

An aerial photograph of a suburban neighborhood. The image shows several houses with various roof colors (red, blue, grey), surrounded by trees with autumn foliage in shades of yellow and orange. A network of streets with cars is visible. A dark blue banner with white text is overlaid across the middle of the image.

THE SMART CITY OF THE FUTURE

Spectrum 

IMAGINE



A CITY WHERE...

- The daily commute is shortened by **15-30 minutes**.
- Emergency response times are cut by **25-30 percent**.
- Time spent interacting with healthcare and government is reduced by **45-60 percent**.
- **100 percent** of your community's students have access to digital education tools.
- Water consumption is lowered by as much as **20-30 percent**.
- Digital communities drive **increased citizen engagement**.¹

WE'RE BUILDING SMART CITIES

FROM THE GROUND UP

What is a smart city? A smart city delivers intelligent capabilities and improves quality of life for its constituents by using technology to respond, in real time, to its ever-changing environment. A smart city can have a profound impact in areas such as economic development, transportation, utilities, infrastructure and public safety. Together, we can improve the lives of those who live, work and play in your community, making the possibility of progress achievable for all.

Spectrum is already a partner that helps you accomplish your mission-critical objectives. We connect more than 27 million residential, business and government municipalities in communities like yours in 41 states. We deliver connectivity solutions that are the foundation of today's communications infrastructure and tomorrow's smart cities.

YOUR CITY IS ALREADY A GIG CITY

DID YOU KNOW?

- Spectrum Internet® Gig delivers the **bandwidth and capacity** businesses need to power their work—and by extension, the local economy.
- Spectrum Internet® Gig is available to virtually all **homes, schools, businesses and municipalities** in the markets we serve.
- Businesses can receive up to **100 Gbps symmetrical service** via dedicated fiber connections.
- We provide over **350,000 Spectrum WiFi hotspots** across the nation and are introducing the next generation of WiFi technology, 802.11ax, which is capable of 1 Gbps wirelessly.
- Spectrum Mobile is built on one of the country's **largest LTE cellular networks** and also takes advantage of our nationwide network of WiFi hotspots.
- Before long, **a billion devices** will have access to Spectrum gigabit speeds.

A man in a blue polo shirt is working on network equipment in a server room. He is looking at a device he is holding, with his hands near a rack of equipment. The background is filled with server racks and cables, creating a technical and professional atmosphere.

WE'RE COMMITTED TO YOUR CITY

WE'RE CONTINUING TO INVEST IN YOUR COMMUNITY

Spectrum is continually investing in your community by increasing the capacity and capabilities of our network to meet the growing needs of households and businesses. We have upgraded to an all-digital network and offer Gig speeds to virtually all households and small businesses across our footprint. We're increasing the density and depth of our dedicated fiber network to serve the mission-critical needs of larger businesses.

AND MAKING SURE OUR SERVICES ARE THE BEST THEY CAN BE

As demand for bandwidth and capacity continues to grow, our world-class network is best positioned to meet these demands, today and into the future. Spectrum is actively working on new technologies to offer services in the near future with 10 Gig to households and small businesses, 100 Gbps symmetrical services to larger businesses and Gig+ speeds on WiFi and 5G in the home and around the community.

KEEPING YOU

AHEAD OF THE CURVE

Spectrum's investment in new technologies and network infrastructure will provide the right connectivity framework for communities to take advantage of new and innovative smart city services. Our network already enables smart city services in some communities and, as more communities embrace the potential of these services, Spectrum can be a reliable partner to deliver them.

- We've invested more than **\$27 billion** since 2014 to extend and enhance our network—including more than one billion dollars for each of the last two years to improve and enhance our fiber network.
- Spectrum is conducting field trials on new technologies like **Citizens Broadband Radio Service** and **5G** to ensure we can complement current Gig+ landline broadband services with Gig+ speeds on wireless.

WE DELIVER THE COMMUNICATIONS INFRASTRUCTURE FOR CITIES TODAY

As a trusted technology partner, Spectrum has your city ready—at home, at school, at work, on the go and in the community.

THE SPECTRUM NETWORK
Infrastructure supporting your community.

Two-way, fully interactive digital network over **840,000 miles** of network infrastructure.

Offering gigabit connections to more than **50 million homes and businesses** across virtually all of our footprint as of the end of 2018.

Up to 100 Gbps symmetrical speeds for enterprise clients, including large institutions such as government.



HOSPITALITY

Connectivity and entertainment solutions that enhance guest experience and inspire loyalty.



HEALTHCARE

Coordinated care that is connected, secure and compliant—improving patient experience and outcomes.



DATA

Scalable broadband, dedicated Fiber Internet Access, Ethernet, Networking and Managed Services.



CLOUD

Customizable Managed Application, Cloud Infrastructure and Managed Hosting Services.



TELEVISION

High-quality HDTV services with customizable programming.



VOICE

Reliable business phone, Enterprise Trunking and Hosted Communications.

IN THE COMMUNITY

AT WORK

AT SCHOOL

ON THE GO

AT HOME



TELEVISION

More HD channels and educational on-demand programming.



DATA

Fast, reliable connectivity in support of growing digital curriculum needs throughout your district.



WIFI

Wireless access throughout your community.



MOBILE

High-value, competitive mobile service launched in 2018.



TELEVISION

More HD channels than any other provider.



VOICE

Reliable service without added fees or dropped calls.



INTERNET

High-speed connections with no data usage caps.

AND ARE PARTNERING WITH CITIES IN FOUR VITAL AREAS...



ECONOMIC DEVELOPMENT AND CIVIC ENGAGEMENT

A digitally-connected city can improve the lives of all its constituents. By empowering a strong, civic-minded community and increasing economic activity, we can create stable, engaged communities that offer greater opportunities for everyone. Residents, local businesses and community leaders can unite to build the cities they envision: a vibrant place to work and live—one that every resident is proud to call home.



UTILITIES AND INFRASTRUCTURE

Access to energy, clean water and fresh air is vital to the quality of life in any community. Technology enables a municipality to better manage and conserve these precious resources. Sensors embedded in municipal water systems and trash bins allow monitoring to reduce waste. Over time, data can be used to develop new conservation programs and help communities make smarter decisions that ensure sustainable growth and development.



INTELLIGENT TRANSPORTATION

Improving transportation times is one of the foundational building blocks of a smart city. Data analysis and traffic pattern monitoring enables real-time responsiveness that can alleviate road congestion as incidents arise. Safer roadway systems that operate more efficiently and reliably encourage interest in the use of public transportation, helping reduce your city's overall carbon emissions and increase productivity previously lost to long commutes.



PUBLIC SAFETY

Public safety begins by preventing and de-escalating crime and other incidents whenever possible. Using advanced and secure video, sensor and communication systems to proactively monitor public spaces and police-encountered situations, communities benefit from increased trust in law enforcement and a more productive police presence. Investing in public safety lays the groundwork for constituent peace of mind and a stable, cohesive community.

...TO BUILD THE SMART CITIES OF TOMORROW

INTELLIGENT TRAFFIC MANAGEMENT
Provides a comprehensive view of a city's traffic in real time for fast incident response, and uses intelligent traffic signals to manage intersections, protecting pedestrians and keeping vehicles moving.

VISUAL SURVEILLANCE
Reduces crime by assisting law enforcement in identifying and apprehending criminals before they jeopardize public safety.

SMART LIGHTING
Improves energy efficiency by using real-time monitoring to tailor lighting both for variable use patterns in commercial buildings, as well as for illumination of roads and public spaces.

CONNECTED COMMUNITIES
Enables more civic participation and engagement to generate a positive environment for community and economic development.

**ECONOMIC DEVELOPMENT
AND CIVIC ENGAGEMENT**

**INTELLIGENT
TRANSPORTATION**

**UTILITIES AND
INFRASTRUCTURE**

PUBLIC SAFETY

POLICE WEARABLES
Provides transparency and documented evidence to help resolve complaints, and promotes positive interactions that build trust between citizens and community officers.

**CRITICAL INFRASTRUCTURE
MONITORING**
Sensors embedded in critical infrastructure such as bridges and power plants monitor structural data to identify potential dangers, protecting citizens and the economic well-being of the city.

DIGITAL GOVERNANCE
Provides collaborative digital platform tools so citizens have an easy, safe and secure method of interacting with local government from any Internet-connected device.

SMART WASTE MANAGEMENT
Optimizing waste removal with sensor-enabled trash bins that notify sanitation crews when they are full, reducing costs and helping keep communities clean and safe.

DATA SECURITY
Ensures private and otherwise sensitive data that may be collected is safeguarded and accessible only to authorized individuals.

SMART WATER MANAGEMENT
Smart meters and leak detectors can reduce wasted resources, contribute to conservation efforts and improve service and support for utility customers.

CONNECTED VEHICLES
When vehicles, pedestrians' smartphones and roadside devices such as traffic lights are communicating with one another, it can lead to improvements in safety, mobility, emergency response times and carbon emissions.

CIVIC LEADERS LIKE YOU ARE TRANSFORMING THEIR CITIES TODAY

- **Reno, Nevada** improves public safety with a police wearables solution that allows over 230 law enforcement officers to upload video to the city's digital evidence platform.
- **San Diego, California** lowers energy usage by 60 percent with smart lighting.
- **Kansas City, Missouri** reduces peak commute times by nearly 30 percent and improves pedestrian safety with an intelligent traffic management solution.

Explore additional resources at **SpectrumSmartCities.com** and use our smart cities social gallery to see how like-minded civic leaders are thinking about smart cities.

Let's collaborate on ways to
deliver tangible benefits to your city.
Call **866-284-4108**.



Spectrum▶

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¹ "Smart cities: Digital solutions for a more livable future," McKinsey Global Institute, June 2018, <https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/smart-cities-digital-solutions-for-a-more-livable-future>.