

Time to recover, reimagine, and rebuild: The Qualcomm team has developed a plan to help Los Angeles recover, reimagine and rebuild a truly equitable, sustainable and connected city. Our solutions help the city **recover** by providing urgent digital infrastructure resources to bridge the digital divide for residents across education, work, city services and health care. Our partnership will **reimagine** the future of connectivity in Los Angeles through a scalable solution, layered with smart city services, at a minimal cost with options to generate new revenue & become self-sustaining. Ultimately, we can **rebuild** a digitally inclusive city that ensures every community has the opportunity to learn, work and compete.

Industry Leaders, Passionate about Digital Equity: Our team of industry leaders is comprised of Qualcomm, Cambium Networks, Verge Internet, Comptek, Black & Veatch (collectively, the “Technical Members”), and JLC Infrastructure (“JLC” or the “Equity Member”). The Technical Members have a significant record of success implementing Wi-Fi connectivity solutions across the globe and across the United States from New York City to cities as close as San Diego, Sacramento, and San Jose. JLC, a 100% minority-owned and controlled investment management firm founded by Earvin (“Magic”) Johnson of Magic Johnson Enterprises and Jim Reynolds of Loop Capital, has successfully served as a developer and financier of landmark public-private partnership projects based in the United States.

Leveraging City Assets to Bring Smart Connectivity to All: Our solutions are designed to leverage the city’s existing streetlight network to deploy wireless broadband in a range of scenarios using newly available CBRS spectrum. Specifically, our 60 GHz cnWave fixed wireless networking infrastructure will serve as the core of our citywide wireless service. This technology provides for both outdoor Wi-Fi networks and indoor connectivity to provide secure, reliable, highspeed Internet citywide at a fraction of the cost of fiber. We also know that this citywide wireless network can form the foundation of innovative Smart City applications—such as smart efficient lighting and intelligent traffic management—that can improve city services, increase safety, reduce costs, and promote equitable economic development for all Angelinos.

Rapid Deployment of Secure, Reliable, Highspeed Wi-Fi: Traditionally, Internet services would rely on fiber for backhaul and last-mile connectivity, which is costly and time consuming to deploy. However, our solution utilizes wireless backhaul for a citywide network that enables ubiquitous internet connectivity to be deployed rapidly and at less cost. Using existing city assets such as streetlight poles and traffic signals we can provide highspeed public Wi-Fi in the outdoor setting, as well as in-unit connectivity to individual homes and businesses through point-to-point and point-to-multipoint solutions. Our wireless network can be designed for any variety of applications, from rural locations to dense urban neighborhoods, and from residential to enterprise level use cases. For Los Angeles, our solution is designed to rapidly deploy secure, reliable, highspeed connectivity to bridge the digital divide in the most vulnerable communities, and build a foundation for long-term equity, opportunity and innovation.

Bridging the Divide in Residential Communities: We have designed connectivity solutions specifically for residential neighborhoods like Boyle Heights, dominated by single-family homes and a comprehensive network of streetlights. Research shows that households in Latinx communities like Boyle Heights report only a 72 percent broadband adoption rate, leaving nearly 30 percent of residents without internet access. Fortunately, these residential blocks also host a network of streetlights that can create a point-to-multipoint network of access points that provides ubiquitous outdoor Wi-Fi and dedicated paths to homes through access nodes on individual buildings connected to an indoor router so that all families and students can benefit from highspeed internet connectivity. This solution was recently utilized in McAllen, Texas, where the city deployed 1,000 of our Cambium outdoor access points to reach their 21,000 public school students. Our solution easily scales from 1,000 to any number of access points needed to connect 80,000+ residents in an Eastside neighborhood like Boyle Heights.

Digital Equity for Vulnerable Communities: We have also designed solutions for more dense environments such as the Nickerson Gardens neighborhood of Watts with its low-rise apartment buildings, schools, outdoor spaces and community centers. Residents of Watts currently have only one incumbent broadband provider, and as a result too many people are unable to access and afford internet service. This digital disparity further exacerbates social, economic, political, health and environmental disparities. To build digital equity in Watts, our solution will efficiently serve the residential, commercial, and educational institutions by extending the network architecture from streetlight poles to rooftops. For example, to serve multi-dwelling mid-rise buildings in Nickerson Gardens our distribution node can be placed on a rooftop to feed broadband to the building, while additional access points will be distributed in the common hallways to provide broadband access to the adjacent apartments and be directly accessible for maintenance without inconveniencing residents. Schools can be provided broadband in a rooftop deployment similar to multi-dwelling buildings but will be fed with higher data rates to allow for digital learning inside the classroom, and outdoor Wi-Fi to provide community access.

Innovation and Opportunity on our Commercial Corridors: We will also bring connectivity to commercial corridors like S. Central Avenue in South Los Angeles. This historic corridor is composed of small independent businesses and poised for further growth. Our solution brings infrastructure to support existing businesses and incentivize more community-serving businesses to locate in the area. Our solution will deploy dedicated paths to individual buildings for indoor coverage and provide outdoor coverage by blanketing the street and pedestrian boulevards with outdoor Wi-Fi. Using a representative block in South Los Angeles, the following system can be easily scaled to provide Wi-Fi coverage across the desired area. The S. Central Avenue corridor is just one of many corridors that will benefit from our solution, serving as anchors for innovation, opportunity and the growth of new industries across Los Angeles.

Advancing Digital Inclusion: Digital equity requires more than simply deploying a wireless network. Our solution will engage the community in an authentic and meaningful way to identify needs, design projects, and make decisions. In doing so, we will focus on addressing the challenges facing communities of color, the elderly, and people with disabilities to advance projects that have measurable benefits and build metrics of success collaboratively within the community. Through the process, we will make data freely available and accessible to the public so that the community can understand and evaluate our decisions and design solutions of their own. Our team seeks to be effective partners with academia, non-profit organizations, other agencies, and private sector companies to leverage resources toward improved outcomes.

A Wireless Fabric – Expeditiously and Economically Addressing the Digital Divide: In summary, think about these wireless network solutions as an interconnected mesh, effectively creating a wireless fabric that will blanket the digital divide. Our wireless broadband network will be anchored to the city's fiber network, using point-to-point links to connect indoor facilities and access points on streetlights to provide ubiquitous outdoor Wi-Fi. The architecture is agile and will elegantly scale from a single block to an entire community—to the entire city. It does not matter if that block or that neighborhood is comprised of single-family homes, multi-tenant mid-rise buildings, commercial, institutional, industrial or a combination of all; the residents and businesses will have broadband access under our solutions. The ability to leverage the city's invaluable fiber network and the extensive street light network is critical to the success of the mission. However, equally important is the ability to rapidly extend connectivity in an economically sensible way, and to incorporate digital inclusion tools that will ensure access, adoption and proper application of connectivity resources. Our solution is designed to achieve these goals, and we are eager to help the people of Los Angeles recover, reimagine and rebuild a connected city.