SMART CITY

Los Angeles Network Streetlights

2020-2025

Street Lighting Vision, Mission, and Values

Vision

LA Lights Network of streetlights is a world leader promoting sustainability and walkability for Los Angeles.

Mission

Provide reliable, safe lighting for all residents and visitors, lighting the way for Angelenos.

Values

- **Community:** Commit to the safety and security of our residents including fostering and supporting community connections.
- **Accessibility:** Provide services and programs that are easily accessible, inclusive and responsive to our residents' needs.
- **Equity:** Dedicate to equitable service outcomes for our employees and residents.
- **Sustainability:** Utilize efficient climate-friendly products and materials across agency operations and remain consistent with L.A.'s Green New Deal Plan 2019.

The Bureau of Street Lighting

The Bureau of Street Lighting designs, constructs, and maintains approximately 223,000 streetlights across the City of Los Angeles. The System has over 400 different styles ranging from modern to ornate/historic and illuminates two-thirds of the City. Street Lighting systems have several purposes as part of the City's infrastructure:

- Provide public safety
- Enhance and assisting transportation
- Enhance community identity
- Add aesthetic value to the City's historic fabric
- A platform for City's Smart Solutions (Smart Infrastructure)

The Bureau mission began in 1925 as the Bureau of Power and Lights, within the Department of Public Works. Throughout the years, lighting initiatives have expanded and evolved. Currently, the Bureau's maintenance division responds to over 45,000 light outages each year, manages an expanding network of smart streetlights, and service solutions beyond the broadcast of light. The Bureau of Street Lighting is 100% special funded. Street Lighting maintenance is financed primarily by the Street Lighting Maintenance Assessment Fund which generates $42 million annually. This fund covers all costs associated with the operation and maintenance of the City's street lighting system.

LA Lights: Smart City

The City's Street Lighting System is comprised of 223,000 lights, exceeds 400 different designs, and covers 469 square miles. By comparison, we have more lights than all of the streetlights in Boston, San Diego, San Francisco and Washington, D.C combined. The City's expansion of Smart Streetlights and the rapid development of digital solutions requires careful consideration of capacity, resources and planning to develop and execute a dynamic five-year strategy.

LA Lights will undertake a digital transformation journey to develop a fully adaptive Street Lighting platform for all city lights and digital solutions so as to provide a better-connected Los Angeles now and in the future.

As we develop the Smart City strategy, we aspire to achieve the following goals:

- Maintain the safety and reliability of the street lighting system at all times.
- Partner with our many diverse communities as collaborators in the expansion of our smart city programs.
- Adopt technology that enhances public services and increases inclusion.

This strategic plan focuses on the three areas of Smart City development:

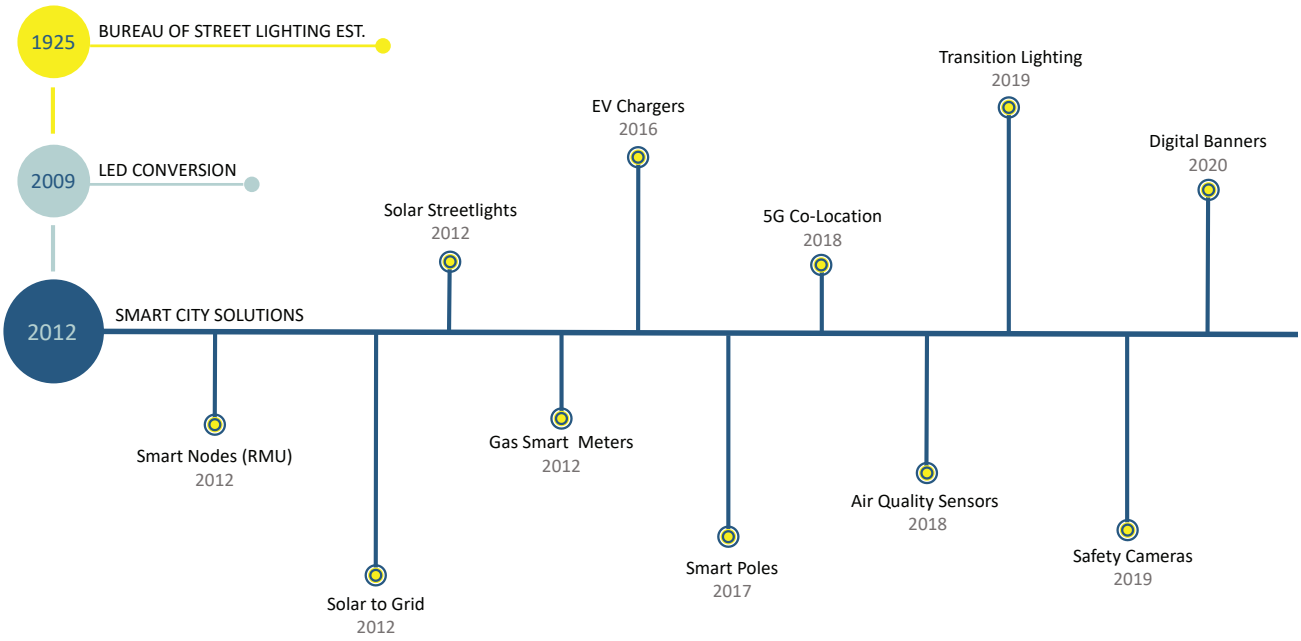
1. Strengthen the City's Street Lighting System
   a. Expand Smart Network Lights
   b. Update Digital Infrastructure: System Platform
2. Expand Smart City Solutions
3. Engage the communities to ensure smart solutions meet their needs.

We adopted five Smart City Principles to embrace applied technologies, express our values, embolden our mission, and exemplify the noble goals of Mayor Eric Garcetti's Sustainable pLAn.

Smart City Principles

1. Pair technology with infrastructure to improve public services.
2. Leverage data to inform program decisions and resource allocation.
3. Develop inclusive, responsive and proactive solutions.
4. Apply technology that enhances the user experience and accessibility.
5. Design solutions to people and City challenges.

Smart City Journey



Smart LA Lights

Our Street Lighting System, including our Network Lights (smart nodes), are managed across various platforms, including the Bureau's internal Asset Management System (AMS), CityTouch, Geographic Information System (GIS) Mapping, Street Viewer, and the City's 311 system.

The Bureau's Smart City Programs, EV Charging, sensor technologies, and more are managed via vendor-proprietary platforms. Managing assets and operations across multiple systems are arduous for staff and partners and will continue to grow in complexity with the City's acceleration of smart infrastructure. A central system platform will enable us to monitor the lighting system and smart city programs, modify workflows and provide real-time data to enhance operations and services outcomes. For successful scalability and to overcome interoperability challenges of the future network, a central platform is now essential. The solution is to identify a data integration tool or Integration Platform as a Service (iPaaS) to be compatible with our smart solutions to enable data accessibility, which involves moving data to-and-from platforms. In short, what is required is an integration tool to allow cloud-based processes, services, applications, and data within or across multiple solutions platforms. This interoperability improves data quality, speed, and open-data sharing. Utilizing an integration tool allows us to remain flexible as new technologies become available and quickly adopt future tools such as Data; IoT; AI; 5G; Sensors; Apps; GPS; Predictive Analytics and Cyber-security.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Beyond the Streetlight: Smart City Solutions

Street Lighting is collaborating on the development and deployment of customized smart city solutions that support the City's digital infrastructure. In addition to monitoring the network streetlights, our Smart City Group (SCG) manages a dynamic portfolio of digital solutions and beta testing of new technologies. These individual smart city programs complement one another, cumulatively ensuring that programmatic goals and our broader milestones in the City's New Green Deal Sustainability pLAn are achieved.

Smart City solutions currently deployed or planned jointly with smart lights include:

1. Air Quality Monitoring Sensors
2. Broadband Connectivity
3. Co-Location (Small Cell) 5G
4. Color Coordination Lighting
5. Digital Banners
6. EV Charging Stations
7. Gas Company Smart Meters
8. Motion Sensors
9. Multi-use (Pedestrian) counters
10. Safety Cameras
11. Seismic Sensors
12. Smart Streetlight Pole
13. Solar Streetlights
14. Solar-to-grid Streetlights
15. Transition Lighting Zones (TLZ)
16. USB Charging
17. Wi-Fi

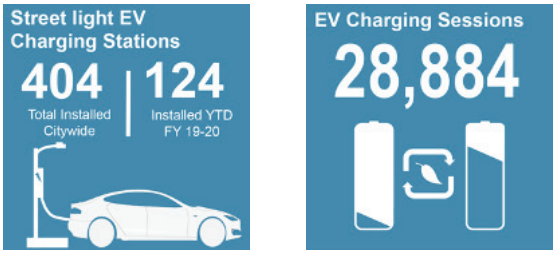
Smart City Portfolio

The City's early conversion to energy-efficient LED lights not only revolutionized streetlights, but it also created a seamless platform for the deployment of future smart solutions. Today, the Bureau operates 15 Smart City initiatives, including 5G Co-Location to expand communications, Electric Vehicle (EV) Chargers, and sensor technologies.

11 Streetlight Electric Vehicle (EV) Charging Stations

Innovative curbside Streetlight EV Charging stations attach to the streetlight and utilize the existing circuitry, making them extremely cost-effective. Our first Infrastructure as a Service (IaaS) solution is expanding to meet the mandate set by the Mayor's Sustainable pLAn to increase EV adoption 25%, adding 100,000 new electric vehicles in the City by 2025. **The program will focus on the following areas for 2020-21**:

- Planning and design for 150 new installations
- Explore Multi-Unit Dwelling (MUD) and residential curbside opportunities
- Program efficiencies: reduce costs and increase utilization



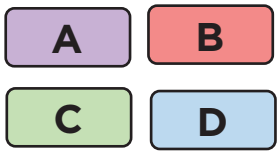
Safety Solutions

9 Transitional Lighting Zones

Transitional Lighting Zones (TLZ) are streetlights programmed to increase illumination levels 30%-50% (brighter) during periods of high-pedestrian traffic, such as following a sporting or entertainment event. Transitional lighting improves visibility and safety for pedestrians and vehicle traffic in immediate areas surrounding venues—the successful L.A. Live TLZ Program is expanding to phase two in 2021. **The Bureau has identified future TLZ sites citywide, including the upcoming design for the Hollywood Bowl location, scheduled for 2021.**

L.A. Live Transitional Lighting Zone

Zones:



TLS Zones may vary in lighting level and type of luminaire based on street classifications.

Multi-Use Counter: Pedestrian and Mobility Counter

Street Lighting is piloting a non-intrusive pedestrian/mobility counter from Eco-Counter.[9] The counter software/technology uses an algorithm to recognize the shapes of pedestrians, cyclists and vehicles. The Eco-Counter transmits the count in real-time, providing data on pedestrian and last mile mobility (bikes/scooters) traffic flow. The counter does not record images. Street Lighting is utilizing this data to ensure adequate lighting levels during high-peak traffic periods. The data insights have a wide variety of unity across city infrastructure and will inform future improvements projects including Smart Poles, Transitional Lighting Zones (TLZ), motion sensors, and other safety enhancements citywide.

Safety-Cameras

A popular smart city solution, safety-cameras support several city programs, and may aide in traffic incidents or security threats. They can assist first-responders to get an up-close view of the landscape in a disaster. **This year Street Lighting deployed safety-cameras for the following programs**:

- In partnership with L.A. Sanitation, we deployed 20 safety-cameras to assist with illegal trash dumping, in support of a broader City campaign to deter illegal dumping in the City.
- Street Lighting deployed four safety-cameras to support the Copper-Wire-Power-Threat (CWPT) initiative. The safety-cameras help deter copper wire and power theft in the City.

[9] *More information is available at* **eco-compteur.com**.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Environment and Health Solutions

3 Air Quality Monitoring Sensors

LA Lights is committed to improve the environmental quality of our local neighborhoods and supports Green Zones in Los Angeles. In partnership with AQMD, Street Lighting has installed 18 air quality monitoring sensors supporting data and research for the City's Clean Up Green Up program, which aims to reduce and prevent pollution, in communities with the worst air quality in Los Angeles.[10] Green Zones focus on transforming highly polluted, blighted neighborhoods into greener, more vibrant, healthier communities.

Enhance Communication & Connectivity

9 Small Cell Communication Attachments: Co-Location (5G)

Los Angeles is on track to become the first 5G city in the Nation, which will bring superfast internet speed to businesses and residents. Co-Location devices are attached to streetlights to boost network coverage and capacity demands for faster service, streaming, and cloud services. The City works with telecommunication companies on the deployment for co-location to deliver the best service to our many communities and increase communication coverage, especially for use in emergencies. There are currently over 2670 Co-location devices operating citywide. **As the Bureau's fastest-growing program, Co-Location will expand to 3,200 devices in 2020-21**.

[10] *More information is available at cleanupgreenupLA.org*

9 Digital Banners

Currently, streetlights can mount banners and art via our permitting system.[11] Street Lighting will pilot Digital Banners to provide the public with real-time information regarding events or during an emergency event.

9 Smart Poles

Street Lighting is piloting a smart hub pole that offers extensive services including, Wi-Fi, USB Ports, Speaker System, or CCTV. Currently, there is one Smart Hub Pole live for testing.

L.A. Smart Pole Coming in Fall 2020

Smart Pole Features

May include:

- 5G
- Air Quality Sensors
- Digital Banner
- Multi-color Lighting
- Pedestrian & Mobility Counter
- USB
- Wi-Fi

Smart City Considerations

Smart City is one concept of many that contribute to the safety, growth, and innovation within the City and around us. Smart solutions help us deliver public services and offer a suite of programs with immense potential. We have also learned smart solutions require new considerations in the context of City services, open data, and equity, to name just a few.

[11] *More information is available at B.S.L..lacity.org*

Innovation and Community

Home to Silicon Beach, Los Angeles has the third-largest pool of tech workers on the West Coast, behind Seattle and San Francisco. The City has developed tools to support and foster tech innovation including a business tax specifically for tech companies, the Technology and Innovation Council, and the LA Tech Talent Pipeline. Our City's diverse communities also offer a unique advantage to gain experience and insights from around the world. We are indeed a Smart City.

Engaging locally generates diverse input on local solutions and increases inclusion. In this spirit, Street Lighting has invited the community to design smart infrastructure with a first of its kind, LA Lights the Way, Street Light Design Contest. The open competition will determine the next standard city streetlight.

Local Innovation Opportunities

1. Inspire the market beyond lighting technology to combine luminaire lamp design with the Internet of Things (IoT) capabilities.
2. Engage L.A.'s technology community's interest in connected infrastructure, offer beta testing zones to stir design interest and enhance market competitiveness.
3. Create more opportunities to engage and learn more about our residents, businesses, schools, and community organizations.
4. Strengthen partnerships and collaboration with the Department of Transportation, Department of Water and Power, Public Works' Bureaus, and other City Departments.

Community Inclusion

The results from our community pilot (see previous section) demonstrated the need for meaningful engagement mechanisms to understand the diverse needs of all residents. Creating meaningful dialogues with stakeholders and vulnerable residents is critical to foraging trust and partnerships in our development of connected infrastructure and services. The Bureau will increase outreach to promote participation from historically marginalized groups such as limited English proficiency and digitally invisible populations. We will utilize technology to foster inclusion and increase access to services for all residents.

8 Workforce Innovation: New Tools for New Teams

The implementation of new technologies and digital services demands the expansion of roles and staff capabilities. Therefore, the Bureau will prepare to integrate new multi-sector professionals, including programmers, software engineers, and data analysts to help navigate new technologies. We will work to incorporate new subject-matter-experts, technology training, and additional capacity-building resources for our staff.

Lights on the Data Practices & Policy

As we increase our dependency on [data] technology to identify problems and solutions, we must consider the impact of smart city data. Smart solutions can provide large data sets which, combined with reporting tools, can generate data on the utilization of public services. A few potential considerations include individual privacy and public access to data. The Bureau of Street Lighting does not collect or store any individual data from our smart city programs. Public privacy and safety are paramount. We are currently evaluating data practices and policies to ensure the highest protection for personal privacy. (Topic directly addressed in our Digital Infrastructure Strategy section).

Smart City Road Map

The Bureau's goal is to develop a fully adaptive Street Lighting Platform for all city lights and connected service solutions. The LALights: Smart City Strategic Plan 2025-2030, highlights the objectives and actions to expand our smart city capabilities, strengthen our digital infrastructure and facilitate community-driven solutions for a better-connected Los Angeles now and in the future.

The following plan outlines a 5-year growth strategy towards achieving a fully connected streetlight system in the future. We begin with the growth strategy of our network [connected] lights, followed by the expansion of our smart city programs, and third outlines a digital transformation framework. The subsequent sections integrate sustainable practices and a community approach. The final section defines the steps of our plan implementation.

The Smart City Path

I. **Smart Infrastructure**
   1. Expand Network Streetlights: Connected Streetlights
   2. Develop Digital Solutions: Smart City Programs

II. **Digital Infrastructure Transformation**
   3. Master Platform (Interoperability)
      a. a. Data Policy & Practices
   4. Digital Solutions: World Class Website

III. **Sustainable Operations**
   5. Sustainability & Resiliency
      a. Infrastructure Improvements

IV. **Smart City Communities**
   6. Connections, Inclusion and Equity
   7. Research, Innovation and Culture

V. **Implementation**
   8. Action Plans

Smart City Strategic Plan for Operational Excellence & Innovation 2020-2025

LA Lights is building a world-class Street Lighting Platform for all City lights and connected service solutions for a better-connected Los Angeles today and in the future.

I. Smart City Infrastructure

1. Expand Street Lighting Network Capacity

The City's Street Lighting System is 223K, of which currently only 37K are network connected. The expansion of smart nodes will strengthen network capacity.

Goal	• Engage with underserved communities.
Strategy	• Expand the network streetlight capacity through smart node connections.
Actions	• Perform system inventory and cost analysis to determine network scalability. • Design and execute deployment strategy for 44K smart nodes by 2025. • Develop a transition plan to integrate existing (smart node) network data into an asset management system (AMS).
Outcomes	• **Design forecast and cost analysis tools to manage smart [node] light expansion.** • **Increase the City's connect "smart" lighting network by 2025.** • **Fully interoperable data-rich system to inform daily monitoring and reporting.**

2. Develop Smart City Solutions: Smart City Portfolio

Expand and improve smart city initiatives to increase service outcomes and sustainability practices.

Goal	• Advance our digital service solutions and improve the quality of life for residents.
Strategy	• Standardize Smart City Programs goals, metrics, funding, data tracking, and evaluation.
Actions	• Program Management Plan (PMP) outlining goals, metrics, funding, evaluation, and tracking on sustainability goals, i.e., energy savings. • Develop robust cost evaluation and benefit analysis; expected Return on Investment (ROI).
Outcomes	• **PMP for all Smart City Programs.** • **Pilot Infrastructure as a Service (IaaS) and other alternative funding models to support Smart City Portfolio.**

Photo: Rudy Espinoza

Smart City Portfolio Expansion 2020-2025

Smart City Program Goals	Timeline					
	2020	2021	2022	2023	2024	2025
Smart Nodes	37k	38k	39k	41k	42k	44k
Co-Location	3200	3700	4200	4500	4800	5100
EV Charging Station	430	580	730	880	1030	1180
Transitional Lighting Zones	2	3	4	6	8	10
Motion Sensors	10	20	30	40	50	60
Safety-cameras	20	30	40	50	60	70
Multi-use Counter	10	12	14	16	18	20
Digital Banners	5	10	15	20	25	30

*Data reflects the end of year outcomes.

II. Digital Transformation Journey

3. Develop Master Platform for all Smart Lights and Digital Solutions

Street Lighting's successful implementation of smart lighting and solutions necessitates a new system platform to allow adaptive monitoring for the lighting system and growing smart solutions in preparation for tomorrow's digital ecosystem.

Goal	• World-class control platform for all streetlights and smart city solutions.
Strategy	• Develop a new system platform to integrate data, upgrade legacy systems and transition data and workloads to the cloud for maximum system performance.
Actions	• Develop a data integration framework for a central platform compatible with the City's street lighting system and smart city solutions. • Update system interoperability to improve live data and project tracking capabilities, workflow and project management across programs/ operations. • Define the requirements for open API for Smart City products. • Explore integration requirements to advance existing streetlight management systems including GIS integration with CAD. • Define web integration points to streamline service requests, repair status, and data access (real-time) for dashboards. • Develop online Materials Management Procurement System. • Develop a robust cyber-security framework to protect against breach or systemic failure. • Approve digitalization plan to achieve full (100%) digital conversation and file storage bureau wide (i.e. Online Patrol Map Conversion).
Outcomes	• **Design a central dashboard to manage and monitor all smart city solutions.** • **Pilot new workflow system across services and project work orders.** • **Develop an open API for Smart City products.** • **On-going system advances to support the best streetlight system, including GIS and CAD integration and other productivity tools.** • **Provide real-time data access on smart city initiatives.** • **Pilot web Materials Management Procurement System.** • **Safe and secure system and data management.** • **Achieve 100% digital file storage Bureau wide - by 2020-21.**

A. Smart City Data Policy and Practices

Smart City programs can create data on the use of public services. The privacy and security of our community is our utmost concern and is crucial to preserving public trust. Street Lighting does not collect or store any data not relevant to the functioning of our streetlights. The Bureau complies with the City of Los Angeles' general privacy policy.[12]

Goal	• Transparent policies and practices on data sharing, open data access, and public privacy.
Strategy	• Define smart city data policy framework and enhance data collection tools and reporting capabilities to facilitate seamless open data access.
Actions	• Create new data collection protocols such as anonymous metadata requirements, and tools to enhance open data accessibility. • Coordinate with City's Information Technology Agency (ITA) on data policy to develop a framework to govern privacy, data practices, and public data access. • Smart City product design and beta testing guidelines, policy and anonymous metadata requirements. • Define program data points for public access on the LA Lights website and the City's Open Data Portal.
Outcomes	• **Implement new data collection and reporting protocols for connect solutions, i.e. multi-use counters.** • **Establish digital rights practices for the collection, use, and protection of data.** • **Publish Smart City data policy, best practices, and access guidelines.** • **Share appropriate Smart City data on website and/or City's Data Portal.**

[12] *More information is available on the ITA website* **ita.lacity.org**

4. Digital Solutions: Develop A World-Class Website

The Bureau provides several online services including program and service requests, B-permits via ePlan LA (portal), and of particular interest, information on our Streetlight Museum. Our site is often the first touchpoint for the public; Street Lighting receives inquiries from cities around the world regarding our smart lights. This digital transformation strategy creates new web capabilities,

Goal	• A world-class website with real-time-data access and extremely efficient service solutions, and customer support.
Strategy	• Design a customer journey for users with usability, interactivity and advanced digital services.
Actions	• Analysis of current website capabilities, content and online services to inform new design and resources. • Develop a website redesign plan, including service points, content guidelines, and self-service tools, such as messenger or chatbots' options. • Develop and implement an online portal for council offices and neighborhood councils to track project status and submit project proposals. • Establish website Project Management Plan (PMP) to manage content and functions.
Outcomes	• **Launch an intuitive data-rich webpage with enhanced digital service solutions for all stakeholders.** • **Develop customer tools such as information videos to guide permit/plan checking, CWT, FAQ on 5G, and other service or topics.** • **Launch a reliable system platform for council offices and city partners to access projects and data updates.** • **Implement website PMP to manage updates i.e. events, data links, Design lighting guidelines, user feedback, etc.**

III. Sustainable Operations

5. Sustainability and Resiliency Practices

The following address infrastructure needs and the challenges of connected infrastructure, subject to vulnerabilities, physical and cyber. Both require durable measures to ensure the integrity of the Street Lighting system in a crisis or emergency. Together, sustainability and resiliency practices increase benefits to the City while minimizing short and long-term impacts on the environment.

Goal	• Achieve fully Sustainable and Resiliency Practices.
Strategy	• Incorporate sustainability principles and resiliency practices into all programs and digital solutions.
Actions	• Determine sustainability and resiliency metrics across programs and initiatives. • Establish a cloud-based back-up and disaster recovery solution with a cloud-based computing platform available on-demand for emergency operations. • Design an emergency lighting system to operate in a crisis or disaster event. • Explore additional behind-the-meter (BTM) solutions, including solar technology that may be used with streetlight system. • Define vendor performance standards to measure and report on sustainability outcomes. • Explore routing software options to reduce daily miles to support net-zero carbon goals.
Outcomes	• **Implement sustainability and resiliency scorecards across programs.** • **Implement a cloud-based disaster recovery system. Implement annual test schedule.** • **Launch Emergency Lighting System.** • **Pilot Energy Sustainability Solutions including off-grid energy solutions.** • **Implement vendor/partner score cards.** • **Pilot routing software cohorts.**

A. Streetlight Infrastructure Sustainability

Infrastructural review and analysis to ensure the integrity of the Streetlight System.

Goal	• Ensure the Sustainability of the Street Lighting Infrastructure.
Strategy	• Implement infrastructural planning initiatives and programs to manage Street Lighting aging assets.
Actions	• Design strategy for fleet replacement with energy-efficient vehicles targeting full fleet conversion by 2050. • Complete a comprehensive field office/5-acre yard assessment to determine warehouse relocation/expansion requirements. • Design Infrastructure Integrity Management Program for all Streetlight Infrastructure Evaluation Initiatives, Program Evaluation and analysis required. • Develop Office/Personnel Resiliency Plan to direct emergency resources and planning activities.
Outcomes	• **Adopt vehicle replacement strategy to achieve a complete fuel-efficient vehicle fleet by 2050.** • **Identify and approve new field office/warehouse location.** • **Implement Infrastructure Plans: 10-year Light Pole Painting Plan; 75-year Infrastructure Restoration Plan and more.** • **Implement Office Resiliency Plan and update all Bureau disaster and recovery plans.**

IV. Smart City Communities

6. Community Connections, Inclusion & Equity

Smart City solutions offer many digital tools to help connect with our stakeholders. Our outreach results (prior section) demonstrate the importance of inclusive engagement to understand the diverse needs of all communities. Creating partnerships with Neighborhood Councils and residents is the best approach to ensure we design equitable service solutions to meet their needs.

Goal	• Strong community connections that foster inclusion and equity.
Strategy	• Optimize community connection pathways to learn and develop solutions that meet the community's current and future needs.
Actions	• Create a community engagement model to guide outreach activities. Track and measure the impact. • Incorporate equity and inclusion considerations into outreach campaigns to ensure access from underserved communities. • Design inclusive feedback channels for ongoing community input. • Pilot/beta test Smart City solutions in underserved areas. • Explore technology opportunities to increase broadband access in underserved areas and support City's broader Digital Inclusion Fund (DIF).
Outcomes	• **Design a Community Engagement Program.** • **Diverse outreach across geographic, social-economic and racial boundaries.** • **Design engagement mechanisms to support community-driven solutions.** • **Equitable distribution of smart solutions across council districts, including underserved areas.** • **Coordinate with Partners to pilot internet and other technology solutions in underserved areas. Continue to support the City's DIF.**

7. Research, Innovation and Culture

Smart City design starts with the people that design and deliver smart solutions with care and professionalism, the Street Lighting Team. The Bureau held an Innovation Lab with staff from all 14 divisions to discuss Smart City opportunities. The development of this plan incorporates collective input from the event as well as additional workgroup sessions with team members.

Goal	• Support Street Lighting's Innovation Culture.
Strategy	• Establish an Innovation Group to foster creativity, promote new ideas and advance a culture of collaboration.
Actions	• Establish a cross-division Innovation Group to identify opportunities to improve productivity, remove barriers and address high priority issues. • Strengthen Public-Private Partnerships (P3s) to enhance sustainable infrastructure and increase benefits to citizens and communities. • Develop future role classification and advocate for improvements to the City's hiring process to prepare for the smart city workforce. • Continue to invest in workforce readiness resources including deployment of laptops, smart phones, and issuing City email and D-time for field crews to advance "remote worker" capabilities.
Outcomes	• **Design a formal innovation lab platform to manage and streamline new ideas, track and share outcomes.** • **Redesign Public-Private Partnership models to include sustainability metrics and to increase public/community benefit.** • **Design recruitment strategy to incorporate programmers, software engineers, and data scientist positions.** • **Develop Workforce Readiness Workplan to manage training, courses, and funding resources.**

V. Strategy Implementation

8. Implementation Plan

Smart City Road Map implementation activities require coordination and support across the Bureau. The action planning will be led by a Bureau Strategy Advisor who will direct the working groups to achieve year one outcomes and future phase planning. All objectives and outcomes are contingent upon current operations needs and available resources.

Goal	• Smart City Road Map Implementation.
Strategy	• Define the implementation phase, including action plans, team members, and timeline to track plan delivery.
Actions	• Create a Smart City Action Plan and identify working group members. • Update smart city portfolio cost and impact analysis. • Define Smart City Plan implementation and measuring impact annual review and reporting protocols • Create a succession plan for Smart City group to ensure on-going success. • Develop a timeline and implementation plans for all goals outlined in this plan.
Outcomes	• **Smart City Road Map Action Plan.** • **Revise Smart City Plan.** • **Publish Smart City Annual Update.** • **Smart City Succession Plan.** • **Design a Strategic Plan Implementation Template.**

The Future is Bright

Street Lighting continues to push forward on digital solutions and smart city projects. Our programs are stimulating new thinking around smart and sustainable infrastructure, locally and internationally. LA Lights is convening a series of events to connect with City partners, utilities, industry, and the community. The Bureau is coordinating with City partners on goals and strategies to support major international events, the World Cup 2026, and the Summer Olympics, LA2028.

The following are a few major upcoming events

- Street Lighting will host the inaugural LA Lights Smart City Conference 2020
- LA Lights the Way, Street Light Design Contest - July 2020
- Super Bowl LVI 2022
- Bureau of Street Lighting Centennial Celebration 1925-2025
- FIFA World Cup 2026
- LA2028 Olympic and Paralympic Games 2028

This Smart City Roadmap is the beginning of our journey to an intelligent Street Lighting Network, and the future we are yet to imagine. LA Lights leads the ecosystem of City departments around a connected city working to strengthen the unseen bonds of “connectivity” lighting the way. Technology is awesome, but cities are still all about people. As we pursue these goals, our approach will be centered around people, our residents, businesses, and visitors to ensure solutions meet their needs neighborhood to neighborhood.

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