

5G, SMART CITIES & COMMUNITIES OF COLOR

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Executive Summary

This report examines the implications for communities of color of fifth-generation wireless technology (also known as 5G) and Smart City technology. Currently, major mobile network operators, such as AT&T, Sprint, T-Mobile, and Verizon, offer the fourth generation of wireless broadband technology (4G). Over the next four years, these companies will start to offer 5G in select cities. 5G will facilitate the growth of Smart City technologies, which are tools that allow cities and counties to manage public services such as transportation and power grids more efficiently.

Key Points

- **5G networks will be 10 to 100 times faster and have greater capacity than current 4G LTE networks.** The increased speed and capacity will allow web pages, video, and other data to load faster on mobile devices, as well as enable various innovations such as remote surgery and smart cars that avoid collisions.
- **5G could reduce or expand the digital divide,** depending on choices made by government officials and wireless companies. Faster 5G could expand high-speed broadband access to many of the 34 million Americans who currently lack access to the service, and it could reduce racial disparities in access. Compared with Whites, Latinos are more than two times more likely and Blacks are almost two times more likely to use mobile devices for their primary access to the internet. 5G could increase these mobile users' access to high-speed broadband. But if not properly deployed, 5G may become another set of services unavailable to many neighborhoods of color.
- **Blacks and Latinos want 5G infrastructure jobs.** While numbers will vary based on local factors, for every 100,000 residents in a city or county, U.S. telecom providers could spend about \$28 million to install 5G infrastructure. That would create an estimated 35 jobs during construction (including 15 construction jobs). In a Joint Center survey, 74 percent of Latino males and 73 percent of African American males said they were either extremely likely or somewhat likely to accept a job earning \$65,000 to \$75,000 a year installing infrastructure to make mobile phones and wireless devices work better.

- **5G will enhance the “Internet of Things” and allow Smart Cities to develop.** 5G will connect wireless networks to billions of devices, such as cars, home appliances, machinery, and wearable technology. Innovative localities will use Smart City technologies like connected sensors and data to provide municipal services more efficiently and effectively. For example, monitors in dumpsters will communicate with sanitation trucks when the dumpsters are full and should be emptied.
- **5G and Smart City technologies will drive innovation, productivity, local economic development, and permanent job growth.** While the numbers will vary based on local variables, for every 100,000 residents, a city or county could see a boost in its annual gross domestic product (GDP) of about \$125 million and gain approximately 650 new permanent jobs.
- **Automation facilitated by 5G and Smart City technologies will also likely eliminate some jobs.** Sensors in sanitation bins, for example, could result in fewer sanitation workers. Parking lot systems could replace parking attendants. Autonomous buses may displace bus drivers.
- **If unchecked, bias may exist in Smart City platforms.** Constant data collection and analysis can be abused. Errors in collecting and analyzing data can produce racial disparities.

Recommendations

5G and Smart City technologies are coming, and state and local leaders should focus on equitable development that improves the quality of life in communities of color. Leaders should ensure that communities of color are positioned to fully take advantage of new jobs, business opportunities, and enhanced services. Leaders must also anticipate and mitigate potential challenges, such as redlining, data bias, and some jobs becoming obsolete.

Specifically, elected officials should . . .

- **Adopt a Digital Inclusion Strategic Plan** to ensure all segments of a community benefit from innovation and economic development.
- **Negotiate with network operators to ensure**
 - **minority contractors and a diverse workforce** help install and maintain 5G and Smart City technologies; and
 - **5G is accessible and affordable for all residents.**
- **Update the permitting process to accommodate new technologies,** such as 5G cell towers, small cell antennas, and other infrastructure. Operators will likely prioritize 5G installation in localities with a modern permitting process.
- **Promote digital readiness and workforce training** so that residents can be lifelong learners who update their skills to meet the needs of constantly evolving industries.
- **Establish clear rules on the collection and use of data** to stimulate innovation, prevent bias, and protect privacy.