



# Empowering smart cities

Transforming the lives of San José residents through purpose-driven networks



## Foreword from Mayor Mahan

San Jose's potential as a modern, diverse, thriving city is limitless. Nestled in the heart of Silicon Valley, we are presented with a unique opportunity and a profound responsibility to harness technology for the greater good of our citizens and use it to solve our biggest issues. Together, we are forging a future where innovation and inclusivity intersect to create a city that thrives by embracing the technological marvels that surround us.

San José isn't just a city; it's a vibrant ecosystem teeming with diverse cultures and ideas. We refuse to settle for the ordinary; our driving force is the pursuit of excellence through innovation. Our Smart City Vision epitomizes this dedication—an aspiration that employs technology as a catalyst to cultivate a more interconnected, prosperous, and sustainable community.

By collaborating with SmartWave and RUCKUS, we are at the forefront of AI-driven Wi-Fi® technology. Our city is currently in the testing phase of implementing Wi-Fi technology in our Wi-Fi infrastructure. This endeavor is already showing early signs of success, heralding a future where AI enhances connectivity and benefits our residents. Through these efforts, we aim to provide a blueprint for other cities and

demonstrate how AI can revolutionize urban living while ensuring that everyone in San José stays reliably connected and gains access to resources necessary for personal and collective growth.

Let us embark on this remarkable journey together, further transforming San José into a beacon of progress—a city where technology empowers each and every individual and where we ascend to global leadership by exemplifying what is possible when innovation and inclusivity reign supreme.

Sincerely,



Matt Mahan - Mayor, City of San José

### CULTIVATING THE FUTURE: SAN JOSÉ'S SMART CITY VISION

San José's ascent to becoming a pioneering smart city was not a matter of coincidence; it was a result of purposeful planning and determined action. The journey began in 2016 when the city identified a stark digital divide, recognizing that around 100,000 residents were without access to high-speed broadband. Embracing the Digital Inclusion and Broadband Strategy in 2017, the city charted a path to bridge this gap through strategic public-private partnerships.

Fueled by the potential of technology to reshape lives, San José embarked on a mission to redefine urban living. A pivotal milestone was the launch of unrestricted community Wi-Fi, igniting efficiency across municipal services. This digital leap facilitated the deployment of innovative solutions such as



coinless parking meters and climate sensors, raising the bar for the city's operational standards.

Empowered by a responsive technological framework, San José evolved into a more user-centric, secure, and sustainable urban center. This transformation exemplified the city's steadfast commitment to inclusivity and set a clear precedent for achievable progress. The strategic integration of technology fostered transparency, enabling robust engagement among businesses, residents, and local governance.

At the heart of this remarkable transformation lies a robust public-private partnership, rooted in a shared vision of progress. This symbiotic collaboration between the city, RUCKUS Networks and SmartWave seamlessly infused technology into San José's core services, propelling the city beyond being a mere urban hub to becoming a model of comprehensive community advancement. This collaborative approach unlocked the potential for all residents to partake in Silicon Valley's culture of innovation.

San José's trajectory underscores the remarkable power of a Smart City Vision. With a comprehensive network that

bridges disparities, enhances services, and ushers in equitable prosperity, the city provides a compelling example. It invites others to actively engage in shaping a future where technology drives communal growth and upliftment.

## A glimpse into success: Catalysts of transformation

### SAN JOSÉ MINETA INTERNATIONAL AIRPORT: REDEFINING TRAVEL EXPERIENCE

As the Bay Area's second-busiest airport, San José Mineta International Airport (SJC) stands a mere four miles of downtown San José. Featuring 37 gates and hosting 10 international and domestic airlines, it welcomed over 12 million passengers in 2023.

In 2010, the airport embarked on a \$1.3 billion modernization endeavor, aligning its services with the expectations of visitors to the capital of Silicon Valley. The challenge? Delivering pervasive high-speed Wi-Fi within a high-density indoor environment.



Guided by innovation and a strategic partnership with SmartWave Technologies, SJC set out to replace its existing access points (APs) with RUCKUS® APs.

Upon completion, SJC's Wi-Fi gained top-ranking recognition for being one of the fastest free airport Wi-Fi services across the United States, boasting an impressive average download speed of 203 Mbps.

For a more comprehensive insight, [access the full case study](#).

#### SAN JOSÉ MCENERY CONVENTION CENTER: EMPOWERING EVENTS, AMPLIFYING EXPERIENCES

Positioned in the heart of downtown San José, the San José McEnery Convention Center hosts a multitude of events each year, ranging from high-profile tech conferences to gaming conventions and industry shows.

In 2013, a substantial \$130 million renovation project transformed the convention center into Silicon Valley's most expansive convention space. This renovation created an opportune moment to address shifting demands on the Wi-Fi performance.

In collaboration with SmartWave Technologies and RUCKUS, the city of San José introduced their Wi-Fi network within the convention center premises. Leveraging RUCKUS indoor and outdoor APs along with ICX® stackable switches, the convention center now boasts a reliable and robust signal, free of dead zones and easily managed through RUCKUS SmartZone™ wireless controllers.

Following the RUCKUS deployment, exhibitors and attendees experience improved Wi-Fi connectivity. Presently, both management and participants enjoy access to shared or dedicated bandwidths of up to 1 GbE.

To delve deeper into the details, [download the case study](#).

#### SAN JOSÉ EAST SIDE UNION HIGH SCHOOL DISTRICT: CLOSING THE HOMEWORK GAP

San José's East Side Union High School District (ESUHSD) occupies a significant place as the seventh-largest high school district in California and the largest in Northern California. With a student body that predominantly represents minority backgrounds, a notable portion lacked internet connectivity at home.



In a determined effort to bridge the “homework gap,” ESUHSD engaged the expertise of SmartWave Technologies to extend its fiber-fast Wi-Fi network to neighboring underserved regions. This expansion leveraged RUCKUS outdoor APs complemented by SmartZone network controllers for efficient management.

Following the successful wireless network expansion in the initial attendance area, the city and ESUHSD embarked on a journey to extending the network to seven additional attendance areas, encompassing the neediest neighborhoods. This concerted effort resulted in the extended Wi-Fi network reaching approximately 75% of students. For those without access to internet devices, Chromebooks were made accessible through school libraries.

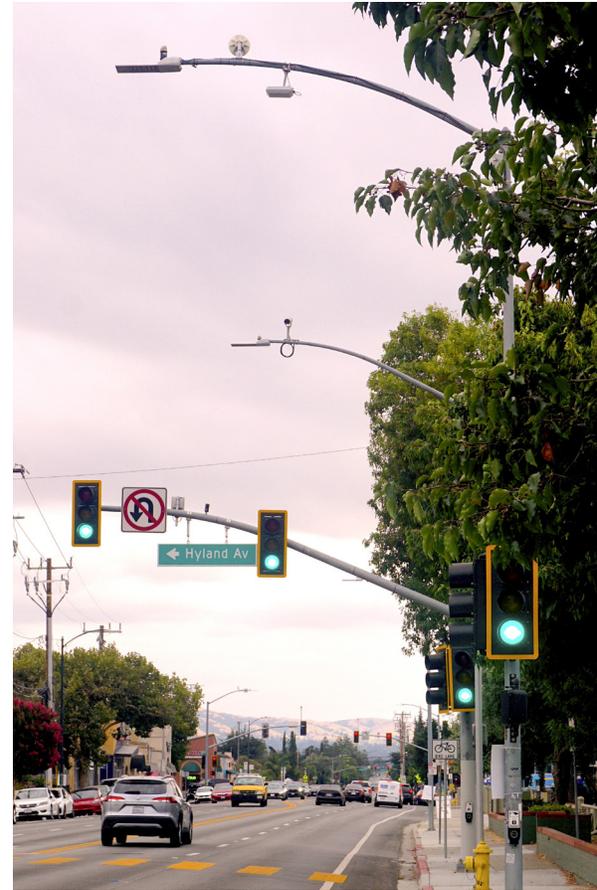
To learn more about this, [download the case study](#).

### SAN JOSÉ COMMUNITY WI-FI: BRIDGING THE DIGITAL DIVIDE

Building upon the success of the East Side Union High School District (ESUHSD) community Wi-Fi program, the city joined forces with local high schools, public libraries, and community centers to expand indoor Wi-Fi coverage into neighboring underserved communities. This collaborative effort was empowered by SmartWave Technologies, seamlessly integrating a blend of RUCKUS indoor and outdoor APs alongside ICX switches into the existing framework, ensuring the establishment of a smooth and efficient Wi-Fi network throughout the city.

In the case of ESUHSD, RUCKUS outdoor APs played a pivotal role in extending network access to neighboring communities. The analysis of student self-reports from phase one of the community Wi-Fi initiative revealed that approximately one-third of students and their families exclusively depended on ESUHSD’s network to meet all their internet needs. An additional third of students utilized the network for specific purposes. Notably, many educators also reported using the network from their homes for both professional and personal use. Today, this initiative has achieved full implementation across all designated areas, effectively dismantling the digital divide prevalent in East San Jose by providing service to over 360,000 households and covering over 12 square miles.

For a comprehensive deep dive, [access the complete case study](#).





## CHARTING THE COURSE FORWARD

Despite remarkable achievements through private-public partnerships, the city of San José remains committed to ongoing progress. Recognizing the need for further advancements, the city is extending its indoor Wi-Fi network to underserved communities, fostering inclusiveness. Using insights gained, this expansion is guided by the city's Portfolio, Products, Projects Office (C3PO), where resident interaction and input contribute to shaping future directions.

The drive for a more connected future is equally a core value for RUCKUS Networks. Recognizing that today's innovations become tomorrow's standard, RUCKUS continuously seeks to reimagine how technology seamlessly integrates into our lives. Partnering with the city of San José has enabled RUCKUS to translate technology into real-world impact, unveiling the advantages of innovation on a large scale. While celebrating past achievements, the pursuit of tomorrow's challenges propels us forward, inspiring us to strive for continual improvement.



Essential to the success of SJC's Wi-Fi is the public/private partnership between the city of San José, RUCKUS Networks, and leading wireless integrator SmartWave Technologies. As a four-time Partner of the Year Award Winner with RUCKUS, SmartWave knew how to best deploy the RUCKUS solution for optimum capacity and coverage in a high-density public environment.

## About RUCKUS Networks

RUCKUS Networks builds and delivers purpose-driven networks that perform in the demanding environments of the industries we serve. Together with our network of trusted go-to-market partners, we empower our customers to deliver exceptional experiences to the guests, students, residents, citizens and employees who count on them.



[www.ruckusnetworks.com](http://www.ruckusnetworks.com)

Visit our website or contact your local RUCKUS representative for more information.

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