



# City of Los Angeles Digital Strategy: COVID-19 Pandemic & Beyond



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## L.A. DIGITAL STRATEGY: WHY IT MATTERS

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The COVID-19 pandemic has disrupted our world. From Zoom work meetings to virtual family gatherings, we have changed almost every facet of our daily lives to stop the spread. During this challenging time, we have drastically redesigned City of Los Angeles government services. First, City of L.A. facilities and public counters had to close, and many in-person services were converted to digital. Then, over 18,000 City staff, not familiar with working from home, were migrated to telework. And while this virus has had many terrible consequences for Angelenos, the pandemic has been a catalyst for improving the quality and availability of digital government services. *If we take advantage of what we have learned through the pandemic, if we implement citywide what we have successfully done in a handful of departments, and if we enact the digital strategy described in this document... we can improve City of Los Angeles services for all Angelenos for decades to come. That is why this digital strategy matters.* Through this digital strategy, we position ourselves to recover into a “new better” and not just a “new normal.” Leveraging our experience in digital transformation over the last five years and the urgency of COVID-19, City of Los Angeles departments are now strategically using the technologies found in this document to realize our vision of a digital and connected Los Angeles.

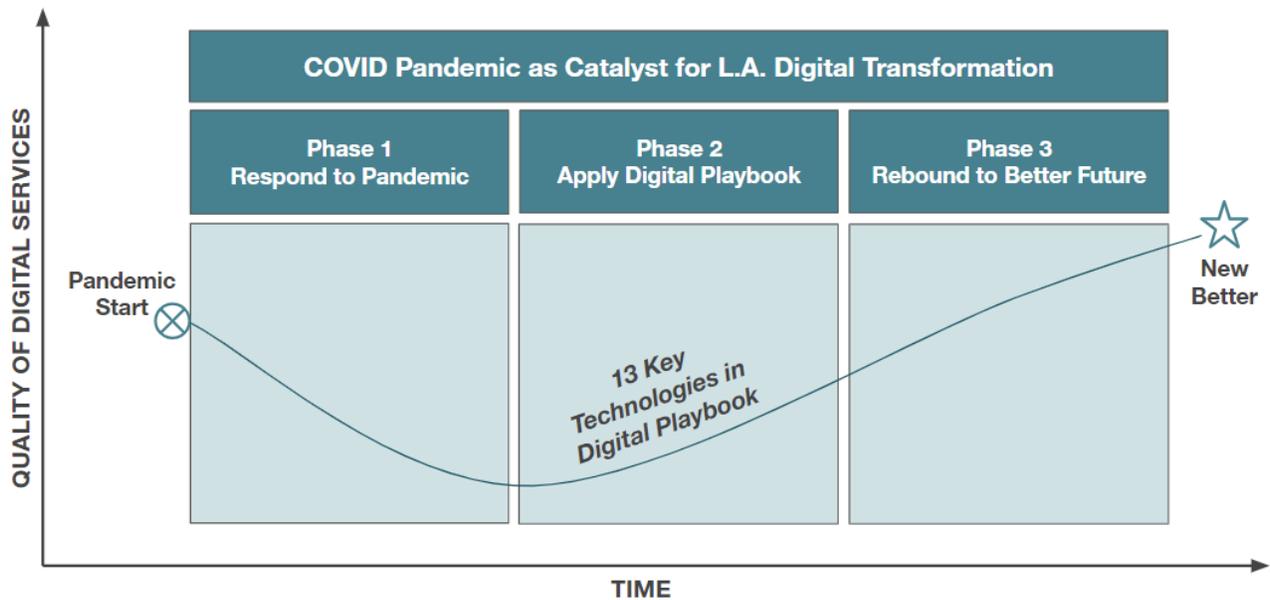
### ***Digital Transformation at the City of Los Angeles***

Digital transformation is not a new priority for the City of Los Angeles. Under the leadership of our Mayor, Controller, City Attorney, and our tech-savvy City Council, Los Angeles has transformed its use of data, social media, communications, websites, infrastructure, television/radio, and mobile apps. In fact, the City of Los Angeles has earned over 40 national technology awards since 2016, including:

- Civic Innovator in the 2020 Pandemic Award (Harvard University - 2021)
- 2<sup>nd</sup> Place Digital City in U.S. (Government Tech Magazine - 2020)
- ‘What Works Cities’ Platinum Award (Bloomberg Foundation - 2020)
- 1<sup>st</sup> Place Digital City in U.S. (Government Tech Magazine - 2016, 2017, 2018)
- Emmy Award (Academy of Television Arts & Sciences - 2018)
- Webby Award Honoree (International Academy of Digital Arts - 2018)
- Digital Equity National Award (NATOA - 2018)

City of Los Angeles technology has been featured in The Economist, Fortune Magazine, Wall Street Journal, Wired Magazine, a16z Summit, Harvard University, Rutgers University, and multiple government trade publications. However, the COVID-19 pandemic has uniquely increased the demand for “contactless” government services. So, our accomplishments of the past must be re-examined in light of the “new normal” and anticipated needs in the future. In other words, it doesn’t matter where the City of Los Angeles was in our digital journey when COVID-19 started, the City of Los Angeles must now rapidly advance its digital services roadmap in this increasingly online world. Hence, the Information Technology Agency (ITA) and other City of Los Angeles departments came together in Fall 2020 through our Information Technology Policy Committee (ITPC) to re-think our digital services and establish an updated digital strategy of key technologies that enable City of L.A. services to be online, full-featured, and easy to use.

***A New Better, Not a New Normal***



\*Based on Gartner 'Leading in Disruptive Crisis'

The challenges presented by the COVID-19 pandemic grant us an unprecedented opportunity to create a “new better”, not just a “new normal” for online services for the public. In 2020, the Office of Mayor Eric Garcetti formalized this concept under Executive Directive #29 (Contactless & People Centered City Initiative), under which City of Los Angeles departments must “facilitate remote, digital interactions during and after the pandemic -- saving people time, money, and frustration, while improving public health, accessibility, and convenience.” Taking on this challenge, the Information Technology Agency facilitated a comprehensive exercise for all City of Los Angeles departments through the citywide Information Technology Policy

Committee (ITPC). The challenge was simple: review all department services that were paused or reduced by COVID-19 and identify methods to digitize and restore them. After two months of reviewing 97 different City of Los Angeles services impacted by COVID-19, the citywide ITPC team identified 13 key technologies that, if implemented, would dramatically improve how residents and businesses digitally engage L.A. City government. Those 13 technologies were adopted as a digital playbook and incorporated into this digital strategy, which greatly impacts the residents of Los Angeles.

## ***Building a Digital, Contactless City of the Future***

In our experience, building a digital city requires focus on two key goals:

1. Digitizing Our Government Workforce
2. Digitizing City Department Services for Angelenos

First, the digital IQ of our government workforce (employees and elected officials) has a direct impact on the quality and innovation of services delivered to the public. Elected offices and City of L.A. employees are charged with planning, implementing, and improving the services that they provide to the public. So, an effective, tech-savvy workforce will directly result in better digital services for the public. This digital strategy incorporates concrete actions to improve the digital IQ of our government workforce.

Second, the quality and availability of City of Los Angeles department digital services provided to the public must be improved during and after the COVID-19 pandemic. All forty-three (43) City of Los Angeles departments, from the Department of Aging (A) to the Zoo (Z), are responsible to provide digital services that are easy-to-use, full featured, and engaging for Angelenos.

The following digital strategy details the methods and tools being used by the City of Los Angeles to improve digital services during the COVID-19 pandemic and beyond.

Ted Ross  
General Manager and CIO  
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## DIGITIZING OUR GOVERNMENT WORKFORCE

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On March 19, 2020, Information Technology (IT) staff at the City of Los Angeles heroically began the process of migrating 18,000+ traditional City of Los Angeles employees into teleworking due to the COVID-19 Safer at Home order from Mayor Eric Garcetti. Immediately, it was essential for the City of Los Angeles to continue delivering critical police, fire, ambulance, elected governance, sanitation, transportation, public works, and COVID response services. Within two days, over 12,000 employees were configured and ready to access all of their office software, apps, and shared drives from the safety of their homes. Within ten more days, the remainder of the 18,000+ employees were accessing City systems securely from home computers, tablets, and smartphones. This once-in-a-career feat was the combined effort of the Information Technology Agency (ITA) and many talented IT staff across various City departments. However, as impressive an achievement as this was, this mass migration to teleworking was necessarily makeshift.

As technology teams stabilized the first tools and processes of the exodus of City employees to teleworking in 2020, it has become apparent that in the year 2021 it is necessary to build a permanent foundation for a long-term, effective digital government workforce. This new workforce will be expected to provide high-quality services anytime, anywhere with a complete suite of secure and capable digital tools from office collaboration to basic data analysis and website development. The establishment of these new “anytime, anywhere” digital capabilities for the City of Los Angeles workforce is particularly important in light of the impact it will have on service levels during the current COVID-19 pandemic and beyond. While we lived in a Digital Age and Digital Economy before the COVID-19 pandemic, this digital transformation has exponentially increased across all segments of society. These new digital expectations demand an effective government workforce that can keep pace with society and deliver the digital access needed for a top-tier city like Los Angeles.

## ***The Importance of an Anytime, Anywhere Government Workforce***

An effective digital government begins with an effective digital workforce. The benefits of a digital workforce are many:

1. Empowered - A digital workforce has easy access to information and data where they need it and when they need it. This access empowers them to make informed decisions to perform their work.
2. Efficient - Digital tools greatly improve the productivity and efficiency of workers that use them. This is not just in their productivity, but also in their ability to assist when needed (e.g. a 3-1-1 Call Center operator can contribute an hour of overtime from home if the Call Center becomes flooded with constituent requests).
3. Connected & Accessible - A digital workforce has a multitude of tools to communicate and connect with each other and the public. From traditional telephone calls that can be made or received at any location to text, email, chat, and video conferencing.
4. Capable and Modern - A digital workforce uses modern, innovative tools that can perform government services that were previously unavailable.
5. Sustainable - A digital workforce can telework, thereby, reducing traffic on the roads and pollution in the air.
6. Cost Effective - Historically, the technology investments made in a digital workforce reduce waste and translate into a multi-fold return on investment.
7. Morale - A digital workforce affords work-life balance for City of Los Angeles employees who juggle work, family, and other commitments.
8. Resilient - A digital workforce is much more resilient to natural disasters and emergencies. With highly resilient Cloud computing, cellular communications, satellite connectivity, and portable computing devices (tablets, smartphones), a modern workforce can quickly re-establish its operations during an emergency. Whether a localized disaster (fire in building) or widespread event (major earthquake), a digital workforce is highly adaptable and the best method for providing the public with the necessary services needed for recovery.

## ***Teleworking 2.0: Tools for a Modern, Digital Workforce***

The following are the key tools, training, and timelines for elevating City of Los Angeles employees to be a modern, digital workforce:

### **Upgrading Google Workspace to Empower 22,000 Employees**

-Coming March 2021-

There is nothing more personal for the office worker than their email, calendar, and office productivity tools. Beginning March 2021, the Information Technology Agency (ITA) will be substantially improving these tools and teleworking capabilities by upgrading all users from the previous minimal “basic” level to the comprehensive “enterprise” Google suite. These new tools will now include:

- Unlimited Google Drive and Email storage
- Real-time document collaboration with non-Google users
- Google Meet video conferencing for up to 250 attendees, with breakout rooms, meeting recording, and closed captioning in non-English languages.
- Team drives that are easily shared across users (important for teleworkers)
- Multi-factor authentication and data loss prevention security features
- Unified search across Gmail, Chat, Calendar, Contacts, Drive, Docs, etc.

### **Preparing Managers with ‘Best Practices for Supervising Teleworkers’**

-Coming June 2021-

One key question emerged as a result of the mass migration to telework: How will teleworkers be supervised to ensure they have the support and oversight they need when working from home? Unlike many private sector companies, the City of Los Angeles does not have a historical culture of telework. The City of Los Angeles had less than 30 teleworkers in February 2020. In March 2020, the COVID-19 pandemic necessitated the migration of 12,000 employees to telework, with a total of 18,000+ teleworkers soon after.

To improve the supervision and experience of teleworkers, the Information Technology Agency will work with the Information Technology Policy Committee to publish ‘Best Practices for Supervising Teleworkers’ by June 2021. These guidelines will include lessons learned over the last year, including how to establish goals, give feedback, and conduct contactless performance evaluations.

## **Raising Employee Digital IQ Through Virtual Training**

-Coming June 2021-

A modern, digital workforce requires more than just sophisticated technology tools. The workforce requires knowledge and understanding in the tools available to them and enhanced skill sets in modern work trends (e.g. data analysis, cybersecurity, etc.). To increase the digital IQ of City of Los Angeles employees, the Information Technology Agency will provide virtual training (aka “ITA Office Hours”) for an additional 4,000 City of Los Angeles employees in intermediate and advanced office productivity techniques, Google Workspace, data analysis and visualization, cyber security, and more, by June 2021.

## **Equipping 18,000 Teleworkers with an Improved Telework Platform**

- Coming September 2021-

Fully implemented within two days of the COVID-19 stay at home order, the Connect2LACity platform provides teleworkers with comprehensive access to City of Los Angeles apps, shared drives, and office computers. Today, over 18,000 teleworkers have this platform to access critical tools in the performance of their work. However, to enable the long-term productivity and capabilities of LA City teleworkers, the Information Technology Agency will enhance and launch a Connect2LACity 2.0 platform by September 2021, which will add the following capabilities to this critical resource:

- Expanded ‘LA City Apps’ portal with department-specific apps, allowing quick access without requiring full remote access or excessive network use.
- Seamless multi-device access via desktop computer, laptop computer, Android tablet or smartphone, Apple tablet or smartphone, or Chromebook.
- Access to specific user shared drives through the online portal
- Increased digitization of department processes for teleworkers

## **Connecting 6,000 Employees with Smartphones (Mobile Worker Program)**

-December 2021-

In 2018, the City of Los Angeles began the process of replacing traditional landline phones with smartphones (aka Mobile Worker Program). The benefits are many:

- Smartphones offer more ways to communicate (call, text, email, chat, video)
- Smartphones empower access to information where and when you need it
- Smartphones improve emergency communications and disaster recovery
- Smartphones save taxpayer money (\$7 Million less than VoIP desk phones)
- Smartphones help recruitment of younger workforce (Millennials and Gen Z)

These benefits were multiplied under the COVID-19 pandemic as 18,000+ employees transitioned to teleworking. While traditional landline phones remained in the offices with no employees around to answer them (at a cost of \$6 million a year), mobile workers brought their smartphones home with them, providing voice communications, messaging, and even WiFi hotspots to teleworkers when needed.

By December 2021, the ITA plans to convert another 1,800 employee desk phones to smartphones, reaching a total of 6,000 mobile workers across the City of Los Angeles, with more to come as funded through the City budget process.

# DIGITIZING DEPARTMENT SERVICES FOR ANGELENOS

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Digital services are the apps, websites, and other public facing technologies used by the public to access City information, request City services, or simply engage their government. Digital Services are highly visible and tangible for our residents, businesses, and visitors. In the beginning, residents had to visit a City of Los Angeles facility to get information or request a public service. With the integration of the telephone, they could then make a call to submit a request or get information. Next, websites allowed easy online access from a computer, as long as government made these services digital and accessible. Smartphone apps made these capabilities available anytime, anywhere, on a device that more than 80% of Americans own. Digital assistants, like Apple Siri and Amazon Alexa, provide even more advanced methods of engagement with our public.

***The benefits of digital services are many, they: make City of Los Angeles services much more accessible to Angelenos, greatly improve customer experience, streamline processes and operations, reduce cost, drive data-driven decisions, and foster an ongoing culture of innovation.*** Regardless of which consumer technology is prevalent, the mandate is clear. City of Los Angeles services and information need to be readily accessible in a digital format, whether residents are accessing them through a computer, tablet, smartphone, digital assistant (Apple Siri, Google Home), or some other future platform.

## ***Contactless Government***

In August 2020, Mayor Eric Garcetti instructed City departments to implement “contactless” government services under Executive Directive #29. In support of this effort, the Information Technology Agency (ITA) worked in partnership with other City departments to perform an intensive exercise to identify services that were paused due to the COVID-19 pandemic, and then work together to identify digital solutions for re-opening each of these services. Using the results of this citywide exercise, the cross-department Information Technology Policy Committee (ITPC) identified the common issues encountered by departments and the key technologies that would digitize government services or greatly improve the digital experience of Angelenos.

***The following are the 13 identified technologies identified by the City of Los Angeles Information Technology Policy Committee (ITPC) that will greatly improve digital services across City of Los Angeles departments during COVID-19 recovery and beyond.***

The technologies listed below will have a substantial beneficial impact on the quality of City of Los Angeles digital services and resident engagement. These digital technologies are classified into three categories based on their effect:

1. Digitizing Paper-Based Processes
2. Maximizing User Experience
3. Improving Department Capacity & Efficiency

# Digitizing Paper-Based Processes

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## #1 - Digitizing Services Through Modern Websites

### **What are Modern, Engaging Websites?**

Engaging websites use modern technologies (e.g. HTML5 and CSS) in a mobile responsive format (web pages dynamically optimizes whether you are using computer, tablet, or smartphones) with a focus on user experience and “inbound website” design (relevant and personalized content with Call to Actions and integrated marketing channels). Of course, this is a mouthful of terms that can sound like technology buzzwords. But, why should a City department convert their existing physical processes into online, engaging websites?

### **Why Implementing Modern, Engaging Websites is Important?**

The primary digital method for the public to interact with a City department is through a website. Through websites, the public consumes information, submits questions, requests services, etc. A modern, engaging website provides a POWERFUL platform for performing these functions. A modern, engaging website provides the following benefits:

- Available 24/7 and highly accessible for the vast majority of constituents
- Reduces hassle and COVID-19 risk of constituents visiting your buildings
- Broadcasts department services to constituents not already familiar with you
- Cost effective for departments to launch and maintain
- Reduces requests and strain on department human resources
- Provides insight about your services (popular services, missing services, etc)
- Your website enables innovations (integrate social media, chatbots, Siri, etc)

Before Modern Website	After Modern Website
User needs to make appointment and visit City building to get information, submit request	User goes online 24/7 to get information or submit a request
Departments spend money on low-value outcomes (rent, parking, in-person staff)	Departments invest money in high-value outcomes (outreach, data for decisions)
Innovation is unavailable to constituents	New technology can be leveraged

## **How to Implement Modern, Engaging Websites**

Building a modern, engaging website starts with an understanding of your department's operations and what you are working to digitize.

- Use Google Sites and Forms for basic website needs (publishing information to constituents, receiving requests, linking to other websites, etc). [GetConnectedLosAngeles.lacity.org](https://getconnectedlosangeles.lacity.org) is a great example of what you can do with a good Google site.
- Use the Drupal content management solution and host it in Amazon Web Services Cloud for intermediate and advanced website needs (publishing information, complex forms, embed content from other websites, embedding social media, calendaring, embedding CRM, embedding video, etc).
- Use Acquia contract to establish an advanced Drupal website hosted in the Cloud, using Acquia's value-added services that make hosting and development easier. The Information Technology Agency has an existing contract with Acquia for professional services and website hosting.
- To be fully accessible and compliant with Section 508 of the American with Disabilities Act, your website needs to comply with key provisions. The ITA Web Services team can provide you guidelines and compliance tools.
- City of Los Angeles websites should adhere to the City of Los Angeles Style Guide (<https://styleguide.lacity.org>), which includes web design standards, including the Navigation Bar ("nav bar") at the top, so users have ease of navigation and can take assurance it is an authorized City of LA website.

## **Who to Contact with Questions About Making a Modern Website**

Please contact ITA Web Services via SNow ticket if you have questions regarding digitizing processes with a modern website ([https://snow.lacity.org/SNOW/quick\\_ticket](https://snow.lacity.org/SNOW/quick_ticket)).

## #2 - Next-Level Service with Case & Customer Management Systems

### **What is a Case or Customer Relationship Management System?**

Customer Relationship Management (CRM) and Case Management systems are digital systems used to intake a request (“case”), assign to City resources, and assist in the resolution of the request. While the City of Los Angeles has various prominent CRM (e.g. MyLA311 or LADWP Billing System), too many existing government services are manual/paper-based and in need of a lightweight, streamlined CRM solution.

### **Why is Implementing Case Management or CRM Systems Important?**

Without Case or CRM systems, constituents are required to call or visit a City building to make requests, often providing the same information repeatedly. To find the status of their request, a City employee must gain physical possession of a case file and spend valuable time providing a simple update that can be automated. A well implemented Case or CRM system provides the following benefits:

- Simplified online intake for constituents
- Personalized and “contactless” interactions for constituents
- Automated case status and constituent updates on progress
- Electronic workflow with efficient collaboration (“work management”)
- Digital records are less expensive and necessary for data-driven decision making (i.e. “if you can’t measure it, you can’t manage it”)
- Resilient to natural disaster and allows remote access for teleworkers

<b>Before Case Management System</b>	<b>After Case Management System</b>
Constituent calls are assigned via email or spreadsheet and may get lost.	Calls are logged into the CRM, get assigned to a staff member, and tracked with CRM reports.
Constituents must reach City staff to request a service or submit a complaint.	Constituents can submit their requests completely online without using staff time.
Constituents must call or visit City staff to find out the status of their request or complaint.	Constituents can check the status of their request online or receive updates by SMS text.

## **How to Implement a Case Management or CRM System**

Case Management or Customer Relationship Management (CRM) systems are software packages that must be well planned and implemented to be successful. To implement a Case Management or CRM system, City of LA departments must perform the following:

1. Document the needs of the system and the types of customers that would use it. Find answers to the following questions (this will help determine the right software):
  - a. Accessibility - Are the customers internal (employees) or external (constituents).
  - b. Sizing - Expected user count (both internal City users and external constituents). Affects pricing.
  - c. Capabilities - What features do you need and which do you want
  - d. Data Sharing - What other systems or tools must the CRM integrate with and is there an existing system that data would need to migrate from
  - e. Sustainability - Who will maintain the system
2. Compare these system requirements with existing City of Los Angeles CRM contracts, such as ServiceNow, Salesforce, and Microsoft Dynamics CRM. They each have their own strengths and weaknesses.
3. Obtain in-house staffing or professional services to build and configure the software. Be sure to consider usability, City of LA cybersecurity standards, training, marketing, etc. Focus groups that represent the users are a powerful tool to building effective software. Be sure to test the software well before deploying it.
4. Maintain your software. Even though Cloud vendors perform the “plumbing” of the system, your staff or contractors will still need to make periodic system configuration changes, build reports, clean data, etc.

## **Who to Contact with Case Management or CRM Questions**

Please contact the ITA Help Desk via SNow ticket if you have questions regarding Case Management or CRM systems ([https://snow.lacity.org/SNOW/quick\\_ticket](https://snow.lacity.org/SNOW/quick_ticket)).

### #3 - Contactless Contracts Through Electronic Signatures

#### **What is E-signature?**

Electronic signatures (e-signature) are an electronic process that indicates acceptance of an agreement or record. E-Signatures allow departments to accept a digital, not handwritten, signature as a legally binding acceptance of an agreement and then store the signature in a database for recordkeeping. E-signatures are codified in the Electronic Signatures in Global and National Commerce (ESIGN) Act and Uniform Electronic Transactions Act (UETA). E-signatures have the same legal status as handwritten signatures across the United States. E-signatures are already used across many business processes at the City of Los Angeles.

#### **Why is Implementing E-signature Important?**

E-signatures are fundamental to digital and “contactless” government services. Without e-signature, a City of Los Angeles department is limited in the services they can provide to residents or businesses, as various use cases will require a formal signature process along certain checkpoints (e.g. sign-off on a permit). A well implemented e-signature platform provides the following benefits:

- Faster signature processes (immediate transmission or acceptance)
- Better customer experience for anytime, anywhere sign-off
- “Contactless” and COVID-19 safe
- Promotes digital, simplified business processes
- Enhanced security to ensure the proper entity is signing
- Integrates with electronic workflow for signature routing
- Paperless and more environmentally sustainable
- Secure signature storage with recovery in case of natural disaster
- Less cost than physical wet-signature processes

<b>Before E-signature</b>	<b>After E-Signature</b>
Constituents must receive mail or visit offices to sign City contracts and agreements	Constituents can immediately receive and sign digitally

Department staff must physically route documents for signatures	Department staff immediately get notified via email that a document is awaiting their review
Physical documents must be securely stored in case of litigation or review	E-signatures are securely stored digitally and easily retrievable for litigation or review

### **How to Implement E-signature**

A citywide and cost effective e-signature contract with Adobe Sign has been established by the Information Technology Agency. To implement e-signature, you will need to perform the following:

1. Document the existing paper workflow that you would be collecting digital signatures for. Consider the start of the process and where it concludes.
2. Confirm that Adobe Sign (e-signature platform) will fulfill your requirements or if your business process is so complex that you require a full Customer Relationship Management system.
3. Contact ITA-eSign team via SNow about purchasing a license and receiving training.
4. Configure Adobe Sign for e-signatures and test workflow before launching to public.
5. Be sure you comply with E-SIGN Act requirements (these are often already included with the e-signature platform):
  - a. Intent to sign & opt-out clause (user must demonstrate intent to sign)
  - b. Parties must consent to do business electronically
  - c. Signature attribution (audit trail of who signed)
  - d. Association of signature with the document
  - e. Record retention requirements

### **Who to Contact with E-signature Questions**

Please contact the ITA eSign team via SNow ticket if you have questions regarding e-signature (<https://snow.lacity.org/snow/esignlicensing>).

## #4 - Public Engagement via Virtual Meetings, Counters & Hearings

### **What are Virtual Meetings, Service Counters, and Hearings?**

Virtual meetings, service counters, and hearings are digital methods to engage and service the public. Through the use of video conferencing, the public can connect with City employees or elected officials to get information or make requests.

### **Why is Implementing Virtual Meetings or Service Counters Important?**

Online websites and forms are powerful tools for receiving constituent requests. However, some complex constituent requests (e.g. permits) require assistance from a City employee above and beyond a website form. A virtual meeting or service counter allows one-on-one assistance during the submission process to ensure that the requests are properly completed and submitted. In addition, our elected officials and commissioners hold virtual public meetings to perform City business with transparency and engage L.A. constituents. These virtual meetings enable widespread attendance and “contactless” interactions during the COVID-19 pandemic. Virtual meetings and service counters provide the following benefits:

- “Contactless” engagement with L.A. residents or businesses
- One-on-one interactions to answer questions and assist complex requests
- Reduced frustration for constituents
- Reduce department costs to maintain physical facilities, parking, utilities, etc

<b>Before Virtual Meetings &amp; Counters</b>	<b>After Virtual Meetings &amp; Counters</b>
Constituents must physically travel to City facility for in-person meetings	Constituents stay in safety of home and attend electronically
City departments must pay for offices, furniture, waiting rooms, and utilities	City departments can invest in staff training and better virtual experience

### **How to Implement Virtual Meetings & Service Counters**

The City of Los Angeles uses Zoom for Government for virtual meetings and Google Meet for service counters. Please refer to ITA’s ‘Procedures for Virtual Public Meetings’ for detailed setup procedures.

### **Who to Contact with Virtual Meetings & Service Counter Questions**

Please contact the ITA Help Desk via SNow ticket if you have questions regarding virtual meetings or service counters ([https://snow.lacity.org/SNOW/quick\\_ticket](https://snow.lacity.org/SNOW/quick_ticket)).

## #5 - Paying Bills Online with the L.A. City Payment Portal

### **What is an Online Payment Portal?**

An online payment portal is a payment gateway to allow electronic payments through a website. Using this portal, a City app can securely receive digital payments without having to store the payment details (e.g. credit cards) in the app.

### **Why is Implementing the City's Online Payment Portal Important?**

The ITA online payment portal is an important tool for receiving online payments. This portal simplifies the receipt of digital payments and protects City departments from having to comply with complex federal Payment Card Interface (PCI) requirements. Implementation of the Payment Portal provides these benefits:

- Allows easy-to-use online “contactless” payments for services, fees, or fines
- Reduces workload and cost for City department IT staff
- Ensure cybersecurity of online payment process
- Eliminates City department need to comply with complex PCI requirements

Before Online Payment Portal	After Online Payment Portal
Constituent must visit City facility to make payment for a service or fee	Constituent can pay fee or fine securely online
City department must build payment processing into every app or website	City departments simply connect to existing L.A. City Online Payment Portal
City departments must comply with PCI compliance requirements or face penalties	ITA takes responsibility of Online Payment Portal complying with PCI compliance

### **How to Implement the City of LA Online Payment Portal**

The Information Technology Agency has a citywide Online Payment Portal for City departments. To implement the Payment Portal, perform the following:

1. Identify department systems that would (or currently) take e-payments.
2. Establish API (interface) between your billing system and the City's Online Payment Portal. This ensures that payments are applied to correct account. The Payment Portal will provide API specifications for your applications.
3. Test the API and launch into production for your constituents.

### **Who to Contact with Online Payment Portal Questions**

Please contact the ITA Help Desk via SNow ticket if you have questions regarding the City's Online Payment Portal ([https://snow.lacity.org/SNOW/quick\\_ticket](https://snow.lacity.org/SNOW/quick_ticket)).

# Maximizing User Experience

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The following are key technologies being implemented by City of Los Angeles departments to improve the user experience (UX) when using our digital services.

## #6 - Easy Access to L.A. City Apps Using Angeleno Account

### What is the Angeleno Account?

Angeleno Account is a unified digital identity management (IDM) platform for the City of Los Angeles. Introduced by the Information Technology Agency, the Angeleno Account allows residents and businesses easy online access to all City of Los Angeles apps and websites through a single user ID and password (Angeleno Account).

### Why is Implementing the Angeleno Account Important?

Prior to the Angeleno Account, LA City residents, businesses, and visitors were required to setup a new user account and password for each City app. This is frustrating for users, prone to security issues, expensive for City departments, and provides the City of Los Angeles with little customer information about its users and their needs. The Angeleno Account provides uniform access to City digital services and the following benefits:

- Consistent, easy-to-use login screen across all City of LA apps and websites
- Reduces user data entry (user profile can pre-populate at new login)
- Easy discovery of other City services by residents
- Less work and cost for City departments (centrally managed login screen)
- Top-tier security features with centralized security updates
- Opportunity to push tailored content to users (future)

Before Angeleno Account	After Angeleno Account
Constituents had to juggle different IDs and passwords for each City app	Constituents have one Angeleno Account ID and password to access every City app
City departments had to build identity systems and manage users for each app	City departments use ITA's Angeleno Account (Okta) system for access to apps

Constituents have to hunt and find City services that would benefit them	Angeleno Account assists constituents with finding other useful City services
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### **How to Implement the Angeleno Account**

The Angeleno Account is established and maintained by the Information Technology Agency using the Okta platform. However, to implement the Angeleno Account, City of LA departments are required to perform the following:

1. Sign up for a developer account: [developer.okta.com](https://developer.okta.com)
2. Decide on authentication method (OIDC or SAML) and user migration path
3. Get access from ITA to User Acceptance Testing (UAT) Okta Directory and modify your app to use the Okta directory for authentication and user information
4. Test and launch to your users

### **Who to Contact with Angeleno Account Questions**

Please contact the ITA-IDM team using a SNow ticket if you have questions regarding the Angeleno Account ([https://snow.lacity.org/SNOW/quick\\_ticket](https://snow.lacity.org/SNOW/quick_ticket)).

## #7 - Improve User Experience Using Net Promoter Score

### **What is Net Promoter Score?**

Net Promoter Score (NPS) is a survey tool used by two-thirds of Fortune 1000 companies. Using NPS, City departments ask a simple survey question to 5% of visitors on their website or call center, “How likely are you to recommend this service to a friend?” using a scale of 0 to 10 for the answers. The science behind NPS shows that customer responses can be categorized into three groups: 9 or 10 is a Promoter; a 7 or 8 is Passive; and a 0-6 is a Detractor. The NPS score is Promoters - Detractors (Passive are left out). The resulting Net Promoter Score is a number between -100 and 100.

### **Why is Implementing Net Promoter Score (NPS) Important?**

Net Promoter Score (NPS) is an effective tool for answering a simple question... how do my constituents feel about my service? NPS is a simple, proven tool to identify how customers feel about a website, call center, app, or other digital experience. It also allows City departments to compare their results with other public or private sector organizations. Capturing a Net Promoter Score for a digital service provides the following benefits:

- Accurate gauge of constituent satisfaction with website, app, or call center
- Simple and inexpensive for City departments to use, automate, and analyze
- Can be used for any digital service (website, app, call center, etc)
- Allows comparison to other departments, governments, or private sector
- Follow-up questions for Detractors shows specific customer issues

<b>Before Net Promoter Score</b>	<b>After Net Promoter Score</b>
City departments unsure of how constituents feel about their websites, apps, and call center	City departments have detailed customer satisfaction scores and areas to improve
City departments would send surveys or call customers to get customer satisfaction info	City departments have real-time customer satisfaction data (over time or since inception)
City departments would be unsure how their services rank compared to others	City departments can obtain NPS results for other organizations for comparison

### **How to Implement Net Promoter Score (NPS)**

A citywide contract with Hotjar has been established by the Information Technology Agency. This is simple to add, like Google Analytics. Call Centers use Amazon Connect. For specific configuration details, please see contact information listed below.

### **Who to Contact with Net Promoter Score Questions**

Please contact ITA-Digital and Media Services using a SNow ticket if you have questions about Net Promoter Score ([https://snow.lacity.org/SNOW/quick\\_ticket](https://snow.lacity.org/SNOW/quick_ticket)).

## #8 - Engage Stakeholders with Effective Social Media

### What is Engaging Social Media?

More than 72% of Americans actively use social media (Pew Research, 2019). Social Media is an interactive computer-mediated technology dedicated to facilitating community-based input, interaction, content-sharing, content-creation, and collaboration. These channels include social networking sites, weblogs (blogs, vlogs, or microblogs), podcasts, online chat sites, and forums. Popular examples include Facebook, Youtube, Twitter, Instagram, Snapchat, and TiKTok. “Engaging social media” is having a social media presence that actively interacts with and is shared by your constituents to others.

### Why is Engaging Residents & Businesses with Social Media Important?

By its nature, social media is bi-directional communication that should be engaging. Social media coordinators are tasked with engaging the public, especially during times of emergency, disaster or public health crises. Engaging social media is much more useful to constituents and more viewed across the social media platform (more “eyeballs”). A well implemented social media platform provides the following benefits:

- Inexpensive platform to engage and understand your constituent’s needs
- Constituents have improved perception of your department and its services
- Constituents can engage and assist your department (“crowdsourcing”)
- Your department expands its influence, especially in times of emergency
- Provides valuable real-time data and sentiment about department services

Before Engaging Social Media	After Engaging Social Media
Constituents feel disconnected from your City department and its services	Constituents understand, access, and even contribute to improving your services
Constituents have no information or false information during time of emergency	Constituents can easily find and share official City information during an emergency
City departments conduct expensive and slow listening tours to solicit input from constituents	City departments use social media sentiment analysis to gain valuable real-time input

### **How to Implement Engaging Social Media**

Please refer to the City of Los Angeles 'Social Media Policy' for guidelines and best practices in the use of engaging social media.

### **Who to Contact with Social Media Questions**

Please email [social@lacity.org](mailto:social@lacity.org) or ITA's Mariana Ferraro ([Mariana.Ferraro@lacity.org](mailto:Mariana.Ferraro@lacity.org)) or Ted Lin ([ted.lin@lacity.org](mailto:ted.lin@lacity.org)) if you have questions regarding engaging social media.

## Improving Department Capacity & Efficiency

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Technology is not built in a vacuum. Innovative technology comes from City of Los Angeles staff with the skills and technology platforms to implement amazing digital services in partnership with vendors. The following are key initiatives and platforms to improve the digital capacity and efficiency of City departments:

### #9 - Establish a Holistic Culture of Digital Thinking

#### **What is a Holistic Culture of Digital Thinking?**

Digital transformation and innovation are not products you can buy, but come from the intelligent design and implementation of targeted digital services. The combination of understanding your customers, understanding the available digital products, and a workforce that can implement these products effectively for the customers is the holy grail of every City department. To do this, your organization needs to adopt and buy into the prevailing best practices for being digital (aka establishing a holistic culture of thinking digital). As a set of values, this includes the following:

- Rapid experimentation - Department staff try new ideas, learn from results, and incorporate new insight (“fail fast”)
- Agile development - Use “agile” development principles for projects, such as prioritizing customer satisfaction, changing requirements when necessary, building as you go, trying out the solution early and often, then making necessary adjustments (a Minimum Viable Product - MVP).
- Self organizing - Department staff step out of their functional areas periodically and partner with other parts of the organization to solve a business problem.
- Data-driven decisions - Department staff collect and use data when making new decisions or changing services for your customers
- Focus on digital first - Department staff consider digital, integrated solutions early in a project, considering ways to not just deliver, but transform customer experiences.
- Streamline processes before applying technology - Automation is useless without a streamlined process. Always perform business process

improvement or re-engineering before a technology project. It will make the technology much better, cheaper, easier to maintain, and faster to implement.

- Technology teams should have a strong DevOps focus - IT staff should closely integrate application development with infrastructure operations to allow streamlined software development and maintenance.

**Why is Implementing a Holistic Culture of Digital Thinking Important?**

Without a holistic culture of digital thinking, traditional solutions and methods will dominate City department processes and digital services. While traditional solutions are not always a bad thing, they can prevent the use of modern technologies and methods that are proven to be cost effective, easy to modify, and provide unprecedented service to customers.

Before Culture of Digital Thinking	After Culture of Digital Thinking
Digital opportunities are not leveraged when planning new or improved City services	Digital tools transform what City services can be offered and how they are offered
Projects require extensive planning with slow builds and lengthy time to deploy	Projects gather initial requirements and build, with working software that can be improved on
Traditional processes and workflow are kept as-is with technology laid on top of it	Processes are scrutinized & improved before applying technology, making it simple and lean

**How to Implement a Holistic Culture of Digital Thinking?**

The Information Technology Agency (ITA) has undergone many digital transformation initiatives since 2015. Below is a list of excellent digital transformation efforts to build a holistic culture of thinking digital:

1. Build a Service Catalog of Department Services - Defining your services and publishing them to your customers is an excellent foundation to thinking digital. The service catalog defines who you are and the value you offer. Having a service catalog allows your department to add, enhance, and retire services using digital initiatives.
2. Use Business Process Re-engineering - Good digital projects must begin with streamlined, optimized business processes. You can't automate a broken process... so re-engineer it before applying technology.

3. Apply User Centered Design - Who better to influence a City service than the customers themselves? Modern User Centered Design (UCD) techniques put users at the center of service design and development.
4. Use Agile Development Principles - Agile development refers to software development based on iterative development, where requirements and solutions evolve through collaboration between self-organizing cross-functional teams. Agile is proven to produce digital solutions faster, with greater value, and less cost.

### **Who to Contact with Digital Culture Questions**

Please contact the ITA Help Desk via SNow ticket if you have questions regarding digital culture ([https://snow.lacity.org/SNOW/quick\\_ticket](https://snow.lacity.org/SNOW/quick_ticket)).

## #10 - Raise the Digital IQ with Google Workspace

### What is Google Workspace?

Google Workspace (aka Google Suite) is a collection of office productivity tools (email, calendar, Google Drive, Docs, Meet, Forms, Sites, etc). The City of Los Angeles was the first large government to use Google Workspace in 2010.

### Why is Implementing the Features of Google Workspace Important?

Google Workspace was designed by Google engineers to provide the digital tools needed by over 130,000 Google employees in their day-to-day work. In other words, the innovative digital tools built by Google for Google employees are fully available to City employees. As Google is known as a top digital company, there are many best practices found in Google Workspace that City of Los Angeles departments could readily adopt. Implementing the features of Google Workspace provides the following benefits:

- Real-time document collaboration and sharing (Google Docs, Sheets, Slides)
- Teleworker accessible Google Drive for file storing and sharing
- Integrated video conferencing with document collaboration and chat
- Google Sites and Forms for rapid website development for teams or public
- Google Groups for integrated team communications and sharing

Before Google Workspace Features	After Google Workspace Features
Documents are emailed between staff who take turns to edit, sometimes losing a version	Documents are updated by multiple staff at once, using a Google Meet to discuss real-time
Employees must be in the office to access a Shared Drive or paper files	Teleworkers can access and share all files in Google Team Drive anytime, anywhere
Department staff wait on IT staff to build a website or form to inform or survey the public	Every department team can build Google Site to engage the public and improve services

### How to Implement the Features of Google Workspace

The Information Technology Agency has established a citywide contract for Google Workspace enterprise licenses. Over 20,000 City employees count themselves as users. Google Workspace is already paid for and simply requires City departments

to begin analyzing their business needs and using the appropriate Google Workspace features. The following are recommended steps:

1. Become familiar with Google Workspace apps. Frequently used apps may be found by clicking this grid icon in the upper right of GMail. The full Google Workspace Marketplace may be found at [www.gsuite.google.com/marketplace](http://www.gsuite.google.com/marketplace).
2. Have department staff attend ITA's Office Hour sessions. Each session provides training in an important Google Workspace feature or function.

### **Who to Contact with Google Workspace Questions**

Please contact the ITA-The Google Team via SNow ticket if you have questions regarding Google Workspace ([https://snow.lacity.org/SNOW/quick\\_ticket](https://snow.lacity.org/SNOW/quick_ticket)).

## #11 - Transform Call Centers with Interactive Voice Response

### What is an Interactive Voice Response (IVR) System?

Interactive Voice Response (IVR) systems allow phone callers to interact with a touch tone menu or through spoken word using artificial intelligence voice recognition software. But, more than just a menu tree, IVR systems can integrate with backend systems to provide information from computer systems without human interaction. It can be made to provide answers to FAQs, say your locations and business hours, and once topics are identified it can transfer callers to the appropriate area or person without needing to wait for your live agents to become available. While ITA 311, LA Sanitation, and LA Department of Water and Power are large, recognizable implementations of IVR technology, this technology is highly applicable in smaller instances too.

### Why is Implementing an IVR Important for Call Centers?

An IVR system allows a group of City employees the ability to enhance any call center. A well implemented IVR provides the following digital benefits:

- Improves caller satisfaction (no busy signals or voicemails)
- Saves time for caller and City department (routes calls where they belong)
- Reduces cost (less staff can handle more workload through automation)
- Provides data and metrics on callers and their inquiries
- Scales to customer demand

Before IVR System	After IVR System
City staff must answer all constituent questions	City staff can focus on more complex calls while having FAQs handled through the IVR
Callers get transferred between staff before finding the right person to answer question	Caller finds their topic in IVR menu and is transferred the right person immediately
Department has no data or insight into the type, nature, or frequency of calls they receive	Department uses IVR reports to adjust their services based on call types and volume

## **How to Implement an Interactive Voice Response (IVR) System**

The Information Technology Agency maintains a citywide contract for the Amazon Connect cloud-hosted IVR system. To implement IVR effectively, City of LA need to perform the following:

1. Analyze the types of calls you receive or expect to receive (requests for information, assistance in completing a form, etc). Look at your most requested services.
2. Short-list the types of calls that a virtual assistant can handle and configure the IVR system
  - a. Answers to FAQs are loaded into the IVR system
  - b. CRM forms for frequently requested services are loaded into the IVR (e.g. a caller can complete a graffiti removal request through the IVR)
3. Test the IVR to ensure it is working correctly and make available to the public
4. Review reports showing caller questions and responses. Make adjustments.

## **Who to Contact with IVR Questions**

Please contact the ITA-VCC-Support via SNow ticket if you have questions regarding IVR systems ([https://snow.lacity.org/SNOW/quick ticket](https://snow.lacity.org/SNOW/quick_ticket)).

## #12 - Build Better Apps with APIs & Micro Services

### **What are Application Programming Interfaces (APIs) and Microservices?**

Application Programming Interfaces (APIs) are electronic communications between two software applications (e.g. between ITA's 3-1-1 CRM and Bureau of Engineering's mapping system for address validation). Microservices are a computer architecture approach where software is built as a collection of different services or APIs. In short, APIs are methods for software to communicate directly with each other and microservices is the building of software that takes full advantage of these APIs.

### **Why is Implementing API Management & Microservices Important?**

Without APIs or microservices, software must be built completely from the ground up and has little interconnection with other software. This is very inefficient and makes updating software very expensive and difficult. In addition, microservices allow software systems to use the very best solution for each component (i.e. the best platform for maintaining User IDs and passwords, the best reporting tool, the best CRM capabilities, etc). In short, it is not good enough to just be digital, the best organizations are *digital and interconnected*. A well implemented API or microservices architecture provides the following benefits:

- Digital services become faster to build and easier to modernize
- Digital services become easier to build and maintain (more object oriented)
- Department IT staff are more efficient by using existing APIs for features
- Department digital services become more innovative by combining different capabilities together that are readily accessible through APIs

Before APIs & Microservices	After APIs & Microservices
Department IT staff write every program from scratch (A to Z) with costly, lengthy build time	Department IT staff leverage existing APIs and services with fast and low cost build time
Department systems are difficult to modify and replace, resulting in many legacy systems	Improvements in one component affect all apps, resulting in frequent modernization

## **How to Implement API Management & Microservices**

The Information Technology Agency has established a citywide API management tool contract with Apigee. To implement APIs and microservices, City of LA departments should perform the following:

1. Assess which department applications would be improved through APIs or microservices
2. For each application (in-house, vendor, etc), identify the method to turn on or code new APIs
3. Contact the ITA API Management team (see contact information below) for a list of existing City APIs
4. Only buy and implement software products that have a RESTful API that can leverage microservices

## **Who to Contact with API Management or Microservices Questions**

Please contact the ITA-API-Management team via SNow ticket if you have questions regarding APIs ([https://snow.lacity.org/SNOW/quick ticket](https://snow.lacity.org/SNOW/quick_ticket)).

## #13 - Scale Up with Cloud Computing & City Cloud Pipeline

### What is Cloud Computing & the City of L.A. Cloud Pipeline?

The “Cloud” represents IT resources delivered as a service over the internet. These computing resources are available through vendors via subscription and enable City of Los Angeles departments the opportunity to “rent” Cloud software applications or hardware infrastructure. Cloud Computing expands the tools available to City departments by leveraging vendor-managed IT investments as a primary, secondary, or temporary IT resource. The Information Technology Agency has made accessing the Cloud easy through the establishment of a redundant Citywide Cloud Pipeline (dual 10GB paths to Amazon Web Services, Microsoft Azure, and Google Cloud).

### Why is Implementing the Cloud & Using the L.A. Cloud Pipeline Important?

Without Cloud computing, City departments must rely on the infrastructure or software that they build in-house or purchase directly from a vendor. With Cloud computing, departments have access to a large array of software, platforms, and infrastructure that can simply be used in a pay-per-use format. The Citywide Cloud Pipeline provides secure, dedicated, and redundant access for City employees to the Cloud. Well implemented Cloud computing and use of the Citywide Cloud Pipeline provides the following benefits:

- Lower cost (pay for what you need with no large capital investments)
- Makes City departments more flexible and agile with easy access to tools
- More secure (Cloud vendors have top-tier security, when used correctly)
- Includes disaster recovery capabilities (hosted and recoverable off-site)
- Empowers IT staff to perform value-add work, instead of just maintenance
- Cloud pipeline provides low-cost, stable, secure access to Cloud apps

Before Cloud Computing	After Cloud Computing
Departments needed to build expensive server rooms and buy more servers than needed	Departments can rent the right-sized Cloud server and turn it off when unneeded
Departments needed to copy and store data offsite for disaster recovery purposes	Departments use Cloud data centers outside L.A. eliminating need for offsite backup

Departments purchased and maintained direct network connections to Cloud data centers	ITA Cloud Pipeline provides dedicated, redundant direct connect to Cloud data centers
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### **How to Implement Cloud Computing & Use the Cloud Pipeline**

The Information Technology Agency (ITA), through the General Services Department, has established competitive contract vehicles for key Cloud computing vendors. In addition, the ITA has established a Citywide Cloud Pipeline for dedicated Cloud traffic through a large national telecommunications vendor. City departments are required to use this pipeline as the secure, redundant connection to the Cloud. To implement Cloud computing and the Citywide Cloud Pipeline, City of LA departments should perform the following:

1. Assess whether your department is migrating an existing app into the Cloud or building a new app in the Cloud.
  - a. If simply migrating an app to the Cloud for hosting (“lift and shift”), then document existing on-premise architecture and re-create in the Cloud instance.
  - b. If using the Cloud migration as an opportunity to implement Cloud-native capabilities that improve the app, then map your application architecture to the new Cloud serverless services.
2. To learn more about securely accessing the Cloud (with pricing) through the Citywide Cloud Pipeline, please contact ITA-NACI via a SNow ticket.

### **Who to Contact with Cloud Computing & Citywide Cloud Pipeline Questions**

Please contact the ITA-CloudOps team via SNow ticket if you have questions regarding Cloud computing or ITA-NACI team for questions regarding the Citywide Cloud Pipeline ([https://snow.lacity.org/SNOW/quick\\_ticket](https://snow.lacity.org/SNOW/quick_ticket)).

## Acknowledgements

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We would like to acknowledge the leadership of Mayor Eric Garcetti and our other elected leaders: City Attorney Mike Feuer, Controller Ron Galperin, and City Council, specifically members of the Information Technology & General Services (ITGS) Committee (Chairperson Nithya Raman, Bob Blumenfield, and Curren Price) who ask the tough questions and expect excellence from City of L.A. technology.

We acknowledge the hard work and expertise of Information Technology Agency (ITA) staff who worked tirelessly during the COVID-19 to create new digital services for Angelenos impacted by the pandemic. You truly kept the City of Los Angeles operating when L.A. needed you most.

We acknowledge the 150+ technologists in our Information Technology Policy Committee (ITPC) from all City of L.A. departments and were instrumental in reviewing and digitizing department services impacted by the pandemic.

### **City of Los Angeles Departments**

Aging	Harbor
Airports	Housing Authority
Animal Services	Housing and Community Investment
Building & Safety	Information Technology Agency
Cannabis Regulation	Library
Chief Legislative Analyst	LA City Employee Retirement System (LACERS)
City Administrative Officer	Mayor's Office
City Attorney	Neighborhood Empowerment
City Clerk	Office of Public Accountability
Civil & Human Rights	Personnel
Controller's Office	City Planning
Convention & Tourism Development	Los Angeles Police Department
Cultural Affairs	Board of Public Works
Disability	Public Works, Bureau of Contract Administration
Economic & Workforce Development	Public Works, Bureau of Engineering
El Pueblo de Los Angeles	Public Works, Bureau of Sanitation
Emergency Management	Public Works, Bureau of Street Lighting
Employee Relations Board	Public Works, Bureau of Street Services
City Ethics Commission	Recreation & Parks
Office of Finance	Transportation
Los Angeles City Fire Department	Water and Power
Fire and Police Pensions	Zoo
General Services	