



CITY OF BEVERLY HILLS
OFFICE OF THE CITY AUDITOR

MEMORANDUM

TO: David Schirmer, Chief Information Officer

CC: Mark Hobson, Assistant Chief Information Officer

FROM: Eduardo Luna, City Auditor

DATE: December 30, 2020

SUBJECT: Innovation Survey and Benchmarking Results Related to Information Technology

The Office of the City Auditor (OCA) conducted a survey of teleworking employees within the Confidential, Management and Professional (M&P), and Municipal Employees Association (MEA) between October 22, 2020 and December 1, 2020. The purpose of the survey was to obtain staff feedback on their telework experience and ideas for innovation within their respective departments' operations.

The survey found that approximately 24 percent of respondents reported that accessing documents and other work files and technological resource needs was somewhat to very challenging to their remote working experiences. Moreover, while most respondents reported having VPN access, they commented that cloud-based and other collaborative and productivity platforms (e.g. platforms with chat, videoconferencing, document sharing, and etc.) would improve their productivity. They also expressed that VPN can be glitchy, slow, and does not always allow for direct portal access into City workspaces.

Respondents also reported the use of personal cell phones for business use. While current City technology allows for calls to be forwarded from desk lines to cell phones, respondents: 1) expressed discomfort with using their private cell phones; 2) noted a loss in productivity as managing multiple phone calls from a cell phone was less than efficient; and 3) suggested that if personal phones are used, the City should reimburse costs. The issues expressed related to the use of personal cell phones may be partially remedied via technology (e.g. use of voice over IP (VoIP) services and software and applications that facilitate call management) and/or equipment (such as office desktop telephones used in home settings).

We are sharing the information within because, while the survey occurred during the pandemic, the issues raised by respondents are not temporary and not exclusive to a pandemic working environment. We also conducted benchmarking and found that other jurisdictions use remote working as a standard scheduling option and use cloud-based and other technologies to support operations. The technological platforms are flexible, secure, scalable, and facilitative of worker productivity.

Based on our conversation with IT, the City's technological infrastructures has the same capacity. The City has phone and VPN equipment available for applicable employees, has secure shared drive options for document sharing, and has web-based methods for accessing



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City portals. Additionally, the IT Department, as part of its strategic plan, intends to implement Microsoft 365 (which includes Microsoft Teams, One Drive, etc.) in the near future.

As described in the included benchmarking, city and state governments have already invested in technological platforms that can adapt to a work from anywhere, be productive anywhere, and interact with customers and colleagues in various ways environments. Hybrid in-office and remote organizational structures will most likely outlast the pandemic.¹ Now, is an opportune time for the City to identify or re-visit its strategic goals related to remote working, worker productivity and collaboration, and customer-service delivery for 21st Century government.

Eduardo Luna
City Auditor

¹ McKinsey & Company: "What's next for remote work: An analysis of 2,000 tasks, 800 jobs, and nine countries," November 23, 2020: <https://www.mckinsey.com/featured-insights/future-of-work/whats-next-for-remote-work-an-analysis-of-2000-tasks-800-jobs-and-nine-countries#>



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Survey Summary

The Office of the City Auditor conducted a survey of teleworking employees to obtain feedback about their telework experience and ideas for innovation in their respective departments' operations. As it related to information technology, key results include:

- Approximately 59 percent of respondents reporting that they received a City-issued computer;
- Approximately 86 percent of respondents reporting they received VPN access;
- Approximately 24 percent of respondents identifying access to documents and other work files as somewhat to very challenging;
- Approximately 28 percent of respondents identifying technological resource needs as somewhat to very challenging; and
- Approximately 54 percent of respondents reporting they received information on internet security.

Notably, while respondents reported receiving VPN access, they commented that other cloud-based options would provide more seamless access to City networks and that work productivity platforms would increase team collaboration, public access, and worker efficiency. Comments included:

- *"I believe the VPN service can be improved to be more seamlessly integrated into work-from-home computers. Though not directly related to working from home I also believe the City should invest in software that allows for a document to be shared and edited by multiple people at the same time. This would allow for improved collaboration. The City should invest in Microsoft Teams and allow people to call phones from their Microsoft Teams account."*
- *"... Also, VPN is often slow...it would be much preferred to have a system like OneDrive where the entire network is on the cloud."*
- *"There are City applications that operate better if done without the VPN. This requires the City to expand its VPN network to make this work remotely without issues."*
- *"Direct portal into City work space. Not website access VPN, but actual operation on the City computer desktop as soon as you open your computer. More robust, less glitches. West Hollywood is doing this."*
- *"I believe the most important technology for more productivity is having collaborative software to allow multiple people to edit documents simultaneously like in Google Docs, without having to have multiple versions being passed around."*
- *"If our desk numbers can operate similar to Google Voice numbers, it would be nice to access voicemails, call logs, and send/receive text messages through a web browser."*
- *"A lot of things have worked well. It would be GREAT if we had more software/programs that allowed us to collaborate more. For example, City of WeHo uses "teams" and some*



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cities use Google-based products that allow multiple people to edit documents collaboratively, etc. This would help us A GREAT DEAL, as this has been one of the biggest challenges..."Additionally, a lot of our applications online are glitchy in general or only work on certain browsers, and this is even more problematic during wfh as we try to help customers remotely.²

Key Takeaways

There are three key takeaways based on feedback from the survey, the current remote working environment, our conversation with IT, and the present opportunity to strategize a response to evolving technological needs. **First, some respondents indicated that they are using their personal cell phones for business purposes.** In discussions with the IT Department (IT), management indicated that IT has equipment (e.g. desktop phones, VPN routers, etc.) available for applicable positions that would allow employees to use City-issued equipment to conduct business, that would allow for call management, and that would allow for quick and secure access to City networks. However, according to IT, in some instances, initial attempts at the beginning of the pandemic to distribute this equipment was met with staff resistance. As employee sentiments may have changed given the prolonged pandemic and as staff continue to adjust to the remote working environment, re-visiting distribution may be met with less resistance.

Secondly, as aforementioned, some respondents suggested the use of collaborative platforms to increase productivity. Respondents mentioned cloud computing through platforms associated with Microsoft and Google. Cloud computing is also available through telecommunications vendors – such as Avaya (the City's existing vendor) and Mitel. Such platforms may also provide other productivity benefits such as chat, visual voicemail, audio and video conferencing, call center analytics, and other features that would benefit in-office work as well. We should note that we are not endorsing or recommending any specific products. Software and hardware choices are based on IT's assessment of needs, internal controls, security, change management, etc. We are however, sharing the sentiment that respondents are tech-savvy and seemingly ready to embrace newer technologies. To that end, according to IT, as part of its strategic plan, it is preparing to upgrade the City's Microsoft platforms.

Lastly, IT has the capacity to address the feedback expressed by the respondents and that can support the strategic direction chosen by the City to enhance internal operations and customer service-delivery. Notably, once the City: 1) has a uniform plan that outlines its goals moving forward regarding hybrid workspaces and service options; and 2) aligns policies and procedures to meet those goals, IT can better integrate technology to support City objectives.

² This responder also noted that GoToMeeting is a limited platform.



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IT Platforms Used in Other Jurisdictions

We benchmarked IT platforms in eight other jurisdictions and, as shown in **Exhibit 1**, found that five of them are using cloud-based platforms such as Microsoft 365 and Google Workspace. The State of Arizona (Arizona) reported migrating over 90 agencies and roughly 40 thousand workers to Google Workspace. As noted earlier, the City of Beverly Hills currently has cloud capabilities and intends to upgrade its platforms. Moreover, as shown, five of the jurisdictions already had remote scheduling options as a practice.

Exhibit 1: Teleworking Policies in Other Jurisdictions

Jurisdictions	Telework Policy Status	IT Platform
City/County San Francisco	City Practice	Cloud-Based (Microsoft 365)
City of Sacramento	City Practice	Cloud-Based (Microsoft 365)
County of Los Angeles	City Practice	Cloud-Based (Microsoft 365)
City of West Hollywood	Temporary	Cloud-Based (Microsoft 365)
City of San Jose	City Practice	Info Not Public
City of Santa Monica	Telework Policy Not Public; City Currently Teleworking	Info Not Public
City of Beverly Hills	Pilot	Cloud Capabilities
State of Arizona	State Practice	Cloud-Based (Google Workspace)

Note: Microsoft 365 includes Teams, One Note, and Windows applications such as Word and Excel.

Google Workspace includes Drive, Gmail, and Google Meet with chat and meeting features.

Source: OCA generated based on research on benchmarked cities, counties, and the State of Arizona.

City of West Hollywood Memorandum of Understanding for Office 365 Implementation

In May 2019, WeHo initiated services to begin citywide implementation of Office 365. In its analysis, WeHo identified the following as the purposes and benefits of implementation:

- WeHo's core platform and technologies use Microsoft products and services for service-delivery;
- Office 365 offers flexibility by allowing employees to work from anywhere, anytime, using any device and encourages environmentally friendly practices through paperless interactions, lessening the need for recycling and disposal of documents;
- Due to the growing importance of mobile workforce, on-demand technology, security, and resiliency, migration keeps the city's technology current, secure, highly available,



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efficient, and cost effective – this includes always receiving the latest security and critical updates with no additional charge;

- Moving to Office 365 would enhance productivity, security, and reliability and provide a holistic set of productivity tools – including Word, Excel, PowerPoint, Access, Publisher, Outlook, One Note, One Drive, Teams, and SharePoint;
- Efficiently utilizing the use of the City's shared hardware and software resources by removing ten total on-premise servers; and
- Allowing for scalable growth without increasing the need for future hardware, storage, and backup costs.

Based on a review of WeHo's agreements with CompuCom Systems, ConvergeOne, and Software One for Microsoft implementation and licenses, between Fiscal Years (FY) 18-19 and FY 20-21, contract amounts are as outlined in **Exhibit 2**.

Exhibit 2: Budgeted Office 365 Implementation and Licensing Costs for the City of West Hollywood Between Fiscal Years 18-19 and 20-21

Vendor	Description	Amount
CompuCom Systems	<ul style="list-style-type: none">• Expires June 30, 2022• Lead migration planning and implementation service (Evaluate, Plan, Build, Deploy, Operate)	\$200,000
ConvergeOne	<ul style="list-style-type: none">• Expires June 30, 2022• On call services to provide remote or on-site engineering resources	\$100,000
Software One	<ul style="list-style-type: none">• Provides Additional Microsoft Office 365 licensing	\$323,808
Total		\$623,808

Source: OCA generated based on review of the May 6, 2019 City Council Consent Item for the Agreement for Services for Microsoft Office 365 Implementation, Related Software and Licenses.

Recently Identified Pandemic and National Security Risks

While IT may already be aware of recently identified pandemic and national security risks, we are including a summary in this memo for due diligence and as a reminder about the importance of ongoing IT security assessments.

On December 2, 2020, the Interpol (International Criminal Police Organization) issued a warning that criminals could target vaccine supply chains and that criminals could target the public via



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fake websites and vaccine scams.³ The Interpol noted that governments should consider these risks as they could be impacted as they prepare to roll out vaccines to their citizens. It also noted that fake websites touting false cures could also pose a significant risk to citizens' health and safety. Addressing these risks within the City will require public safety, IT, and Public Information Office collaboration.

On December 14, 2020, the U.S. Department of Homeland Security, along with private businesses, investigated and began responding to, a suspected, Russian hacking campaign.⁴ It is suspected that the hackers breached other federal departments and agencies, including Treasury, Commerce, the State Department, and the National Institute of Health. Additionally, on December 17, 2020, Politico reported that hackers accessed systems at the National Nuclear Security Administration, which maintains the U.S. nuclear weapons stockpile.⁵

In summary, hackers breached SolarWinds software, where its customers downloaded malicious software that allowed hackers to spy on businesses and agencies for roughly nine months. According to a Reuter's article, SolarWinds noted that the attack was the work of an outside nation state and that the attackers inserted code into updates of SolarWinds's Orion network management software between March and June 2020.⁶ The Microsoft Security Response Center, as well as other security software companies, drafted advisements for detecting and mitigating future attacks and residual impacts from the breach.⁷ The advisements included a non-exhaustive list of Indicators of Compromise (IOCs) for organizations to review.

³ "Interpol warns of organized crime threat to COVID-19 vaccines," December 2, 2020: <https://www.interpol.int/en/News-and-Events/News/2020/INTERPOL-warns-of-organized-crime-threat-to-COVID-19-vaccines>

⁴ Reuters: "U.S. Homeland Security, thousands of businesses scramble after suspected Russian Hack, December 14, 2020: <https://www.reuters.com/article/global-cyber/global-security-teams-assess-impact-of-suspected-russian-cyber-attack-idUKKBN28O1KN>

⁵ Politico: "Nuclear weapons agency breached amid massive cyber onslaught," December 17, 2020: <https://www.politico.com/news/2020/12/17/nuclear-agency-hacked-officials-inform-congress-447855>

⁶ Ibid

⁷ Microsoft Security Response Center: "Customer Guidance on Recent Nation-State Cyber Attacks," December 13, 2020: <https://msrc-blog.microsoft.com/2020/12/13/customer-guidance-on-recent-nation-state-cyber-attacks/>