City of Long Beach
Working Together to Serve

Memorandum

Date: November 26, 2018

To: Patrick H. West, City Manager

From: Lea D. Eriksen, Director of Technology and Innovation Department

For: Mayor and Members of the City Council

Subject: **City Communication Technology Update**

At its June 19, 2018 meeting, the City Council requested the Technology and Innovation Department (TID) to assess smart phones, soft phones, and other methodologies to minimize the number of handset phones and report back on the progress in 120 days. TID believes that there are opportunities to reduce the number of handset phones and to improve the overall communication, and that these projects require interactive and creative planning, partnership and change management with City departments. This memorandum outlines the City's existing communication technologies, upcoming changes to communication technologies, and approaches and considerations for new communication technologies.

Existing Communication Technologies

The City has approximately 8,000 phone lines and 3,600 Cisco IP handset phones in over 150 buildings supporting diverse needs. These include:

- Individual phone lines
- Shared and departmental phone lines
- Call centers
- Emergency and safe house phones
- Billing and information lines
- Fax and conference lines
- Security and fire control systems
- Elevator and access gate systems
- Heating and electrical systems
- Emergency and panic systems
- Intercom and phone announcement systems
- Voicemail systems
- Language access services

These phone lines and handset phones provide mission-critical services for the City's day-to-day operations across all City Departments, and between the City and its residents, businesses, and visitors.

The City has about 1,900 City-issued mobile devices, which include cell phones, smart phones, tablets, and pagers. In addition, the City provides cell phone stipends to approximately 250 eligible employees who use their own cell phones or smart phones (called BYOD or Bring Your Own Devices) for mobile communications. While City-issued and BYOD cell phones can receive forwarded calls from the City telephone system, cell phones cannot originate calls from the City's prefixes (e.g. 562-570-xxxx). This may expose private numbers for City employees leading to an increase in phone calls during non-business hours or could lead to confusion on who is calling in the case of the residents, businesses, and visitors. City-issued smart phones can access approved mobile applications (including soft phone applications) and can be remotely managed and secured to protect confidential information. BYOD smart phones are not supported by the City, and cannot currently access approved mobile applications or be remotely managed or secured.

As outlined in the Mobile Device Stipend Utilization and Bring Your Own Device Policy Memo on February 9, 2018 (see Attachment 1), elimination of the City-issued mobile devices and expansion of the BYOD cell phone stipend will have operational, financial, and labor impacts. In addition, using mobile devices to replace handset phones may be further complicated by the performance and reliability of cellular voice, cellular data, and WiFi data across the City and in various City buildings.

The City has a limited deployment of the Cisco IP Communicator softphone technology used by the Code Enforcement Bureau of the Development Services Department. Over the past five years, this technology enabled Code Enforcement staff to receive and originate phone calls from PCs and laptops using City prefixes (e.g., 562-570-xxxx). In addition to occasional training challenges, this technology has required significant support for headsets and PC software upgrades. Due to the performance and reliability of the outdated telephone system software and Citywide technology infrastructure, TID held off on expanding this communication technology until after critical upgrades were completed.

Lastly, the City has continued to extend its use of other communication technologies (also referred to as "collaboration systems") such as Surface Hub Smartboards (whiteboard collaboration, desktop projection, video conferencing) and Skype for Business (instant messaging, desktop sharing and video conferencing). In addition to occasional training challenges, these collaboration systems have inconsistent performance and reliability issues that appear to be partially caused by outdated or insufficient desktop and network infrastructure hardware, software, or capacity.

Upcoming Changes to Communication Technologies

TID is currently upgrading the City's outdated telephone system, including the backend voicemail, phone and contact center systems, improving system supportability and reliability, building new workflow capabilities, and enabling phone integration with email, desktops and teleconferencing systems. As part of the phone system upgrade, TID is also replacing outdated and incompatible Cisco IP handsets. Of the 3,600 existing Cisco IP handsets, TID will replace approximately 2,700, a 25 percent reduction, through working with departments to justify

handset replacements and phone lines, to pilot and promote new soft phone capabilities, and to pilot and advance other communication technology options (e.g., Microsoft Teams, Cisco WebEx Teams).

Additionally, the Critical Technology Infrastructure Needs Program modernizes foundational elements of the City's technology architecture and infrastructure that will be critical in enabling the evolution of the City's communication technologies, including the City's one phone number project (see Attachment 2 for more details).

Approach and Considerations for New Communication Technologies

Because the deployment and usage of handset phones, smart phones, soft phones, personal computers and collaboration systems in the City directly impact individual users, have complex departmental interdependencies, and impact how the City interacts with residents, businesses and visitors, TID's recommended approach to develop and integrate new communication technologies that reduce handset phone needs involves defining and establishing:

- System reference architecture, standards, and minimum requirements,
- Platforms that integrate, manage, or secure City issued and BYOD devices,
- Updated policies for security, device usage and stipends for BYOD devices,
- Training for TID staff and City users to understand and use solutions,
- Assess labor imacts including any meet and confer obligations,
- Job classifications to support new technologies and solutions, and,
- Portfolio management focus to improve technology alignment and execution.

These approaches will help ensure the City's communication technology initiatives are continually aligned with evolving standards, that transitions to new communication services are seamless, and that performance, adoption, and continuous improvements are managed over the long term.

In FY 19, TID will focus on completing the in-progress and Critical Technology Infrastructure Needs Programs already underway and will work on defining projects and proposals to evolve the City's communication technology capabilities.

Should you have any questions, please call Cason Lee, Deputy Director of Technology and Innovation Department, at (562) 570-5553.

ATTACHMENT

CC: CHARLES PARKIN, CITY ATTORNEY
LAURA L. DOUD, CITY AUDITOR
TOM MODICA, ASSISTANT CITY MANAGER
KEVIN JACKSON, DEPUTY CITY MANAGER
REBECCA GARNER, ADMINISTRATIVE DEPUTY TO THE CITY MANAGER
MONIQUE DE LA GARZA, CITY CLERK (REF. FILE #18-0537)

Mobile Device Stipend Utilization and Bring Your Own Device Policy

City of Long Beach
Working Together to Serve

Memorandum

Date: February 9, 2018

To: Patrick H. West, City Manager

From: Lea D. Eriksen, Interim Director of Technology and Innovation
Alex Basquez, Director of Human Resources

For: Mayor and Members of the City Council

Subject: **Mobile Device Stipend Utilization and Bring Your Own Device Policy**

At its meeting on December 5, 2017, the City Council discussed the recommendation to authorize the City Manager to submit to the City Council purchase transactions for critical technology infrastructure needs (Agenda Item No. 29). Councilmember Mungo requested information on the City's mobile device stipend utilization rates and a potential expansion of the City's Bring Your Own Device (BYOD) policy. Information related to this request for information is provided below.

Current City Policy

The City established the "Cellular Stipend Program" in 2003, which provides a $30 per month taxable monthly stipend allowance to eligible employees who use their own cellular phone for City-related business. To be eligible, an employee must already have a City-provided cellular phone that would be turned in, or meet one or more of the following qualification factors:

- A significant percentage of the workday is spent out of the office;
- Functional responsibility of the position requires mobile communications for business needs. This would include supervision of field and/or emergency personnel;
- Position responsibilities require immediate communications after regular business hours, on weekends, and on holidays;
- Position responsibilities require support for services and systems on a 24-hour, seven day a week basis. This includes emergency response personnel; and,
- A means of security is needed for employees who must travel into unsafe situations.

When the program was established, cellular phones were primarily used for calling, and text messaging was a relatively new concept. As technology has advanced, cellular phones have essentially transitioned to mobile computing devices that can process a multitude of activities, where phones calls became an ancillary function. Accordingly, the Technology and Innovation Department is working with the Human Resources Department and the City Manager's Office to update the language in the City's policies regarding the use of mobile devices.

Current Mobile Device Stipend Utilization Rate

As of December 2017, 235 City employees receive a mobile device stipend and there are 1,850 City issued devices. See summary chart below.

Summary of Stipend and City Issued Mobile Devices		
Category	**Count**	**% of Total**
Stipend Recipients	235	11%
City Issued Mobile Device	1,850	89%
Total	2,085	

The City offers the option of a monthly stipend or a City-issued cell phone/mobile device for employees that meet the requirements of the current policy. This allows an employee and department to determine what is best for their operational needs. For example, some City-issued mobile devices serve specific purposes, such as processing parking citations; and others may require certain features like being intrinsically safe, maintaining data security, and being waterproof. In these cases, using a personal device would not be feasible.

Potential Expansion of the City's BYOD Policy

Expansion of the City's cell phone stipend program or elimination of City-issued mobile devices will have operational, financial, and labor impacts. These and other factors, including the 2017 California Supreme Court ruling on use of private electronic devices to conduct City-related business, will be considered in the update of the City's policies regarding use of mobile devices.

If you have any questions regarding this matter, please call Michael K. Kek, Customer Services Bureau Manager, at (562) 570-7002.

Attachment: Cellular Stipend Program (May 5, 2003)

cc: CHARLES PARKIN, CITY ATTORNEY
LAURA L. DOUD, CITY AUDITOR
TOM MODICA, ASSISTANT CITY MANAGER
KEVIN JACKSON, DEPUTY CITY MANAGER
REBECCA GARNER, ASSISTANT TO THE CITY MANAGER
MONIQUE DE LA GARZA, CITY CLERK (REF. FILE #17-1043)
DEPARTMENT HEADS

City of Long Beach
Working Together to Serve

Memorandum

Attachment

Date: May 5, 2003

To: All Department Heads

From: Gerald R. Miller, Acting City Manager

Subject: **Cellular Stipend Program**

Overview

Beginning immediately, the City is initiating a cellular stipend pilot program. A cellular stipend is a monthly monetary allowance provided to eligible employees who use their own cellular phone for City-related business. The program's goal is to reduce City costs related to the use and administration of cellular phones. Employees meeting the qualifications to receive a City-issued cellular phone are eligible for the stipend program. Department Head approval must be obtained prior to an employee receiving a stipend.

Stipend Amount

Employees approved for the program will receive a $30 taxable monthly allowance in their paycheck. Based on plans currently offered by cellular providers, $30 will get approximately 300 local minutes for City business.

Request Process

Attached are copies of two forms: Cellular Phone Stipend Request and Stipend Guidelines. These forms are available for downloading from the front page of the City's Intranet. Employees requesting the stipend must complete both forms. Approved Stipend Request forms should be routed to the Technology Services Department for processing. Signed Stipend Guidelines forms should be kept on file by the departments.

If an eligible employee is approved to receive a stipend and currently uses a City-owned cellular phone, he or she may continue to use that device while employed by the City. The Technology Services Department will arrange to transfer the account to the employee's name and the monthly bill mailed to his or her address.

Employee Responsibilities

It should be noted that employees are fully responsible for acquiring their own equipment and paying their bills. No allowance will be provided to purchase new equipment or replace lost or damaged equipment.

Additional Information

For more information about the program, please contact Toni Krino, Acting Manager of Customer Services in Technology Services, at 8-6870. Also, additional information is available on the City's Intranet.

GRM:tak
Attachments
cc: Mayor/City Council
City Attorney
City Auditor
City Prosecutor

ATTACHMENT 2

Critical Technology Infrastructure Needs Program

In 2017, TID engaged with multiple City departments and an extensive team of construction, engineering, design and technology consultants to assess the technology infrastructure and future needs of the City, resulting in the development of the Critical Technology Infrastructure Needs Program. This program is essential for managing simultaneous and time-sensitive objectives of modernizing the City's outdated technology infrastructure, building a new Civic Center, downsizing and transitioning the City's primary data center, migrating staff and services to the new Civic Center, implementing technology systems like Enterprise Document Management System (EDMS), Customer Relationship Management (CRM), Cyber Security management systems, and LB Coast.

In December 2017, TID presented to City Council the Critical Technology Infrastructure Needs Program to address foundational infrastructure that is at its end-of-life and incapable of supporting the new Civic Center and the business needs. Currently, the program is in process of building the foundation for the new data center, Citywide network communications, audio video and security systems, and public safety communication systems. Through this program, the new architecture is designed to improve technology efficiency, effectiveness, performance, reliability, scalability, security and flexibility while also providing better services to staff, residents, and businesses. The new architecture is designed with features that support the evolution of the communication technologies.

Some highlights of how this program enables smart phones, enable soft phones, or reduce handsets is outlined in the table below.

Technology Projects	Benefits
One Number	Improves the City's inbound interactions with residents, businesses and visitors by implementing a customer centric call triaging and information system for non-emergency contacts with the City. The result of this system could assist with enhancing call centers, enabling customer self-service, and streamlining phone tree workflows.
Customer Relationship Management (CRM)	Improves the City's inbound interactions with residents, businesses and visitors by implementing a customer information management platform for non-emergency contacts with the City. The result of this system could assist with standardizing call center tools, managing call triage and follow-ups, and streamlining departmental workflows.
Unified Communication System (UCS) Upgrade	Upgrades the voicemail, phone and contact center systems with current generation software, server, storage and network architecture that improves emergency response, phone and email integration, soft phone accessibility, handset and smart phone integration, teleconferencing integration, and enables speech recognition processing.
Fiber and Network Communications Upgrades	Enhances bandwidth and access paths for applications between City facilities and assets, to/from the Data Centers, and to/from to the Internet. A fiber network will enable applications, devices and users to reach the Internet with better speed, reliability, security and cost, while modern networking equipment supports newer standards in software-defined networking, data tunneling and segmentation which are foundational for VOIP, Soft Phone, Smart Phone, and collaboration systems.
Cellular Distributed Antenna System (DAS)	Ensures that the new City Hall and new Port Headquarter buildings have a strong and reliable cellular signal to support cell and smart phones access.
Personal Computer Lifecycle and Telephone Upgrades	Implements the annual personal computer lifecycle program at the Civic Center and upgrades the telephone handsets to current generation hardware and software. These upgrades are necessary to ensure compatibility with the newer UCS software, to leverage advanced features of the newer UCS software such as soft phones, and to pilot new communication technologies such as Microsoft Teams and Cisco WebEx Teams.