*

**Teleworking was also associated with high levels of work quality: 85% of respondents stated that work was completed on time and met City standards, and many respondents noted that their productivity actually increased.** For example, one respondent noted,

*“This is the first time I have done this in 22 years. I was able to work 1-2 days a week from home, but am not able to now due to management. It was good for my family with the cost savings of fuel, mechanical wear and tear, and food. I was surprisingly busier at home than at the office due to less distractions. At work, it's easy to get into conversations about life, weekends, vacations, etc.”*

Another person noted,

*“My direct reports love it and have been happier and more productive. They call in sick less often. As a manager it has not made it any harder from a productivity standpoint. I personally love it.”*

**Additionally, the data suggest substantial CO2 savings could be achieved via widespread part-time teleworking within the City’s workforce.**

**However, there are real barriers to teleworking the will need to be addressed for future efforts. For example, 56% of respondents reported missing the connections and camaraderie of the office, and 43% of respondents were neutral about or disagreed with the idea that teleworking would not affect advancement.** For example, one respondent wrote,

*“I enjoy teleworking in moderation. It makes focusing and avoiding distraction from the office place really easy, and also allows me some personal space and less stress....However, at this moment after three months of teleworking, I am missing my coworkers, I feel disconnected from my work, there are some systems that just do not function properly with a home system, I am tired and less motivated, and now more stressed.”*

Another respondent noted,

*“(I am) concerned about management's view on my ability to be productive while teleworking. Afraid of stigma that teleworking means you're not working.”*

**Additional barriers include difficulty accessing everything needed to telework, noted by 51% of respondents, followed by technological challenges working from home (including needing better equipment, wifi, and/or secure access), noted by 27% of respondents.** For example, one person stated,

*“We have no way to run payments at home nor do we have access to certain systems from home...”*

Another person responded,

*“...in my Division, we have an extreme deficit of technology that could be used at home. In a very inequitable manor, some take home technology was provided to certain individuals. The remainder are on their own to supply their own equipment. Some colleagues had to purchase tech equipment so they could do their jobs. No compensation discussed for wear and tear on personal equipment. Management's attitude is ‘just do your job’.”*

Others noted that they were uncomfortable or potentially risking security by using personal equipment, or that they lacked wifi or VPN access, e.g.,

*“I would prefer to utilize city owned property instead of personal property.”*

One respondent noted that the use of personal property could jeopardize employees’ privacy:

*“The police department has no policy prohibiting employees from accessing evidence and case information on their person laptops and outside of a VPN. (There are employees currently doing this.) Without a policy, supervisors are able to make employees feel that they are expected to do this. These employees' personal laptops could become discoverable in court. Also, security of case information could be compromised.”*

**Priorities to improve the teleworking experience include fast, reliable network speed (noted by 80% of respondents), videoconferencing or conference call opportunities with colleagues (noted by 50% of respondents), assurance of multiple lines of communication between management and employees (noted by 41% of respondents), and IT assistance for teleworking employees (noted by 40% of respondents).** Another 28% of respondents requested training on the use of technology to facilitate teleworking, and clearly there is a need for clear procedures regarding the protection of data. These barriers speak to a larger aspect of teleworking that was not able to be addressed under the stay-at-home order, but will need to be addressed in future policy: what is the balance between employer and employee responsibility to provide services to facilitate teleworking, and how can this be done equitably?

**Related to equity, the survey data also revealed that teleworking may not be an option for some employees, particularly those who work on-site.** As one respondent indicated,

*“We did it as a necessity, everyone was directed to work from home during Covid-19 with some exceptions. Our operations don't allow for it long term. With city facilities closed*

*to the public, it was possible, but as soon as facilities reopen, it won't be possible. It would take restructuring our department/division to make it possible long term. Then there is the question of whether the opportunities are equitable. If one employee has to come to work and another in the same classification but different responsibilities can telework, is that equitable? Will one employee get paid more for having to come in to work?"*

**However, several respondents suggested that they would like to be on site when necessary and telework otherwise, suggesting the potential for a hybrid or part-time approach.** For example,

*"I have appreciated the City's allowance of teleworking during the pandemic...My position would not be suited to exclusively teleworking, as we operate a customer-facing sales center, but I could effectively complete 80% of my job at home (the administrative, analytic, and coordination tasks), if provided with a City laptop and possibly cell phone."*

Another respondent said,

*"For me, teleworking will be good as a once or twice per week option, if appropriate given what is going on in the facility."*

**Future teleworking efforts will need to be tailored to specific departmental challenges, such as the reality that certain positions are able to accommodate teleworking more easily than others.** Effective teleworking policies will be informed by and tailored to each department's specific needs and roles. However, a clear tone can be set at the top to help facilitate a transition to increased teleworking when possible.

**There is also a clear need to ensure that future teleworkers have the necessary equipment, training, and clarity about expectations to do their jobs well.** These findings are supported by data showing that nearly 25% of respondents indicated that they did not have all of the resources needed to telework. In particular, nearly 20% of respondents reported lacking home internet. The data also revealed that 32% of those teleworking did not know about or have access to a teleworking policy, and that the policies themselves did not consistently cover important information related to expectations.

#### **4. Conclusions and Next Steps**

This report provides an in-depth review of the results of the teleworking survey distributed to City of Tempe employees and managers. The data indicate that teleworking is widely supported by City of Tempe employees, although there is a clear need to address issues related to equipment, clarity of expectations, and job-specific limitations. The research team will further explore these findings through focus groups and interviews with key City staff, aiming to obtain

specific feedback regarding how to design a teleworking toolkit that can guide management regarding overcoming barriers and be flexible for management and employee needs while allowing the City of Tempe to have some level of consistency between departments. The toolkit will also be informed by additional research into best practices and findings from other pandemic-related teleworking experiments happening worldwide.

## Appendix B. City of Tempe/HUE Teleworking Survey

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### Welcome!

**Thank you** for your interest and willingness to participate in our teleworking survey for the City of Tempe! Teleworking is defined for this survey as working from home, using technology to connect with coworkers and/or customers. Your participation is crucial to helping us understand the experiences and perceptions associated with teleworking – both in “normal” times and in the current COVID-19 crisis. Your answers will help inform policies that could improve teleworking experiences at the City of Tempe and beyond.

This survey will be open until **Sunday, June 21st**. You must be at least 18 years old to participate in this survey. Please only take the survey one time. The survey should take about 10-15 minutes. We recommend taking it on a computer, but it is accessible by tablet or mobile phone. To navigate the survey, use the "Next" and "Back" buttons (forward and backward arrows for tablets and phones) at the bottom of the page.

There is no direct benefit to you from taking part in this study. There are also no known risks to you from taking this survey, beyond those associated with any other online activity. Your participation is completely voluntary, and you may leave the survey at any time without penalty. An asterisk (\*) after a question indicates that a response is required, but you may choose “Decline to say” for any question you do not want to answer. Your answers are anonymous and will be aggregated and used for research purposes only.

If you wish to participate in the next phase of this research (focus groups), you will be directed to a separate form at end of the survey where you can enter your contact information. This information will not be connected to your survey responses. All information will be kept confidential and will never be sold or used to contact you without your permission.

If you have any questions concerning the research study, please contact Dr. Rebecca Sanders at [rlsanders@asu.edu](mailto:rlsanders@asu.edu). If you have any questions about your rights as a participant in this research, you can contact the Chair of the Human Subjects Institutional Review Board at (480) 965-6788. By taking the survey, you are indicating your consent to participate.

Are you at least 18 years old as of today?\*

Yes – *CONTINUE*

No – *DISQUALIFY AND TERMINATE*

**Do you consent to participate in this survey?\***

Yes – *CONTINUE*

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## Work and Management Experience

On this page, please tell us about your work and management experience.

1) Please select the option below that best describes your current work schedule.\*

Full time (40 hours per week or more)

Part time (less than 40 hours per week)

Decline to say

*If Q1(current work schedule)=="Part time":*

2) Were you working part time before the COVID-19 pandemic, or has your position changed in response to the pandemic?

I was already working part time, and my position has not changed.

I was already working part time, but my position has changed due to COVID-19.

I was working full time, but my position changed due to COVID-19.

Other (please describe) \_\_\_\_\_

3) Are you generally required to work in the field or at a location other than the primary work site?\*

Yes

No

Decline to say

4) Prior to the COVID-19 pandemic, what was your main commute mode (at least four days/week) in the average week? Please select the mode you used for the longest portion of your trip. \*

No main mode -- I used multiple modes.

Drive alone

Bus

Light rail

Carpool / Vanpool

Bicycle / E-bike

Walk

E-scooter

Telework

Taxi / Uber / Lyft

Decline to say

*If Q4 (main commute mode prior to pandemic) == "No main mode – I used multiple modes":*

**5) Which modes did you use to travel to work in the average week? Select all that apply if you used separate modes on separate days, but just the modes you used for the longest portion of your commute. E.g., if you walked to the bus, just select bus. We ask about access to transit and telework separately.\***

- |                   |                    |
|-------------------|--------------------|
| Drive alone       | Walk               |
| Bus               | E-scooter          |
| Light rail        | Taxi / Uber / Lyft |
| Carpool / Vanpool | Decline to say     |
| Bicycle / E-bike  |                    |

*If Q4 (main commute mode prior to pandemic) == "Bus" or Q5 (modes used to commute in ave. week if no main mode) == "Bus":*

**6) How often did you access the bus by the following modes?**

	Always	Often	Sometimes	Rarely	Never
Walk					
Bike					
E-scooter					
Private auto					

*If Q4 (main commute mode prior to pandemic) == "Light rail" or Q5 (modes used to commute in ave. week if no main mode) == "Light rail":*

**7) How often did you access the light rail by the following modes?**

	Always	Often	Sometimes	Rarely	Never
Bike					
E-scooter					
Walk					
Private auto					

*If Q5 (modes used to commute in ave. week if no main mode) == "Drive alone", "Carpool / Vanpool", "Bicycle / E-bike", "Bus", "Light rail", "Walk", "E-scooter", or "Taxi / Uber / Lyft":*

**8) Thinking of the mode you used for the longest portion of your commute prior to the COVID-19 pandemic, how often in the average week did you travel to work by the following modes?\***

	2-3 days/wk	1 day/wk	Occasionally (< 1 day/wk)
Drive alone			
Carpool / Vanpool			
Bus			
Light rail			
Bicycle / E-bike			
Walk			

E-scooter			
Taxi / Uber / Lyft			

*If Q4 (main commute mode prior to pandemic) == "No main mode — I used multiple modes", "Drive alone", "Carpool / Vanpool", "Bicycle / E-bike", "Bus", "Light rail", "Walk", "E-scooter", "Taxi / Uber / Lyft", or "Decline to say":*

**9) In the average week, how often did you telework prior to the COVID-19 pandemic?\***

Never	2-3 days/wk
Occasionally (< 1 day/wk)	Decline to say
1 day/wk	

**10) How long was your typical one-way (from home to office) commute?\***

15 minutes or less	46-60 minutes
16-30 minutes	More than 60 minutes
31-45 minutes	Decline to say

**11) How far (in miles) would your typical one-way (from home to office) commute be if you weren't teleworking?\***

1 mile or less	10.1 to 20 miles
1.1 to 3 miles	Over 20 miles
3.1 - 5 miles	Decline to say
5.1 - 10 miles	

*If Q4 (main commute mode prior to pandemic) == "Telework":*

**12) How long would your typical one-way (from home to office) commute be if you weren't teleworking?\***

15 minutes or less	46-60 minutes
16-30 minutes	More than 60 minutes
31-45 minutes	Decline to say

**13) How far (in miles) was your typical one-way (from home to office) commute?\***

1 mile or less	10.1 to 20 miles
1.1 to 3 miles	Over 20 miles
3.1 - 5 miles	Decline to say
5.1 - 10 miles	

**14) How many years of experience do you have in your field?\***

0-5 years	More than 20 years
6-10 years	Decline to say
11-20 years	

**15) Which of the following classifications best describes your level of responsibility at the City?\***

Director / Deputy Director	Non-supervisory
Manager	Decline to say
Supervisor	

**16) Which of the following classifications best describes your field of work?\***

Professional (engineer, attorney, accountant, IT, HR, etc.)  
Public Safety  
Administrative  
Line staff  
Other  
Decline to say

*If Q15 (describe job classification)=="Director / Deputy Director", "Manager", or "Supervisor":*

**17) How many employees do you currently supervise? For this survey, consider only the employees who directly report to you.\***

1-5	More than 10
6-10	Decline to say

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## Experience with Teleworking Prior to the COVID-19 Pandemic

On this page, we ask questions about your professional experience with teleworking prior to the stay-at-home order related to COVID-19.

**18) Did your department have a telework policy in place prior to COVID-19?**

Yes

No

I don't know

*If Q18=="Yes":*

**19) Which of the following aspects of teleworking did the departmental policy address? Check all that apply.**

Frequency of check-ins between managers and employees (e.g., daily, weekly)

Length of time checking in between managers and employees (e.g., 15 minutes)

Expectations about meeting attendance

Timesheet logging

Expectations about email or phone responsiveness

Who is eligible for teleworking

Other (please describe):

*If Q4 (main commute mode prior to pandemic) == "Telework" OR Q9 (how often telework in ave. week prior to pandemic) == "Occasionally (< 1 day/wk)", "1 day/wk", or "2-3 days/wk":*

**20) What motivated you to telework prior to the COVID-19 pandemic? Select all that apply.\***

I valued the time saved and/or flexibility allowed by teleworking.

I experienced less stress and/or better work-life balance teleworking.

I had specific person care or household duties that required teleworking.

I had health issues or a disability that could not be accommodated in the office.

I was able to be more productive working elsewhere.

It was not necessary for me to be in the office all the time to perform my duties.

Decreased personal expenses (e.g., savings on gas, parking, or transit)

Other (please describe):

Decline to say

*If Q9 (how often telework in ave. week prior to pandemic)=="Never":*

**21) What kept you from teleworking prior to the COVID-19 pandemic? Select all that apply.\***

Our agency discouraged teleworking unless the situation required it.

Management discouraged teleworking due to worries about productivity and/or accountability.

I enjoyed being in the office.

I believed teleworking would negatively impact my productivity.

I needed to be physically present on the job at all times.

Our agency lacked the appropriate tools (e.g., video conferencing software) to allow for everyone to telework.

Our agency lacked sufficient data protections and/or secure connections for teleworking.

I lacked the tools at home to allow for teleworking (e.g., a laptop for out-of-office use).

Other (please describe):

Decline to say

*If Q15 (describe job classification)=="Director / Deputy Director", "Manager", or "Supervisor":*

**22) Did you manage any employees (full or part time) who teleworked prior to the COVID-19 pandemic?\***

Yes

No

Decline to say

*If Q22 (manage teleworkers prior to pandemic)=="Yes":*

**23) How many of your employees teleworked prior to the COVID-19 pandemic?**

All (100%)

Almost all (81-99%)

Most (61-80%)

About half (41-60%)

Some (21-40%)

Very few (1-20%)

**24) Why did your employees telework prior to the COVID-19 pandemic? Select all that apply.\***

- They valued the time saved and/or the flexibility allowed by teleworking.
- They experienced less stress and/or better work-life balance teleworking.
- They had specific person care or household duties that required teleworking.
- They had health issues or a disability that could not be accommodated in the office.
- They were able to be more productive working elsewhere.
- It was not necessary for them to be in the office all the time to perform their duties.
- Decreased personal expenses (e.g., savings on gas, parking, or transit)
- Other (please describe):
- Decline to say

*If Q23 (how many employees teleworked prior to the pandemic) == "Almost all (81-99%)", "Most (61-80%)", "About half (41-60%)", "Some (21-40%)", "Very few (1-20%)":*

**25) What kept some employees from teleworking prior to the COVID-19 pandemic? Select all that apply.\***

- Our agency discouraged teleworking unless the situation requires it.
- As the manager, I discouraged teleworking due to worries about productivity and/or accountability.
- My employees enjoyed being together in the office.
- My employees believed teleworking would negatively impact their productivity.
- My employees needed to be physically present on the job at all times.
- Our agency lacked the appropriate tools (e.g., video conferencing software) to allow for everyone to telework.
- Our agency lacked sufficient data protections and/or secure connections for teleworking.
- My employees lacked the appropriate tools at home to allow for teleworking (e.g., a laptop for out-of-office use).
- Other (please describe):
- Decline to say

*If Q22 (manage teleworkers prior to pandemic) == "No":*

**26) What kept employees from teleworking prior to the COVID-19 pandemic?**

**Select all that apply.\***

Our agency discouraged teleworking unless the situation requires it.

As the manager, I discouraged teleworking due to worries about productivity and/or accountability.

My employees enjoyed being together in the office.

My employees believed teleworking would negatively impact their productivity.

My employees needed to be physically present on the job at all times.

Our agency lacked the appropriate tools (e.g., video conferencing software) to allow for everyone to telework.

Our agency lacked sufficient data protections and/or secure connections for teleworking.

My employees lacked the appropriate tools at home to allow for teleworking (e.g., a laptop for out-of-office use).

Other (please describe):

Decline to say

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**Experience with Teleworking During the COVID-19 Pandemic**

**On this page, please tell us about your experience teleworking under the stay-at-home order related to COVID-19.**

**27) Are you currently teleworking due to the stay-at-home order related to COVID-19?\***

Yes

No

Decline to say

*If Q27 (currently teleworking) == "No":*

**28) What is keeping you from teleworking under the stay-at-home order? Select all that apply.\***

I am considered an essential worker.

I need to be physically present on the job at all times.

Other (please describe):

Decline to say

**29) Does your department have a policy related to teleworking under the stay-at-home order related to COVID-19?**

Yes - the same policy we had prior to the COVID-19 pandemic.

Yes - a revised version of the policy we had prior to the COVID-19 pandemic.

Yes - a new version developed in response to the COVID-19 pandemic.

No

I don't know.

*If Q29 (does department have teleworking policy) == "Yes - a revised version of the policy we had prior to the COVID-19 pandemic." or "Yes - a new version developed in response to the COVID-19 pandemic."*

**30) Which of the following aspects of teleworking does the current departmental policy address? Check all that apply.**

Frequency of check-ins between managers and employees (e.g., daily, weekly)

Length of time checking in between managers and employees (e.g., 15 minutes)

Expectations about meeting attendance

Timesheet logging

Expectations about email or phone responsiveness

Who is eligible for teleworking

Other (please describe):

**31) Following the stay-at-home order, has your department provided any best practices or guidance specifically related to teleworking during the COVID 19 pandemic?\***

Yes

No

Decline to say

*If Q15 (describe job classification)=="Director / Deputy Director", "Manager", or "Supervisor":*

**32) Are any of the employees you supervise teleworking due to the stay-at-home order related to COVID-19?\***

- Yes
- No
- Decline to say

*If Q32 (are you supervising teleworking employees)=="Yes":*

**33) How many of your employees are teleworking under the stay-at-home order?**

- All (100%)
- Almost all (81-99%)
- Most (61-80%)
- About half (41-60%)
- Some (21-40%)
- Very few (1-20%)

*If Q33 (How many employees are currently teleworking)=="Almost all (81-99%)", "Most (61-80%)", "About half (41-60%)", "Some (21-40%)", or "Very few (1-20%):*

**34) What is keeping some employees from teleworking under the stay-at-home order? Select all that apply.\***

- They are considered essential workers.
- They need to be physically present on the job at all times.
- Other (please describe):
- Decline to say

*If Q32 (are you supervising teleworking employees) == "No":*

**35) What is keeping your employees from teleworking under the stay-at-home order? Select all that apply.\***

They are considered essential workers.

They need to be physically present on the job at all times.

Other (please describe):

Decline to say

*If Q32 (are you supervising teleworking employees) == "Yes" & Q25 OR q26 listed any barriers:*

**36) Given the need to telework due to the stay-at-home order related to COVID-19, to what degree have your concerns about the following aspects of teleworking been addressed? Please answer on a scale of 1 to 5, with 1 meaning "they have been completely addressed" and 5 meaning "they have not been addressed at all."**

	1 - Completely addressed	2 - Mostly addressed	3 - Somewhat addressed	4 - Not very addressed	5 - Not at all addressed	N/A
Concerns about productivity						
Concerns about accountability						
The need to be physically present on the job at all times						
The need for agency tools/equipment to support teleworking (e.g., video						

conferencing software)						
The need for sufficient data protections and/or secure connections for teleworking						
The need for employee-specific tools/equipment to support teleworking (e.g., a laptop for out-of-office use)						

*If Q32 (are you supervising teleworking employees) == "Yes" :*

**37) How were expectations and requirements with regard to teleworking shared with your employees?**

- Discussion with individual or group of employees
- Shared policy documentation
- I have not shared

**38) How do you keep track of your teleworking employees' progress? Check all that apply.\***

- Regular phone calls / video conference calls
- Regular email check-ins
- Regularly-submitted progress reports
- I don't currently keep track.
- Other (please describe):
- Decline to say

*If Q15 (describe job classification) == "Non-supervisory" or "Decline to say":*

**39) Has your manager discussed clear expectations and requirements with regard to teleworking with you?\***

Yes

No

Decline to say

**40) How does your manager keep track of your progress? Check all that apply.\***

Regular phone calls / video conference calls

Regular email check-ins

Regularly-submitted progress reports

They don't currently keep track.

Other (please describe):

Decline to say

*If Q27 (currently teleworking) == "Yes":*

**41) Which of the following technology resources are available to you for teleworking under the stay-at-home order? Check all that apply.**

Laptop / desktop / tablet

VPN or other secure network connection

Cloud-based document sharing (Microsoft Teams, Sharepoint, Dropbox, etc.)

Web conference services (Zoom, Microsoft Teams, Skype, etc.)

Internet connection at home

Other (please describe):

*If Q32 (are you supervising teleworking employees) == "Yes":*

**42) What percentage of your employees who are teleworking have access to the following technology resources?**

	All (100%)	Almost all (81- 99%)	Most (61- 80%)	About half (41- 60%)	Some (21- 40%)	A few (1- 20%)	None (0%)
Laptop / desktop / tablet							
Web- conference Services (e.g., Zoom, Microsoft Teams, Skype)							
VPN or other secure network connection							
Cloud- based document sharing (e.g., Microsoft Teams, Sharepoint, Dropbox)							

Internet connection at home							
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*If Q27 (currently teleworking) == "Yes":*

**43) Do you have all of the resources you need to telework? If not, please list the additional resources you need.\***

Yes

No (please describe):

Decline to say

*If Q32 (are you supervising teleworking employees) == "Yes":*

**44) Do your employees have all of the resources they need to telework? If not, please list the additional resources they need.\***

Yes

No (please describe):

Decline to say

## Opinions about Teleworking

**On this page, we have a few questions related to your opinions about teleworking, both in normal times and under the stay-at-home order related to COVID-19.**

*If Q32 (are you supervising teleworking employees) == "Yes":*

**45) On a scale of 1 to 5, with 1 meaning "strongly agree" and 5 meaning "strongly disagree", please indicate your agreement or disagreement with the following statements about how work conditions are impacted by teleworking under normal conditions and under the stay-at-home order. Please note that if you have not teleworked, we still want your opinions about telework in general.**

	<b>Under normal conditions</b>	<b>Under the COVID-19 stay-at-home order</b>
Work is completed on time.		
Work quality meets City standards.		
Teleworking provides a competitive edge for our agency with regard to employee attraction and retention.		
Teleworking has no impact on a worker's ability to advance.		
We are able to communicate effectively when teleworking.		
Coworkers in the office have no problems connecting with teleworking employees.		
It is not difficult to hold group meetings while teleworking.		

**46) On a scale of 1 to 5, with 1 meaning "strongly agree" and 5 meaning "strongly disagree", please indicate your agreement or disagreement with the following statements about how quality of life is impacted by teleworking under normal conditions and under the stay-at-home order, for both you and your employees. Please note that if you have not teleworked, we still want your opinions about telework in general.**

	<b>Under normal conditions</b>	<b>Under the COVID-19 stay-at-home order</b>
Personal morale is improved among teleworkers.		
I am less stressed while teleworking.		
My employees report less stress while teleworking.		
I am able to find better work/life balance while teleworking.		
My employees report better work/life balance while teleworking.		
I am able to better manage my health while teleworking.		
My employees take less sick leave while teleworking.		
I appreciate the decreased personal expenses (e.g., savings on gas, parking, or transit)		
My employees appreciate the decreased personal expenses (e.g., savings on gas, parking, or transit)		

*If Q15 (describe job classification) == "Non-supervisory" or "Decline to say":*

**47) On a scale of 1 to 5, with 1 meaning "strongly agree" and 5 meaning "strongly disagree", please indicate your agreement or disagreement with the following statements about how work conditions are impacted by teleworking under normal conditions and under the stay-at-home order. Please note that if you have not teleworked, we still want your opinions about telework in general.**

	<b>Under normal conditions</b>	<b>Under the COVID-19 stay-at-home order</b>
Teleworking provides a competitive edge for our agency with regard to employee attraction and retention.		
Work is completed on time.		
I am able to communicate effectively when teleworking.		
Teleworking has no impact on my ability to advance.		
It is not difficult to hold group meetings while teleworking.		
I am able to connect with fellow teleworking employees.		
Work quality meets City standards.		

**48) On a scale of 1 to 5, with 1 meaning "strongly agree" and 5 meaning "strongly disagree", please indicate your agreement or disagreement with the following statements about how quality of life is impacted by teleworking under normal conditions and under the stay-at-home order. Please note that if you have not teleworked, we still want your opinions about telework in general.**

	<b>Under normal conditions</b>	<b>Under the COVID-19 stay-at-home order</b>
My morale is improved while teleworking.		
I am less stressed while teleworking.		
I am able to find better work/life balance while teleworking.		
I am able to better manage my health while teleworking.		
I appreciate the decreased personal expenses (e.g., savings on gas, parking, or transit)		

*If Q32 (manage teleworking employees) == "Yes"*

**49) Please rank the following items in terms of what would best assist you as a manager working with employees who telework, with "1" being the most important and "8" being the least important.**

- Regular assessment of teleworking program results
- Assurance of multiple lines of communication with teleworking employees
- Time management training by teleworking employees
- Clear in-office meeting scheduling procedures
- IT assistance for teleworking employees
- Fast, reliable network speeds
- Training on the use of technology to facilitate teleworking
- Videoconferencing or conference call opportunities with your colleagues for work

*If Q15 (describe job classification)=="Non-supervisory" or "Decline to say"; AND Q27 (currently teleworking)=="yes":*

**50) Please rank the following items in terms of what would best assist you as a teleworking employee, with "1" being the most important and "8" being the least important.**

Regular assessment of your progress

Assurance of multiple lines of communication with your manager

Time management training

Clear in-office meeting scheduling procedures

IT assistance for teleworking

Fast, reliable network speeds

Training on the use of technology to facilitate teleworking

Videoconferencing or conference call opportunities with your colleagues for work

**51) Do you have children who are school-aged or younger at home?\***

Yes

No

Decline to say

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## Teleworking After the COVID-19 Pandemic Ends

As best you can, please answer the following questions about future work, when COVID-19 is no longer a threat and the stay-at-home order has been permanently lifted.

*If Q27 (currently teleworking) == "yes":*

### 52) Will you want to continue teleworking in the future?\*

- Yes, all of the time.
- Yes, some of the time.
- No
- Unsure
- Decline to say

*If Q15 (describe job classification) == "Director / Deputy Director", "Manager", or "Supervisor"; & Q55 == "Yes, some of the time", "No", or "Unsure":*

### 53) What are the barriers to your teleworking full-time in the future? Choose all that apply.\*

- Too many distractions at home
- Difficulty accessing everything I need from the office (e.g., network files or physical items)
- Technological challenges working from home (e.g., slow internet connectivity)
- I value the camaraderie of the office
- Collaboration tools are insufficient for teleworking
- Teleworking stresses my relationships with my employees
- Other (please describe):
- Decline to say

*If Q15 (describe job classification) == "Non-supervisory" or "Decline to say"; & Q55 == "Yes, some of the time", "No", or "Unsure":*

**54) What are the barriers to your teleworking full-time in the future? Choose all that apply.\***

Too many distractions at home

Difficulty accessing everything I need from the office (e.g., network files or physical items)

Technological challenges working from home (e.g., slow internet connectivity)

I value the camaraderie of the office

Collaboration tools are insufficient for teleworking

Teleworking stresses my relationships with my manager

Other (please describe):

Decline to say

*If Q32 (manage teleworking employees) == "Yes":*

**55) Will you allow employees who currently telework to continue to do so in the future?\***

Yes, all the time

Yes, some of the time

No

Unsure

Decline to say

*If Q55 (allow currently teleworking employees to continue) == "Yes, some of the time", "No", or "Unsure":*

**56) What are the barriers to you allowing your employees to telework full-time in the future? Choose all that apply.\***

Too many distractions at home

Difficulty accessing everything they need from the office (e.g., network files or physical items)

Technological challenges working from home (e.g., slow internet connectivity)

I value the camaraderie of the office

Collaboration tools are insufficient for teleworking

Teleworking stresses my relationship with my employees

Other (please describe):

Decline to say

*If Q55 (allow currently teleworking employees to continue) == "Yes, all of the time", "Yes, some of the time":*

**57) Would you allow additional employees to telework in the future?\***

Yes

No

Unsure

Decline to say

*If Q57 (allow additional employees to telework in future) == "Yes":*

**58) How many employees in your team would you allow to telework?**

All (100%)

Almost all (81-99%)

Most (61% to 80%)

About half (41% to 60%)

Some (21% to 40%)

Very few (1-20%)

Unsure

**59) In your opinion, under normal conditions, who should be allowed to telework?**

It should be an option for anyone who can do it effectively.

It should be an available solution for the appropriate role or occasional circumstance.

It should be implemented only when all other options have been exhausted.

*If Q15 (describe job classification) == "Director / Deputy Director", "Manager", or "Supervisor":*

**60) Please share any additional thoughts on why teleworking is good and/or bad for you as a manager and/or for your employees today and in the future.**

*If Q15 (describe job classification) == "Non-supervisory" or "Decline to say":*

**61) Please share any additional thoughts on why teleworking is good and/or bad for you as an employee today and in the future.**

**62) Is there anything else you would like to share about your experience with teleworking and your interest or disinterest in teleworking in the future?**

## **Appendix C. City of Tempe/HUE Teleworking Project Focus Group Script**

### **Introduction (5 min)**

Thank you all for joining us by videoconference today. I'm Dr. Rebecca Sanders, an Assistant Research Professor at ASU, and I'm here with Amanda Luecker, at the Arizona Department of Environmental Quality. We are looking forward to hearing your impressions of the draft teleworking toolkit (teleworking tips, generic teleworking application, and teleworking policy) and discussing how the materials could be improved to be useful to you. To give feedback, please participate in the anonymous Zoom polls when they appear, and raise your virtual "hand" or type into the chat box when you have a comment. You may chat just to me or to the entire group, although if you are willing to chat to the entire group that can help facilitate discussion.

A note about privacy: I am recording this session so that I can return to the transcript for reference if needed, but your responses will remain with us and we will not use your name at any point in the toolkit development. Please respect one another's privacy and do not repeat the conversation outside of this group.

Any questions? If not, let's begin. As a reminder, please draw upon your review of the materials and other relevant teleworking and/or toolkit experience in our discussion today.

### **Review of toolkit materials (20 min)**

1. On a scale of 1 to 5, where 1 means "very easy to understand" and 5 means "very difficult to understand", how would you rate the draft telecommuting toolkit in terms of ease of understanding the content?
2. If you did not answer 1, what parts of the toolkit were not easy to understand and what could we do to make the content more easily understandable? Please raise your hand to speak or type your thoughts into the chat box, and please be as specific as possible.
3. On a scale of 1 to 5, where 1 means "very complete" and 5 means "very incomplete", how would you rate the draft telecommuting toolkit in terms of containing the content you need to telework successfully?

4. If you did not answer 1, which parts of the toolkit are incomplete and/or missing, and what information would you like to see added to the toolkit? Please raise your hand to speak or type your thoughts into the chat box, and please be as specific as possible.
5. (For managers group only): On a scale of 1 to 5, where 1 means “very easy to implement” and 5 means “very difficult to implement”, how would you rate the draft telecommuting toolkit in terms of ease of implementing the content?
6. (For managers group only): If you did not answer 1, what parts of the toolkit were not easy to implement? Please raise your hand to speak or type your thoughts into the chat box, and please be as specific as possible.
7. On a scale of 1 to 3, where 1 means “too long”, 2 means “just right”, and 3 means “too short”, how would you rate the length of the toolkit?
8. If you did not answer 2 / “just right” what text or sections should be shortened or removed, or, conversely, extended or added? Please raise your hand to speak or type your response into the chat box, and please be as specific as possible.
9. On a scale of 1 to 5, where 1 means “I really liked the layout” and 5 means “I really disliked the layout”, how would you rate the layout of the toolkit?
10. If you did not answer 1 or 2, what changes would you like to see to the layout? Please raise your hand to speak or type your response into the chat box, and please be as specific as possible.

### **Preferred media (10 min)**

Now I want to hear from you about your preferred medium for receiving information about teleworking. You have seen an example of a PDF, and here’s a brief (2-3 minute) video about teleworking from telework.gov, the federal government’s teleworking website.

11. Which of the following media would you like to receive information about teleworking?
  - a. PDF booklet explaining all things telework
  - b. PDF tip sheets for teleworking
  - c. Short videos
  - d. Comprehensive website

### **Teleworking Issues (20 min)**

Now I'd like to shift gears a bit and discuss a couple of common teleworking issues.

12. Have you experienced any concerns related to equity within your experience teleworking under the stay-at-home order? These could be concerns related to ability to telework, provision of equipment or training, disparities related to sociodemographic characteristics, or other.
  
13. How can the City work to redress perceptions of inequitable treatment associated with teleworking?
  
14. Are you experiencing any technical difficulties (e.g., difficulty accessing files or programs from work, difficulty with equipment, difficulty with internet) teleworking at this time?
  
15. If so, please raise your hand or describe these difficulties in the chatbox.
  
16. What can the City do to help you address these difficulties?

### **Closing (5 min)**

17. Thank you so much for your feedback today! Is there anything else you would like to share with us about the content of the toolkit or teleworking for the City? If so, please raise your hand to speak or type your response into the chat box, and please be as specific as possible.

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