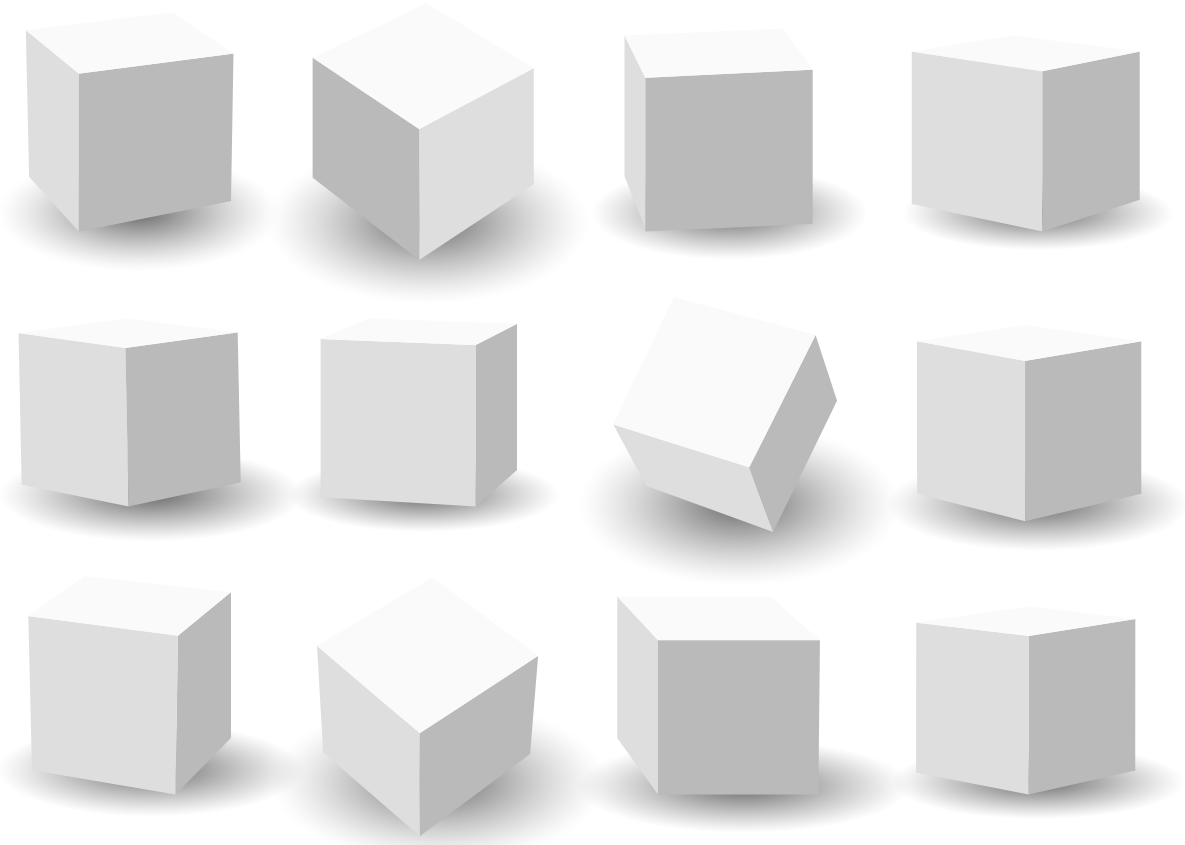


ctia™

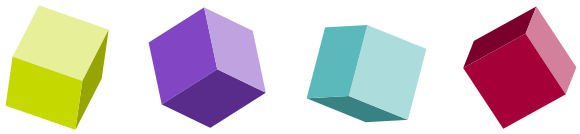
2022
Annual Survey Highlights

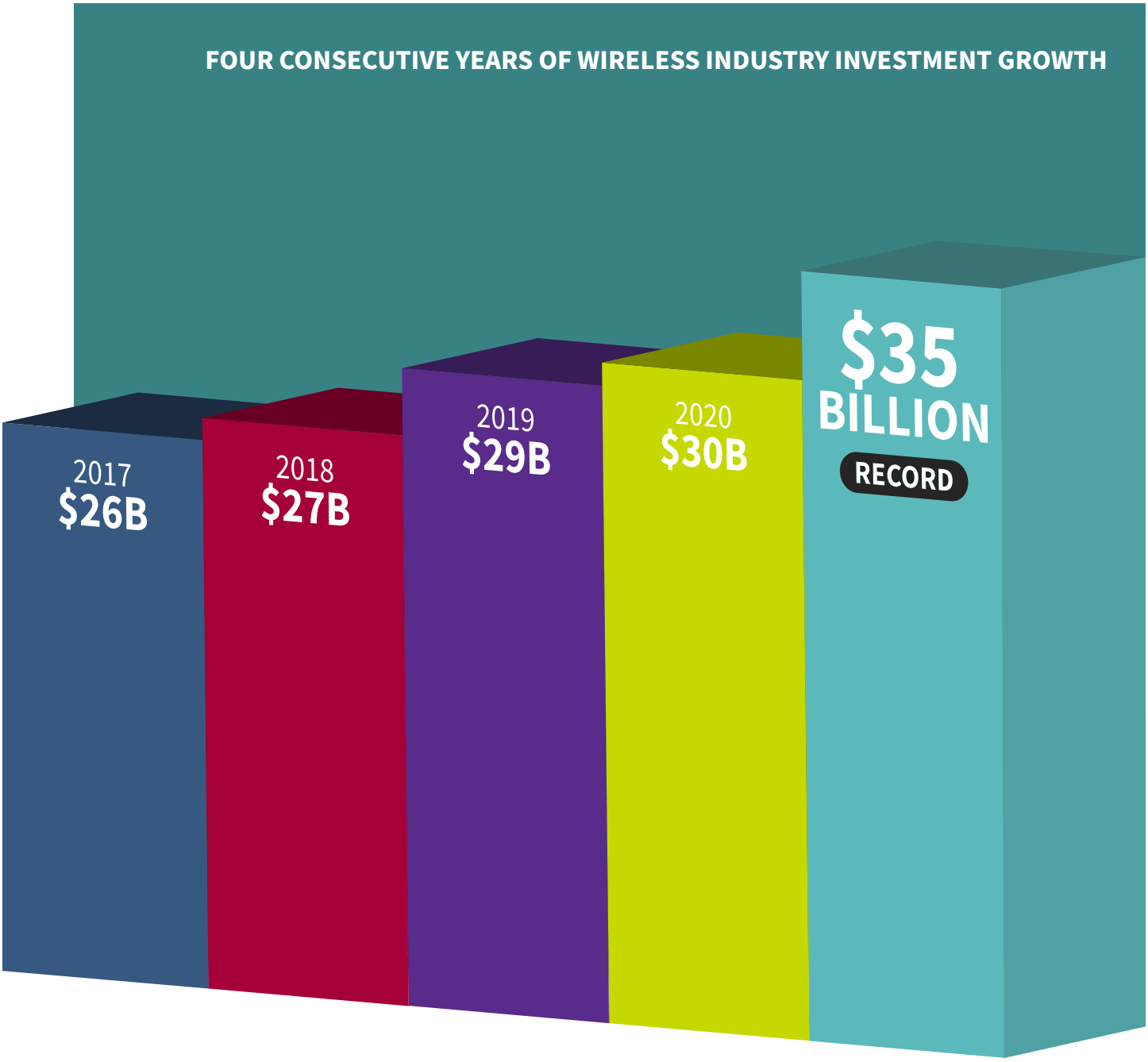
Since 1985, CTIA has surveyed U.S. wireless providers, highlighting the evolution of this dynamic industry. The 2022 CTIA Annual Survey tells a story of wireless capital investment that is speeding 5G deployment, spurring broadband competition, and building the connectivity platform that will strengthen the nation's economy and inspire new innovation.

Thanks to wireless providers' record investment, 5G rolled out twice as fast as 4G. Now, as 5G networks blanket the nation, 5G home broadband is unleashing wireless's competitive spirit in a whole new market, delivering home high-speed internet offerings that help reach unserved and underserved communities—aiding the U.S. in tackling the digital divide.

It's just the latest example of 5G networks' power to build new foundations for society-enhancing advancements. These 5G-enabled technologies are being implemented across industries—from wireless soil sensors to driverless cars—leading to higher efficiency and lower emissions. In fact, Accenture projects that 5G innovations will help America meet one-fifth of its climate goals.

The 5G Economy is only beginning. As entrepreneurs, inventors, and entire industries tap 5G's potential, the power of wireless will bring solutions beyond our imagination.





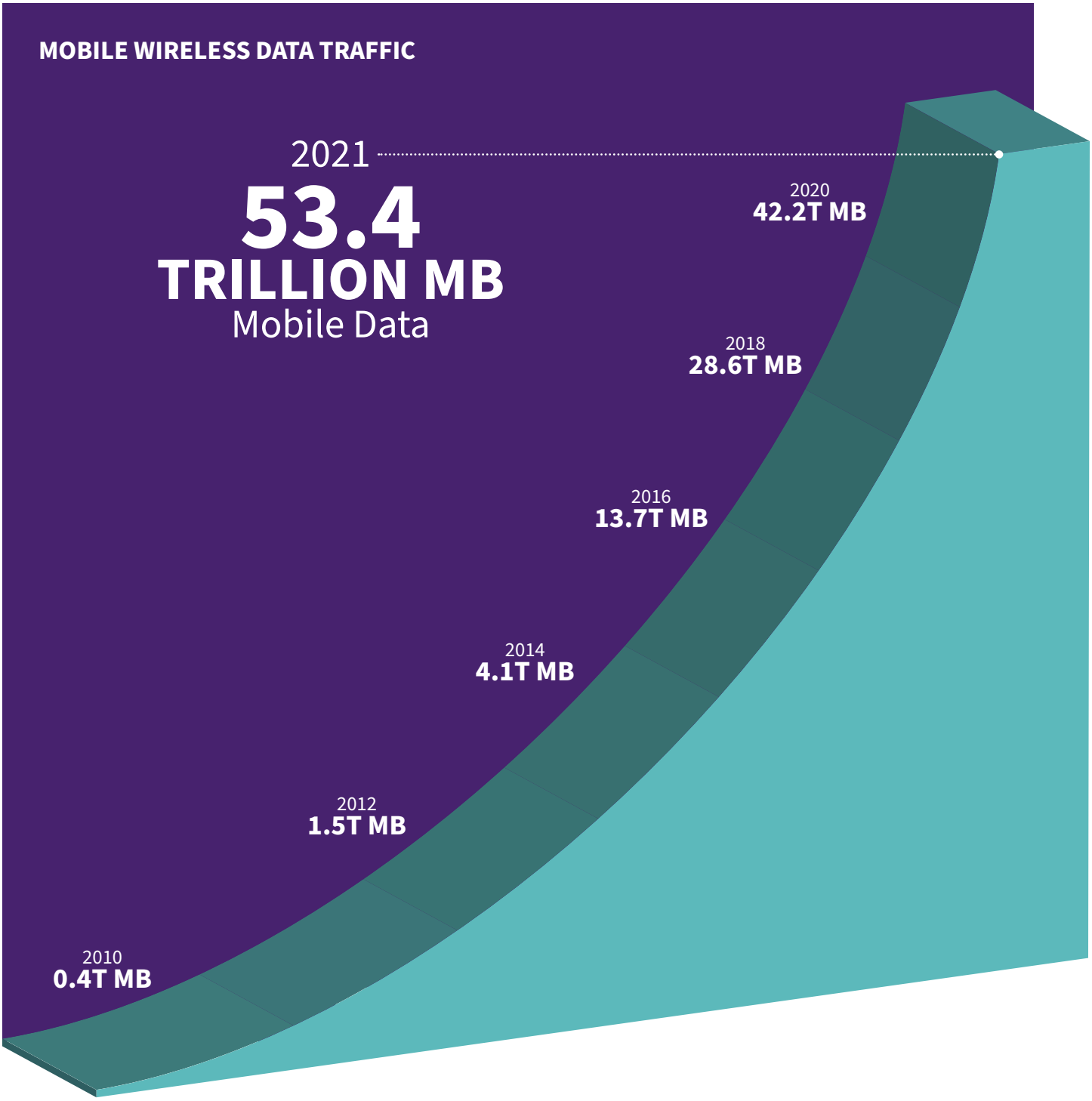
$121B

INVESTED FROM 2018, THE YEAR 5G LAUNCHED, TO 2021.

Unprecedented Investment in Our Wireless Future

Wireless providers' capital expenditures reached a historic, all-time high in 2021. Providers invested $35 billion into growing, improving, and running their networks. This is the fourth consecutive year of increased investment—a powerful trend that emphasizes the societal importance of wireless connectivity and underlines the industry's commitment to building a robust platform for innovation that connects all communities.

Since 2018, the year 5G launched, providers have invested over $121 billion in their networks, and over the life of the wireless industry, investment totals over $635 billion.



2X

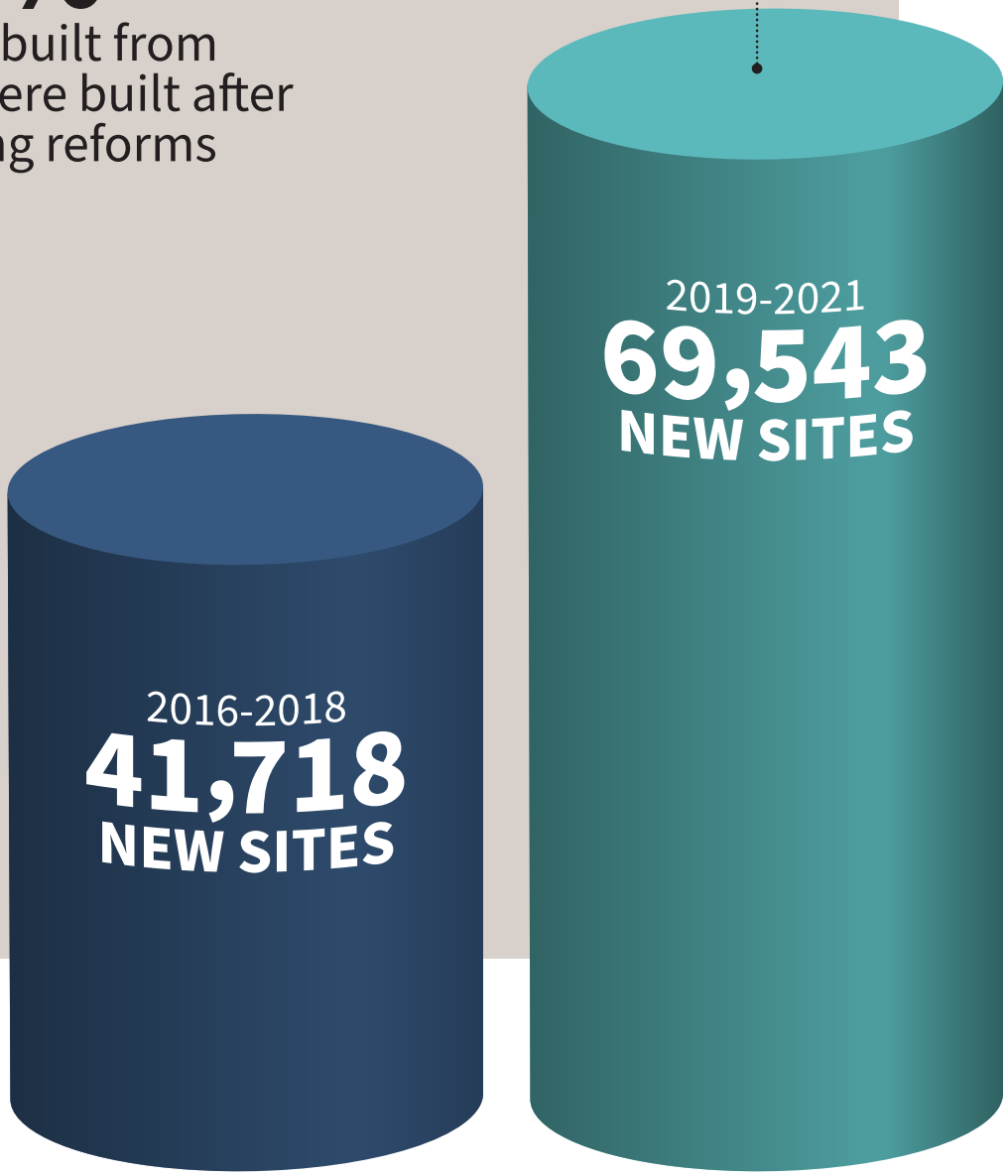
GROWTH IN MOBILE TRAFFIC IN 2021 COMPARED TO 2020.

Wireless Data Traffic Skyrockets

With the growth in wireless innovations, applications, and connections, mobile data use has consistently increased year-over-year—and it leapt to 53.4 trillion MBs in 2021. That means U.S. networks are supporting more data traffic than 2010 through 2017 combined. In fact, the 11.2 trillion MB increase in data use since last year alone is 1.5 trillion MB more than consumers used in all of 2015. Wireless data traffic will only keep climbing—Ericsson predicts consumers will nearly quintuple their mobile data use, to 240 trillion MBs per year by 2027.

OPERATIONAL U.S. CELL SITES

62%
of cell sites built from 2016 to 2021 were built after federal siting reforms



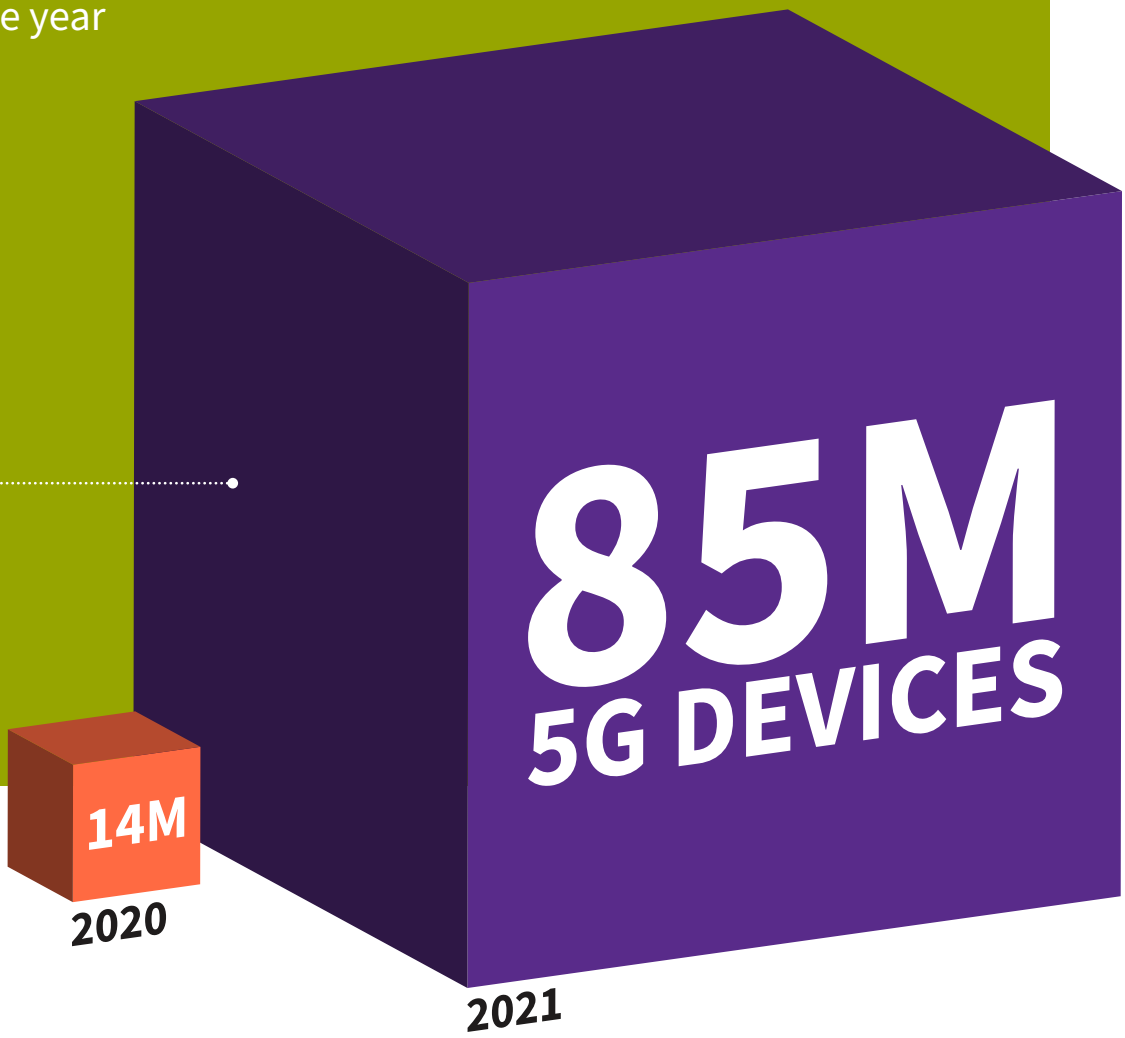
418,887
OPERATIONAL CELL SITES ACROSS THE NATION BY YEAR-END 2021.

More Cell Sites Support Enhanced Coverage

The nationwide rollout of 5G happened twice as fast as 4G, providing the physical foundation for our 5G Economy. More wireless infrastructure is a big part of that successful launch as key federal infrastructure siting reforms continue to pay dividends by easing barriers to deployment. By the end of 2021, there were 418,887 operational cell sites across the nation. And that doesn't account for all the new 5G base stations added to existing cell sites. More cell sites enhance coverage, encouraging adoption and helping to close the digital divide.

NUMBER OF 5G-ENABLED DEVICES IN THE U.S.

513%
Increase in 5G devices
in just one year

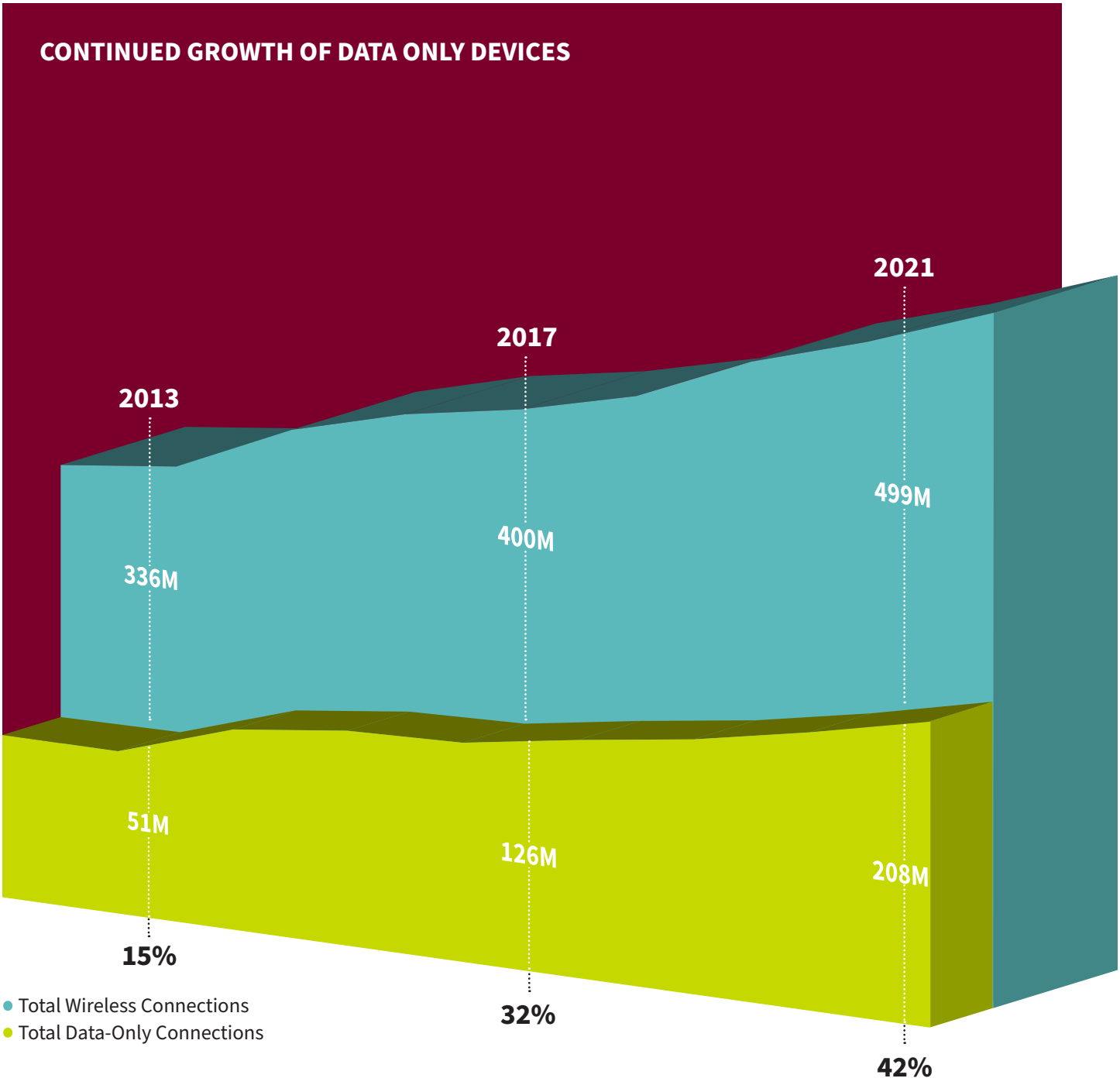


315M
AMERICANS ARE COVERED BY 5G.

1/3 OF AMERICAN ADULTS HAVE AN ACTIVE 5G DEVICE.

Expanding 5G Networks See 6X More 5G Devices

5G's remarkable investment and rapid rollout have enabled an explosion in 5G adoption and 5G-enabled devices year-over-year. Today, 5G touches every facet of our lives, with 315 million Americans covered. Consumers have embraced the technology, leading to the number of 5G-connected smartphones and other 5G devices growing over 513% this year to 85 million.

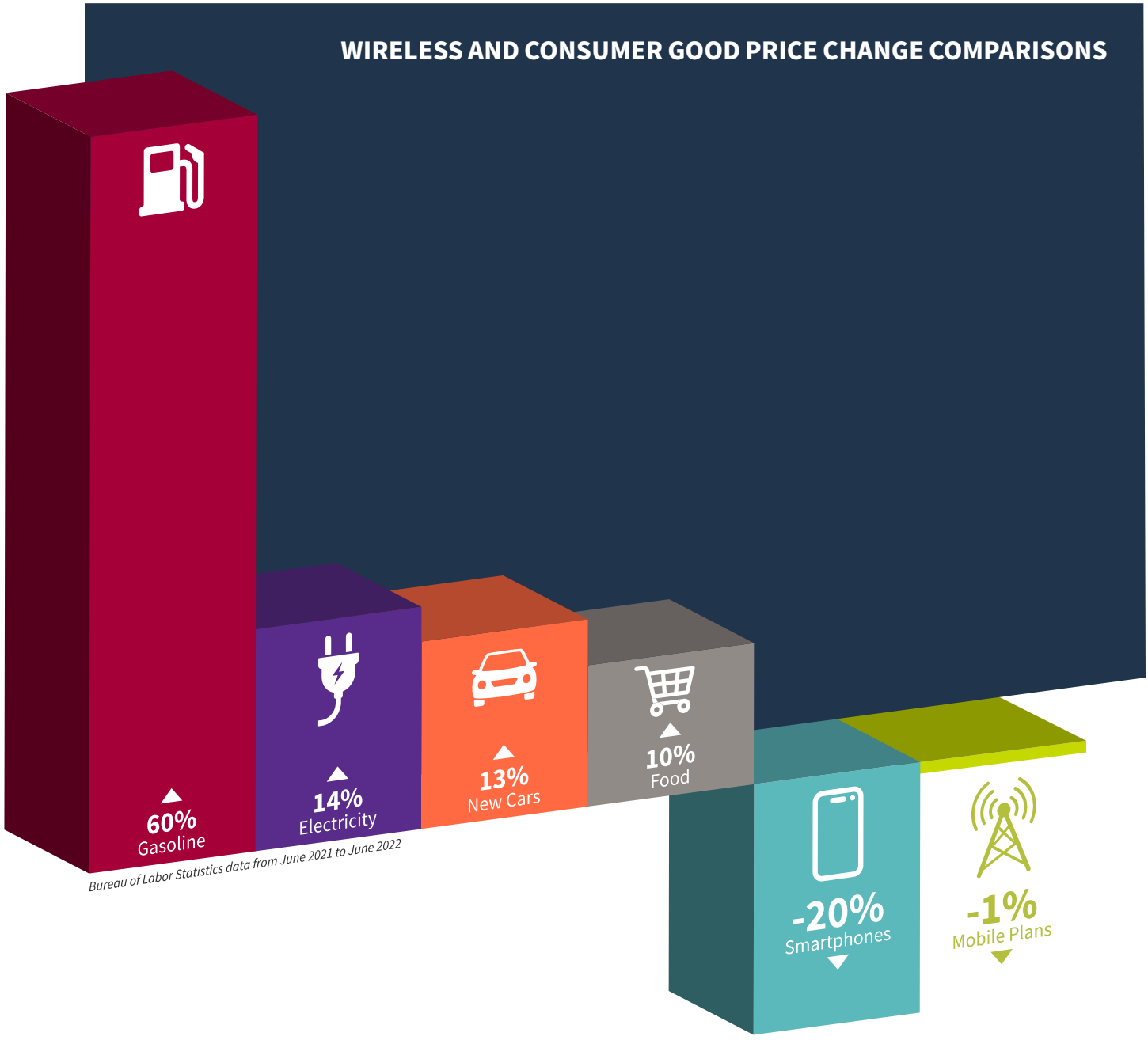


42%

OF ALL WIRELESS CONNECTIONS ARE DATA-ONLY DEVICES.

IoT Devices Make Up Increasing Share of Total Connections

Americans continue to add wireless connections, driven by growth in data-only devices—the medical sensors, smartwatches, hotspots, and more that run on wireless data. These devices make up an increasing share of overall connections every year. In 2021, data-only devices represented about 42% of all wireless connections, increasing from 190 million to 208 million since 2020. Wireless-enabled tablets and laptops jumped 14% to 47 million. Overall, wireless connections grew to 499 million.



43% DECREASE

IN PRICE OF UNLIMITED PLANS SINCE 2010.

Wireless Competition Drives Lower Prices Despite Historic Inflation

Beyond coverage, the wireless industry's remarkable investment and intense market competition bring lower prices—even in the face of historic inflation. In fact, the prices of wireless service and smartphones have decreased, providing a welcome contrast to an economy where consumers have faced price increases for 94% of tracked goods and services nationwide. Consumers are getting more value for their dollars, too, with wireless speeds in 2021 85 times faster than in 2010—paired with a 43% price decline in unlimited data plans over that same period.

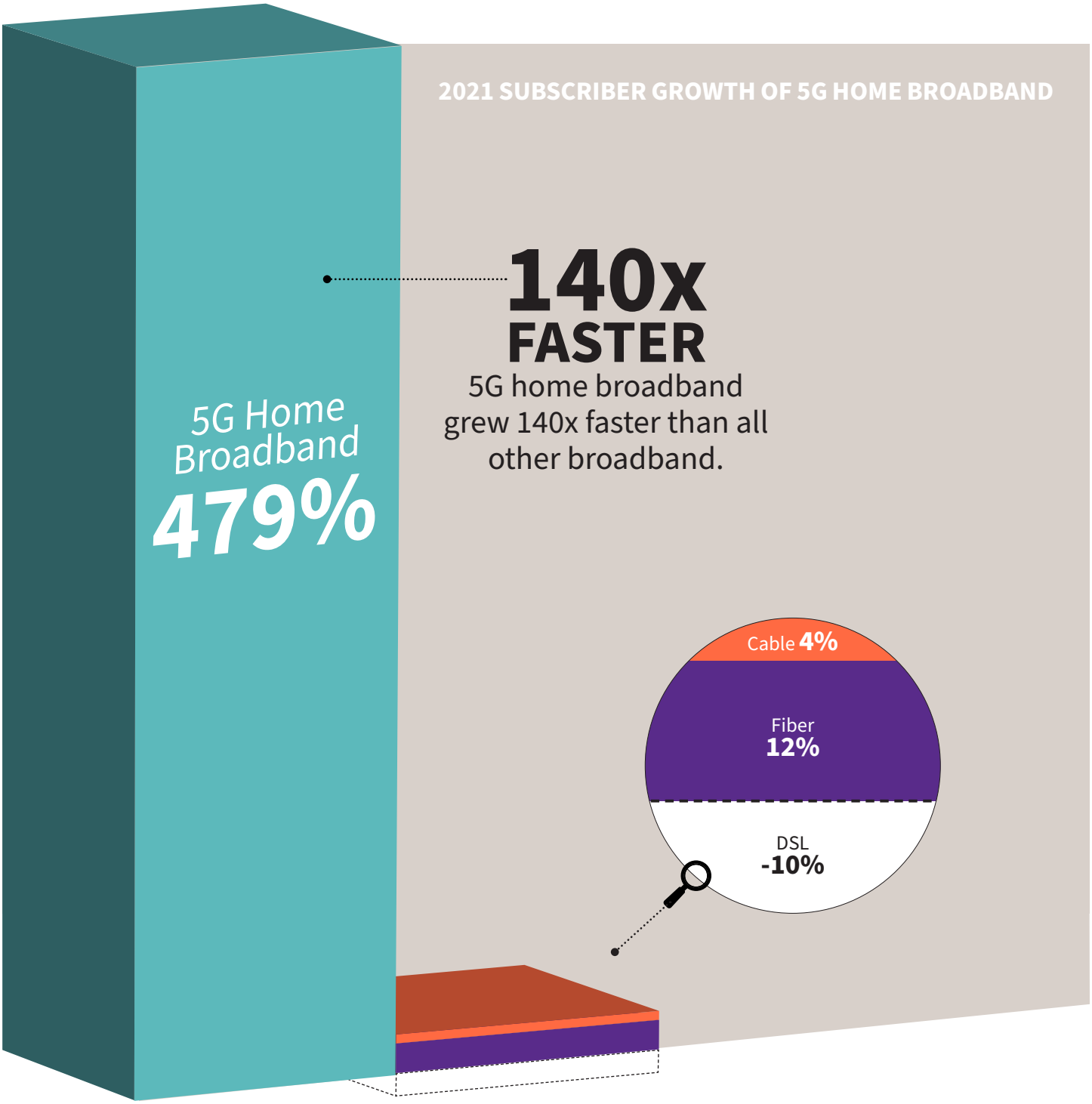
63,644

MESSAGES EXCHANGED PER SECOND.

Consumers Rely on Messaging and Voice Capabilities

In 2021, American consumers exchanged 2 trillion messages—that's over 63,600 texts per second. And a 98% open rate for text messages shows they remain an important communication tool for consumers. In comparison, email open rates average just 21%.

And even with texting at their fingertips, millions of consumers still use voice calls to talk to friends and family daily—amounting to 2.4 trillion minutes of use in 2021.



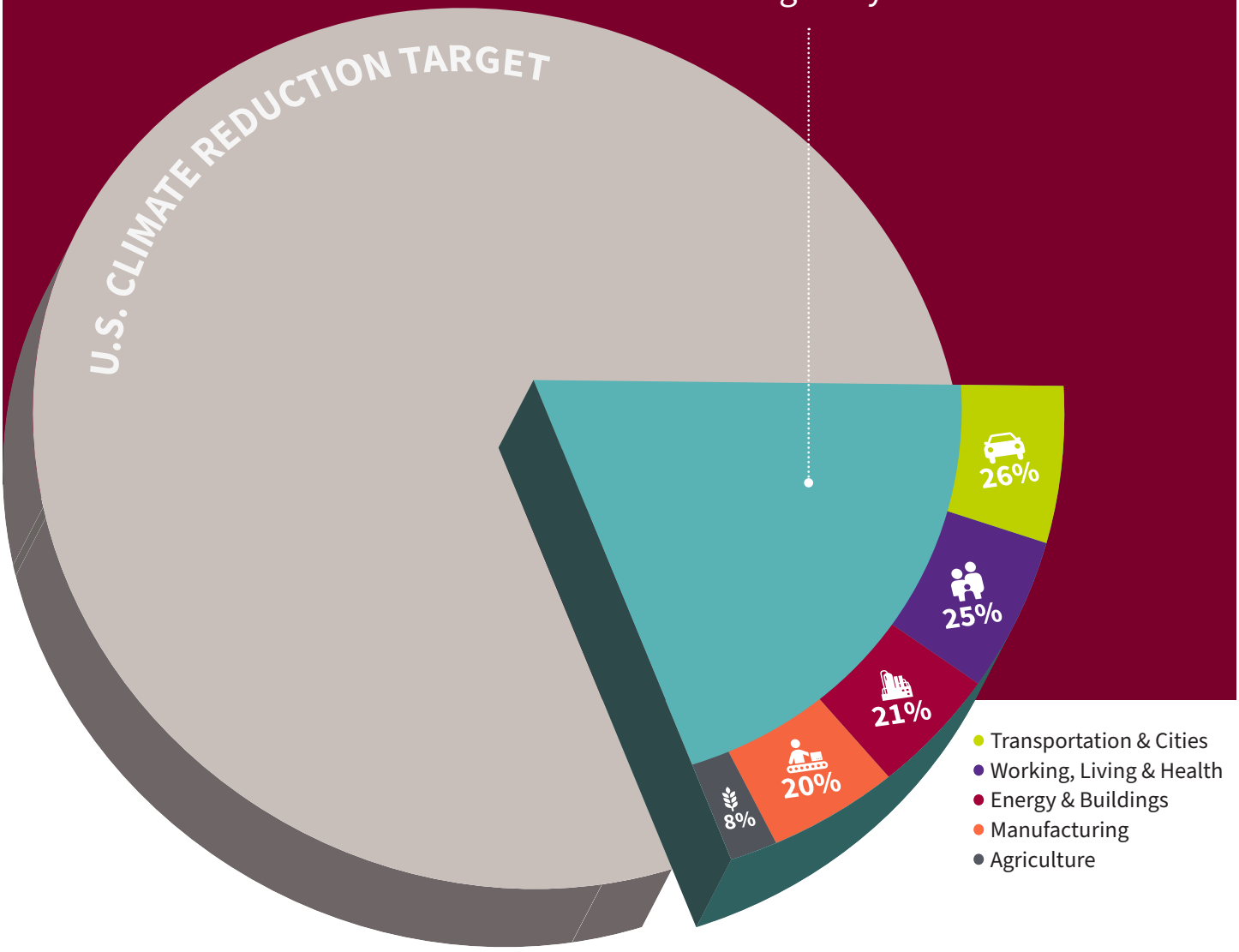
40M+
HOUSEHOLDS HAVE ACCESS TO 5G FOR HOME SERVICE

Wireless Investment and Competition Bring Consumers New Offerings

Investment and competition also foster faster speeds and bold new innovations and services, including 5G for home broadband, or 5G fixed wireless. This competitive new option brings enhanced capabilities to consumers, including 5G's high capacity and low latency, by providing home broadband connections wirelessly via spectrum instead of through a wired cable connection. It's already available to more than 40 million households, providing a choice in high-speed internet service in many communities.

5G-ENABLED CLIMATE REDUCTIONS BY INDUSTRY

1/5th
of U.S. carbon emission reduction targets can be met by 5G-enabled technologies by 2025.



4.5M
JOBS CREATED BY THE 5G ECONOMY.

$1.5T
GDP GROWTH FROM 5G ECONOMY.

Wireless Platforms Help Solve Societal Challenges

Not only is wireless the on-ramp to connectivity for many Americans, making it a key piece of closing the digital divide—it's also a platform for innovation.

Other industries are leveraging inventive 5G solutions to mitigate the impacts of climate change. Accenture found that 5G-enabled use cases will deliver one-fifth of the U.S.'s emission reduction targets by 2025. 5G is also poised to create green jobs in key industries of the future, helping grow our economy.


ctia™
www.ctia.org