



County of Los Angeles
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May 6, 2020

To: Supervisor Kathryn Barger, Chair
Supervisor Hilda L. Solis
Supervisor Mark Ridley-Thomas
Supervisor Sheila Kuehl
Supervisor Janice Hahn

From: Sachi A. Hamai
Chief Executive Officer

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**REPORT BACK ON PREPARING FOR EMERGENCIES WITH TELEWORK
(ITEM NO. 60-A, AGENDA OF MARCH 4, 2020)**

On March 4, 2020, the Board of Supervisors (Board) instructed the Chief Executive Officer, in consultation with the Acting Director of Internal Services and the Chief Information Officer, to assess the Los Angeles County (County) landscape of telework options for all employees including:

- a) Ensuring that all relevant employee classifications have the technology, both hardware and appropriate software, to telework from home;
- b) Ensuring that remote access from County technology devices can be done securely in real time with no delay in worker productivity; and
- c) Report back to the Board in writing in 30 days.

In order to gather important data from departments regarding the number of employees that were telecommuting and to further evaluate some of the constraints employees were experiencing working from home, there was a 30-day extension granted from the Fourth Supervisorial District to extend the Board motion response deadline to May 4, 2020.

The attached report examines all aspects of telecommuting readiness based on your response to the Board's proclamation at the Board meeting of March 4, 2020, declaring a local and public health emergency that required County departments to quickly shift from a high percentage of their employees working full-time in County facilities to working

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remotely on a full-time or part-time basis. There are many lessons learned from this sudden shift that, if applied, will lead to a future where County employees can *work from anywhere at any time* and the policies, leadership, technology, infrastructure, and culture are in place to move seamlessly from one environment to another. The report is focused on the transition to remote work due to the COVID-19 pandemic and addresses the following areas in response to the Board's request:

- Telework Survey
- Policy
- County Leadership Culture
- Public Cloud Services
- Facilitating Remote Meetings
- Cybersecurity
- Employee Assigned Device
- Electronic Signatures
- Digitization of Paper Files
- Remote Access Technology

Please feel free to contact me, or your staff may contact Bill Kehoe, Chief Information Officer, at (213) 253-5600 or bkehoe@cio.lacounty.gov if you have any questions or require further information.

SAH:WSK:pa

Admin/Final Documents/BOARD CORRESPONDENCE 2020/Board Memos 2020/Telework Board Motion/Board Memo - Telework Bd Motion Response ATS_B101474.docx

Attachment

c: Executive Office, Board of Supervisors
County Counsel
Internal Services

TELEWORKING READINESS REPORT

Background

Due to the declared COVID-19 public health emergency at the Board of Supervisors (Board) meeting of March 4, 2020, the Board announced a *Safer at Home* order for Los Angeles County (County) that forced all departments to shift in a short time to a *work at home* preference for their employees based on job duties. It is important to note that department leadership was responsible for differentiating essential (those whose job duties required serving the public or assigned as a disaster service worker) and non-essential (those whose job duties could be performed remotely).

In addition to the technology challenges that this shift presented, there were cultural and staff management issues that had to be addressed. Overall, the County was not prepared for this rapid shift to a large percentage of employees teleworking. This was a difficult transition but made possible by the hard work and commitment of the Internal Services Department (ISD) Information Technology Services (ITS) Division and dedicated IT staff from every department. To prepare for the future, we must learn from the current situation and make the necessary adjustments that will enable employees to *work from anywhere at any time* without the extraordinary effort that occurred during this crisis.

This report is focused on the transition to remote work due to the COVID-19 pandemic and addresses the following areas in response to the Board's request and provides recommendations for each section. The areas are:

- Telework Survey
- Policy
- County Leadership Culture
- Public Cloud Services
- Facilitating Remote Meetings
- Cybersecurity
- Employee Assigned Device
- Electronic Signatures
- Digitization of Paper Files
- Remote Access Technology

Telework Survey

In response to the Board motion, the Office of the Chief Information Officer asked 34 departments on March 25, 2020, to complete a survey regarding their telework capabilities. Departments were re-surveyed on April 17, 2020, in order to reflect the most current information. Below are the survey summary findings:

- 32 percent of total County active employees (36,625 out of 114,182), are currently teleworking and able to perform the majority of their job functions. These employees can access internal County/departmental resources, such as shared drives, mylacounty.gov (timesheet and other employee administrative functions), departmental intranet, and departmental applications.
- Three departments (Departments of Human Resources [DHR], Consumer and Business Affairs, and Arts and Culture) indicated that 100 percent of their employees are currently teleworking. Another ten departments indicated that at least 70 percent of their employees are currently teleworking.
- 21 percent of employees (23,634 out of 114,182) have been issued a County laptop or tablet and have secure access to all applications and services that they need to perform their job almost as effectively as if they were in the office. There were some services that had to be rapidly deployed to facilitate this access that are described further in the body of this report (e.g., remote access, electronic signature and public cloud services technologies).
- 28 percent (31,854 out of 114,182) of employees who do not have County-issued laptops or tablets can still perform some or most of their job functions via a personally-owned computer. While this is necessary at this time, it presents a security risk to the County. Therefore, in the future, it is preferred that employees have a County-issued mobile device that they can use when teleworking.
- The top challenges identified in the survey preventing effective teleworking are:
 - ✓ Equipment (lack of County-issued laptop or tablet);
 - ✓ Home network capacity (lack of or slow home internet);
 - ✓ Education and Training (learning to use different applications, such as Skype for Business, Teams, WebEx, and remote access platforms);
 - ✓ Technology (lack of adoption of available cloud-based applications, such as Skype for Business, Teams, WebEx, etc.); and
 - ✓ Technical support (lack of support to remotely troubleshoot and fix technical issues).

Policy

A low percentage of employees and managers were adept at leading and operating from remote environments. This likely caused initial unproductive performance, anxiety and confusion. Multiple departments quickly established or modified telework policies and procedures to address the challenge in spite of an established telework policy by DHR, which includes training for staff and management.

Recommendation: Form an intra-departmental strike team to review and update the DHR Telework Policy based on lessons learned from the COVID-19 *Stay at Home* order.

Recommendation: All departments should adopt the policy and the associated training for staff that are eligible to telework provided by DHR. If departments have additional expectations or requirements to the DHR policy, they should add such to the policy or attach an addendum versus creating their own. This will provide a consistent policy and employee expectations across the County for teleworking.

Recommendation: All employees currently teleworking and any that could potentially telework in the future (whether in the normal course of business or during another crisis) should be required to take the DHR telework training course. All supervisors and managers who could potentially have teleworking employees should also be required to participate in the telework training.

County Leadership Culture

Supervisors and managers who can view their employees in their workspaces have a sense that employees are productive and working to their fullest. The shift to teleworking requires managers and supervisors to lead in a much different manner, understand and provide direction on projects, assign and track due dates, remove obstacles, and check-in with employees frequently. There is a risk of employees not performing up to their full capacity while teleworking if leadership has not been trained in the new model.

Recommendation: All supervisors and managers who could potentially have teleworking employees should participate in training focusing on how to supervise mobile employees effectively.

Recommendation: ISD has developed tools to provide remote employee check-in and a daily work completion report to facilitate better oversight of teleworking staff. Departments should review and consider adopting these tools to better manage remote staff.

Public Cloud Services

Public cloud applications and platforms allow employees to securely access services, such as e-mail, work documents, and other critical applications from the browser on their device. Public cloud services also serve as a disaster recovery solution given that employees would still have access to cloud services in the event of a County data center or network outage.

The County took a major step forward in mobilizing its workforce during the past three years, with the adoption of the Microsoft Office 365 (O365) cloud platform. These tools allow departments to access important office applications (e-mail, word processing, spreadsheets), intranet content, videoconferencing solutions (Skype, Microsoft Teams) and working files from any computing device. While these tools are available for all County departments, inconsistent adoption and deployment resulted in the inability of many employees to take advantage of these tools.

Many departments have also procured cloud-based services that do not rely on any on-premise County infrastructure. For example, the cloud-based call center (Amazon Connect) currently used by ISD, which has been installed in six agencies during the COVID-19 crisis and is being considered by an additional seven departments, allows call center agents to receive and process calls from any location.

Recommendation: The County should continue to aggressively move to the public cloud and migrate on-premise systems to cloud-based services. Public cloud services will enable more teleworking opportunities and assist in attracting the next generation of County employees.

Recommendation: Since 2015, the County has made significant investments in the Microsoft O365 Enterprise Agreement. This platform provides full licensing to all County employees for e-mail, videoconferencing solution/collaboration (Microsoft Teams), document storage and sharing (OneDrive), Office (Word, Excel, PowerPoint), SharePoint, etc. The County should leverage these investments and aggressively deploy the tools included in the platform to all employees in all departments. In order to be fully effective with these tools, employees must be trained based on their job function which determines how they will use these tools.

Facilitating Remote Meetings

Meetings and team collaboration are much different in a remote work environment. In some departments this was a major shift from the traditional *in-person* meetings held in conference rooms with paper copies provided to all participants. The scheduling, execution, and technology challenges are significant in a County that had a very low percentage of staff working remotely and utilizing videoconferencing tools.

To remain productive, employees that are teleworking need to learn how to schedule, facilitate, and participate in meetings using videoconferencing tools, such as Microsoft Skype for Business, Microsoft Teams, or Cisco WebEx. These technologies can enable voice-only or full-motion video meetings ranging from one-on-one conversations to townhall-style gatherings. The experience of videoconferencing and collaboration will carry over to the workplace once employees return to the office and provide multiple options for conducting meetings. Users will be able to share comments, retain conversation threads, and record meetings to share with others at a later date.

Recommendation: Continue the adoption of these tools (Microsoft Skype for Business, Microsoft Teams, or Cisco WebEx) after the COVID-19 crisis, replacing regular in-person meetings. The benefits include reduced travel time for meeting participants and potential reductions in conference room upgrade costs.

Cybersecurity

When employees are working at County facilities with a County-issued device, all the County security controls are in place and the risk of a security-related incident is much lower than when employees are working remotely. For short-term telework situations (a few days to a week), these issues do not pose a high risk. The risk increases the longer devices remain remote.

Deployment of critical security software upgrades or critical configuration changes is difficult when the device is remote. This creates a cybersecurity risk of a security incident. Routine security software upgrades generally use automated deployment methods. Some departments do not have these automated deployment methods in place if the County-issued device is remote.

Every telework environment is different and has unknown risks. It is impossible to evaluate the risks of every remote environment. Some of the risks to remote devices relate to physical compromise (theft), access to the device and sensitive information by non-County individuals, and other risks, such as the lack of security controls on the telework location network.

Recommendation: Move to a consolidated enterprise security model managed by ISD that regulates all security updates and policies on County-issued devices would provide greater protection of the information to which the workforce has access.

Employee Assigned Device

Mobile devices (laptops and tablets) are a foundational component to enable employee mobility. When a laptop or tablet has been purchased, rented, or leased and issued to an employee, it allows the employee to take that device and *work from anywhere at any time*.

The County has traditionally purchased desktop computers for staff due to cost considerations, thus constraining the mobility of employees. The purchase of laptop and/or tablet devices is rising; however, the County is still behind since 75 percent of device purchases through the ISD Consolidated Computer Purchase Program in 2019 were desktop computers. Once an employee is issued a desktop computer, they are immediately mobility-constrained for four-to-five years, depending on the replacement cycle.

Another constraint to employees being assigned a mobile device is the lack of a leasing program. Leasing establishes a consistent funding model from a capital expenditure to one of operational funding, which allows more employees to receive a mobile device with a built-in device replacement cycle.

Many employees that were required to telework did not have a County-issued mobile device and were forced to use a personally-owned computer or other personal device. This creates a security risk and a less efficient working environment.

Recommendation: Require that the purchase, lease, or rental of all future computers be a mobile device (laptop or tablet) to facilitate the vision of employee mobility and provide employees the ability *to work from anywhere at any time*. The purchase of a desktop computer should be the exception and require special justification.

Recommendation: Provide a four-year leasing option for departments as an alternative to purchasing laptops and tablets. This would provide a low, upfront cost and equal payments over the life of the lease within the departments' operational budget and include a *built-in* device replacement cycle upon completion of the lease term, ensuring that employees will stay current with hardware and remain mobile.

Recommendation: Any grant funds provided to departments for equipment replacement from the CEO Information Technology Fund should only be used to purchase or lease laptops or tablet devices. If departments intend to acquire a desktop computer, they should fund the acquisition and manage the lifecycle of the replacement from their operational budget.

Electronic Signatures

The County, as a business organization, requires employees to affix their signature to a myriad of documents (i.e., arrest and search warrants, contracts, official reports, purchasing, process approvals, timesheets, etc.). Some of these documents require signatures that are legally binding, others are acknowledgements of acceptance or approval. Traditionally many of these signatures have been obtained through pen-and-ink signatures. With such a large number of employees working in distributed locations, obtaining such signatures has proven challenging. Several departments have limited electronic signature/approval processes, but many documents require an actual pen-and-ink signature with manual, slow routing processes.

There are multiple forms of electronic signatures. Each serves a different purpose.

- **Digitized Signatures:** Images of an individual's pen-and-ink signature. Generally, these are scanned images that can be placed into memoranda or correspondence. They resemble the individual's actual signature but are a facsimile. Digitized signatures are usually not used when the document must be legally binding.

- **Electronic Signatures:** This form indicates the signature may be obtained through some mechanism associated with an individual through technological means that the individual acknowledges or approves a process. This generally does not resemble the individual's actual signature. Depending upon the method of association, it is possible for electronic signatures to be legally binding.
- **Digital Signatures:** This form is the most secure and is generally legally binding. Typically, they do not resemble the individual's pen-and-ink signature, but authenticity can be traced back through electronic means to ensure that the individual claiming to be the signatory, is the signatory; this is referred to as non-repudiation.

During the course of the *Stay at Home* order, numerous processes, which have traditionally been reliant upon pen-and-ink signatures, have emerged as stumbling blocks in County operations. Some examples are:

- **Contract acceptance** – Some departments have a technological solution to sign contracts, others do not and have had to scramble for signatures.
- **Quarantine warrants** – The department of Public Health issues warrants enforcing quarantine of certain infected and/or exposed individuals. At the beginning of the COVID-19 crisis, these warrants were signed with pen-and-ink.
- **Numerous approvals, acknowledgement, and/or acceptance processes** – Most of these that began as pen-and-ink signatures remain unchanged and signatures are either awaiting the conclusion of the crisis or are routed through manual means.

Recommendation: Departments should examine processes that require a pen-and-ink signature then implement the appropriate electronic signature into the identified processes. Processes should be prioritized on the basis of frequency of use, value impact to the County, and number of required signatures for each process or transaction.

Digitization of Paper Files

To effectively telework, employees need access to digital documents and the ability to digitally sign documents with an automated workflow process. When documents are not digital and reside in a filing cabinet at a County facility, they are not accessible to remote workers and prevent the processing of critical customer transactions and services, thus constraining the vision of telework.

The County has a culture of accumulating, filing, and retaining large amounts of paper requiring space for filing cabinets and archives for storage. In addition, the inefficiency of employees having to search for documents in filing cabinets versus retrieving a digital

copy is significant, and it slows down the processing of internal and customer service transactions.

Recommendation: Kick-off a Countywide campaign to move critical business processes from a paper based, manual to digital workflow complete with digital signature capability for all approval requirements. The process improvements should also include digitizing paper files that can be easily searched and retrieved by employees from their mobile device. This will enable a more efficient teleworking environment for employees, reduce space needs in County facilities, and create automated workflows.

Remote Access Technology

The County has utilized remote access technology for several years, however, at a minimal level. The solution in place, Pulse Secure, provides employees that telework the ability to access electronic documents and applications from remote locations. Prior to the crisis, this solution experienced limited use and, therefore, was acquired with only 4,500 concurrent (simultaneous access) licenses. Once the number of users reached this limit, no further users were allowed to access internal systems and documents.

To overcome this limitation, shortly after the *Safer at Home* order was issued, ISD implemented several new technologies to provide County employees access to electronic documents and applications:

- ISD created *connect.lacounty.gov*, a website designed to offer employees various methods to access County resources, dashboards on departmental adoption of remote access software and training on telework and collaboration tools. The website provides step-by-step instructions for employees to determine what is the best remote access tool for them, and how to download and activate the tool.
- AppStream (*myapps.lacounty.gov*) – Allows the access to County applications on non-County issued devices from an Amazon Web Services cloud platform.
- VMWare Horizon (*mypc.lacounty.gov*) – Creates a *virtual* Personal Computer (PC) resembling that of the user's own desktop with access to internal County computing resources. By initiating this virtual PC, the user's experience is similar to that of working in the office.
- zScaler – True, private network access from the user's device to internal County resources. If the employee has a County-issued device, once zScaler is initiated, the employee has full unrestricted access and authority within any system or application just as if they were sitting at their office desk.

Recommendation: Move toward a centralized robust remote access program that allows County employees to use either a County-issued device or a personal device to safely access all their respective IT resources as they would from their office.